Infection Control Guiding Principles for Buildings

Acute Hospitals and Community Health and Social Care Settings

Policy [ ] Procedure [ ] Protocol [ ] Guideline [x]

Insert Service Name(s), Directorate and applicable Location(s):
All acute hospitals
All Community Health and Social Care Settings

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1.0 INITIATION

1.1 Purpose

This document has been developed to provide infection prevention and control guidance regarding the design of new buildings, extensions, refurbishment works, adding extensions, upgrading existing facilities or any such building works that impact on how care is provided to service users both in acute hospitals and community health and social care settings in the community. It was originally adapted from the 'Infection Prevention and Control Building Guidelines for Acute Hospital, SARI 2009' [1]. It is intended that the guidance applies for works as above within the Health Service Executive, however the principles are relevant in non-HSE health and social care settings. **For the purpose of this document, the term 'hospital' will include acute hospitals and all health and social care settings where clinical care is provided.** For ease of use, the recommendations are divided into four sections:

Part 1 – Governance

Part 2 – Acute hospital settings

Part 3 – Community settings

Part 4 – Other settings

This guidance has been reviewed to ensure that experience and learning from the COVID-19 pandemic and other infection control risks in relation to infrastructural issues has been considered and where appropriate has informed updates to this guidance.

By way of implementing this guidance, it is anticipated that it will be shared by Capital and Estates with their planning, design and building teams and will be supported by clinical teams including infection prevention and control teams. It will assist the design or refurbishment of hospitals/ health and social care settings to reduce and prevent the occurrence of healthcare associated infections (HCAIs) and improve service user safety.

1.2 Scope

Target Users

This guideline is intended for use in planning, designing, building and refurbishing any health and social care setting. As such, it is expected to be used by Capital and Estates staff and planners, management teams in acute and community health and social care settings, clinical staff and infection prevention and control professionals, quality and risk managers, design teams, those involved in the management and maintenance of buildings and construction contractors. It is intended to support those working within the HSE. While the principles apply equally to non-HSE facilities, the infection prevention and control (IPC) expertise for input should be sought for refurbishment or maintenance projects or building of new facilities in line with national standards, please refer to the following two documents:

https://www.hiqa.ie/sites/default/files/2018-09/National-Standards-for-IPC-in-Community-services.pdf

https://www.higa.ie/sites/default/files/2017-05/2017-HIQA-National-Standards-Healthcare-Association-Infections.pdf

1.3 Out of Scope

This guideline does not apply to social care settings of a 'home-type' environment that would have 5 or fewer service users.

It is not intended to be used to inform inspections of existing buildings, or to be used to retro fit or modify buildings already beyond tender agreed stage.

1.4 Objectives

To ensure infection prevention and control requirements are considered and incorporated as part of any new build, refurbishment or any internal works in HSE facilities and organisations funded by the HSE.

1.5 Outcomes

Health and social care facilities should be planned to promote application of standard and transmission based precautions to keep staff, service users and others safe from preventable infections, whilst complying with health and safety legislation and compliance with regulatory standards as determined by HIQA. This will help reduce and prevent the occurrence of HCAIs and improve service user safety, identify and mitigate against infection prevention and control risks.

1.6 PPPG Development Group

AMRIC Team, Capital and Estates, and HCAI Clinical Advisory Group.

1.7 PPPG Development Governance Group

Antimicrobial Resistance and Infection Control Oversight Group.

1.8 Glossary of Terms

AMRIC – Antimicrobial Resistance and Infection Control
CAG – Clinical Advisory Group
CEO - Chief Executive Officer
HBN – Health Building Note
HCAI – Healthcare Associated Infection
HIQA - Health Information Quality Authority
HAS – Health and Safety Authority
HSE – Health Service Executive
HTM - Health Technical Memoranda
IPC – Infection Prevention and Control
LTRCF- Long Term Residential Care Facility
NCEC – National Clinical Effectiveness Committee
RCF – Residential Care Facility
Service user – relates to residents/patients/clients etc.
AGP : Aerosol Generating Procedure

CDC : Centers for Disease Control and Prevention
CFD : Computational fluid dynamics
CIBSE: Chartered Institution of Building Services Engineers
ECDC : European Centre for Disease Control
HCID : High Consequence Infectious Diseases
HLIU : High level isolation units
HPSC : Health Protection Surveillance Centre
HSA: Health and Safety Authority
IHFG: International Health facility guidelines
ISEN: International Standards European standard
PPPG: Policies, Procedures, Protocols and Guidelines
PPVL : Positive pressure ventilation lobby
RDS: Room data sheets
SARI: Severe Acute Respiratory Infections
TGD : Technical Guidance Document
WHO: World Health Organization

2.0 DEVELOPMENT OF PPPG

This guidance was originally developed by the HSE AMRIC team and HSE Capital and Estates Leads. Since the first publication date in 2019, this guidance has been reviewed and updated to reflect:

- Best practice guidance including international best practice and published international guidance in relation to IPC and Health Building Notes
- Feedback from relevant stakeholders and their experience of issues presenting with the practical implementation of the guidance
- Lived experience from COVID-19 pandemic response.
- Publication of NCEC IPC clinical guidance (published July 2023)

This guidance is agreed under the governance arrangements in place for the sign off and publication of AMRIC guidance.

3.0 BACKGROUND AND CONTEXT OF THE ROLE OF BUILT ENVIRONMENT IN HEALTHCARE ASSOCIATED INFECTIONS

Prevention and control of healthcare associated infection and the management of antimicrobial resistance requires a multi-disciplinary approach. This includes adequate space and facilities in all areas to support best infection prevention and control practice, including appropriate service user accommodation. The fundamental infection prevention and control practices that should apply in all health and social care settings at all times are referred to as standard precautions.

Single occupancy rooms

Single room isolation of people for infection prevention and control purposes is at times required for control of suspected or confirmed communicable diseases, including in residential settings. Single

room accommodation is preferable for residents in long stay facilities as this may be the person's home for many years. However, use of single room isolation, particularly in residential care facilities, needs to be balanced against the psychosocial needs of the service user. Where appropriate provisions are made, the rate of falls in single service user rooms need not be higher than for multiple-bedded rooms [2]. Single rooms can facilitate visitors and family members to play a greater role in the care of the person.

There is a requirement for a high proportion of single en suite rooms to support staff delivering appropriate care for service users. Single rooms with en suite facilities should be the norm for patient accommodation in new build acute hospital facilities. However, it is appropriate to consider some provision for two-bed units to support care of service users for whom single room accommodation may be inappropriate or stressful. Where such provision is made, each service user should have their own toilet facility.

In addition to the above general requirement, there is a need to accommodate some people infected with, suspected to be infected with, or confirmed to be carrying certain types of bacteria or viruses, to support the implementation of transmission based precautions. These are precautions additional to standard precautions and are in three categories: contact precautions, droplet precautions and airborne precautions.

The most commonly required category of transmission-based precautions is contact precautions. A standard single service user room with en suite sanitary facilities is sufficient to support implementation of contact precautions. [3].

Single occupancy rooms with specialist air handling

To support implementation of airborne precautions, there should be a proportion of single en suite rooms with specific additional requirements, including ventilation controls.

In some settings, there is also a requirement for a proportion of single rooms with specific requirements including the provision of ventilation systems that are capable of maintaining control to provide protection to some people who are profoundly vulnerable to infection for a period of time. This is called protective isolation, and typically applies to particular specialist wards in an acute hospital setting.

It is important that facility designs allow for flexibility of use over time and planning for future service requirements. Health and social care facilities are likely to have a life span of many decades, during which time, there are likely to be considerable advances in healthcare technology, new and emerging infections and changes in the way in which healthcare is delivered.

Ventilated single occupancy rooms

Containment of certain bacteria and viruses that are routinely spread by the airborne route requires single occupancy rooms with en suite facilities that are specifically designed to minimise airborne

transmission. Tuberculosis, measles and chickenpox are universally accepted as routinely transmitted by the airborne route. The requirement in this setting is that the system prevents the flow of air from the room to other occupied spaces. This is because the air in the room is likely to carry pathogenic organisms that come from the person's airway. This is generally achieved by appropriate controlled mechanical ventilation which should ensure that the pressure cascades and air flow direction between the patient bedroom, ante-room and corridor or hallway are appropriate for the intended use of the room for the particular circumstance. This effect can be supported by ensuring the appropriate usage of the doors between the room and ante-room and between ante-room and hallway; these should be maintained closed except when entering or leaving the room.

Single occupancy rooms designed to minimise spread of infection by the airborne route are also required in some circumstances for service users with respiratory tract infections that are normally transmitted mainly by the droplet route (such as influenza and COVID-19). Certain types of procedures performed on service users with respiratory viral infection may generate infectious small liquid respiratory particles. Such procedures are known as aerosol generating procedures (AGPs), for example endotracheal intubation, and are associated with an increased risk of transmission of infection. When AGPs are performed on service users with respiratory viral infection, they should be performed in specifically designed rooms as per HTM03 and Health and Safety Authority (HSA) guidance. In addition, there is experience of increased risk of transmission when service users with respiratory viral infection require high flow oxygen or similar respiratory support. Such service users should also be managed in single occupancy en suite rooms where possible to minimise transmission.

Neutral pressure rooms with positive pressure lobby (PPVL)

In addition to requirement for single rooms as described above, certain people with profound immune deficiency, such as that which occurs immediately following bone marrow transplantation, require "protective isolation" in a room that protects them from exposure to contaminated air. This is because ordinary air contains fungal spores, which are harmless to most people but can cause very serious disease in profoundly vulnerable people. The requirement in this setting is that the system prevents inflow of unfiltered air, that is likely to contain fungal spores and other microorganisms, from the hallway or from outside the building into the room. This can be achieved by appropriate sealing of the room, by ensuring that the doors between the room and ante-room and between ante-room and hallway are maintained closed except when entering or leaving the room and by appropriate mechanical ventilation of the room. Mechanical ventilation ensures controlled inflow of air that is filtered to remove fungal spores and other microorganisms.

Rooms that allow for switching from negative pressure to positive pressure should be avoided. Such rooms have, in practice, resulted in frequent errors in relation to adjustment between their settings so that service users and staff are exposed to airborne infectious agents when the room is inappropriately set to positive pressure or that vulnerable service users are exposed to fungal spores when the room is inappropriately set to negative pressure. Isolation rooms with ventilation systems that are switchable are not allowed in new installations. In existing installations, where older switchable systems still exist, there must be a strict Standard Operating Procedure available to advise staff of their safe use. These systems must be clearly labelled as per HTM guidance.

“Neutral pressure” rooms with a positive pressure ventilated lobby (PPVL) support both airborne precautions for service users with airborne infections and “protective isolation” for service users with profound immune deficiency. They have advantages because they have this dual function. [4]

The ratio of airborne isolation rooms to general rooms required for a given hospital is dependent on local, regional, and potentially national prevalence of infections requiring airborne isolation (particularly tuberculosis), local IPC policy and national IPC strategy, and requirements for future emergency/ pandemic response planning.

High Level Isolation Units (HLIUs)

Detailed guidance is beyond the scope of this document.

When dealing with High Consequence Infection Diseases (HCIDs), a higher specification of infection control and quarantine facilities applies, which should be provided both regionally and nationally to cater for HCIDs. For details on the management of HCID cases, please see Infection Prevention and Control Guidance for the management of suspected/ confirmed High Consequence Infectious Diseases (HCIDs) in Acute Healthcare settings available at https://www.hpsc.ie/a-z/hcid/guidance/

Note - HBN-04-01-S1 exclusion clause 1.6.

The International Health Facility Guidelines (iHFG) following link provides some guidance on higher specification infection control/ quarantine facilities.

https://www.healthfacilityguidelines.com/ViewPDF/ViewIndexPDF/iHFG_part_d_complete

Reference should also be made to the following documents when designing such facilities for HCIDs.

1. (ECDC) Health Emergency Planning Preparedness for Important cases of high-consequence infectious disease. 2019
2. Bannister B, Puro V, Fusco FM, Heptonstall J, Ippolito G, Group EW. Framework for the design and operation of high-level isolation units: consensus of the European Network of Infectious Diseases. *Lancet Infect Dis.* Jan 2009;9(1):45-56
3. Sykes A. *An International Review of High Level Isolation Units.* Winston Churchill Memorial Trust 2018
4. Kingdom DoHU. Health Building Note 04-02 2013
5. Martin D, Howard J, Agarwal B, et al. Ebola virus disease: the UK critical care perspective. *Br J Anaesth.* May 2016;116(5):590-596

Number of isolation rooms

A review of airborne isolation room requirements in hospitals in Florida, based on Health Resources and Service Administration critical benchmarks, concluded that large regional hospitals should have at least one airborne isolation room per 75 acute beds; other acute hospitals should have one per 150 beds, and these should be located as close as possible to the emergency department [5]. The

International Health Facility Guidelines (iHFG) updated in 2022 suggest two negative pressure isolation rooms per 60 inpatient units

https://www.healthfacilityguidelines.com/GuidelineIndex/Index/Infection-Control

The Florida paper predates the COVID-19 pandemic, while the IHFG were updated to take account of lessons from pandemic response. In addition to the classical airborne pathogens listed above there is growing experience that other viruses, including, SARS-CoV-2 and influenza virus, can also spread by the airborne route in particular in context of certain medical procedures and in crowded settings with poor general ventilation. This experience requires an increased focus on ensuring adequate general ventilation in all healthcare buildings in the context of any new build or refurbishment work.

In the context of that experience, and noting the updated guidance referred to above, 1 negative pressure room per 75 beds should be considered a minimum for all new acute hospital builds and one negative pressure or positive pressure ventilated lobby (PPVL) room per 25 to 30 bed ward may be more appropriate. In a development on an existing site, the number of controlled pressure isolation rooms in the new build should take into account the need to compensate for deficits in controlled pressure isolation rooms in other inpatient areas on the site.

Please see the following document for more details:

https://www.healthfacilityguidelines.com/ViewPDF/ViewIndexPDF/iHFG_part_d_complete

Guiding principles for infection prevention input into buildings work

The basic guiding principles for infection prevention and control teams input into building/ construction work projects in healthcare settings include:

- Ensuring infection prevention and control (IPC) staff are central to key stages in designing new builds, refurbishing old builds, adding extensions, upgrading existing facilities and undertaking any building work that will impact on how care is provided to service users and others. The design and build should reflect the recommendations of the IPC staff, while taking account of project budget, scale and scope.
- Service user accommodation should be designed in a way that addresses a number of requirements related to IPC including:

- Maximising service user comfort and dignity
- Ensuring ease and safety of delivery of service user care
- Appropriate provision for family members and other visitors
- Minimising risk of transmission of microorganisms
- Adequate facilities for storage of equipment and supplies
- Adequate toilet and shower facilities designed and built to ensure rapid and complete drainage of all water, and to prevent backflow from drainage systems to the greatest extent practical.
- There is increasing emphasis on environmental microorganism reservoirs, for example hospital sinks, showers, and drains as cited in numerous research articles. Sinks can have complex associated pipework, difficult to eradicate biofilms and persistent contamination which can remain for prolonged periods acting as an environmental reservoir (Breathnach et al 2012, Weinbren 2020).
- Evidence about infection risks from sinks and shower drains is an evolving area and advice should be sought from Capital and Estates and IPC colleagues about sink and shower drain placement to reduce risks, and designs that support access for cleaning.
- Depending on the intended uses and susceptibility of the users, a clinical risk assessment may indicate the need to protect patients at high risk of certain infections, such as non-tuberculous mycobacteria, by eliminating the potential for exposure to water and associated drainage. The risk assessment should determine the appropriate location of wash-hand basins for patients and staff. For example, basins may need to be situated outside the patient area (such as in a lobby or corridor or en-suite) rather than within the patient's bedroom. This helps avoid exposure to sprays from the outlet and associated drainage system. The risk assessment may determine that shower facilities should be omitted at design for certain cohorts of at-risk patients, or where they are unlikely to be used frequently.
- Adequate number, design and placement of facilities to manage commodes in terms of storage and cleaning
- Hand hygiene facilities – optimising design, visibility and location of clinical wash hand basins and location of alcohol-based hand rub dispensers.
- Maintain a log of poorly draining plumbing fixtures and treatments of same and consider their upgrade/removal/remedial works to address poor draining facilities and backflow. Items used to unblock drains should be disposed of carefully or cleaned appropriately.
- Ensure that hand washing facilities are designated for that purpose only, and not for the disposal of fluids, medication etc. as these increase the bacterial numbers in a biofilm and impede drainage

leading to potential transmission of microorganisms to patients.

- A project water safety group (PWSG) should be appointed formally for acute in-patient accommodation projects, with representation from Capital & Estates, Design teams, IPC, Clinical staff, maintenance and the EMC (Environmental Monitoring Committee) where it exists. The PWSG should be empowered to ensure the design promotes the delivery of a safe building in terms of water safety, in particular for at-risk patient groups (as defined in NHS Technical Bulletin 2024/3)

- Environmental cleaning and decontamination – location, adequate storage, accessibility
- Building services and plant should be designed to mitigate infection prevention and control risks (for example, removal of dead legs in water supply systems) and to incorporate efficient and optimised maintenance regimes (easy access allowing routine flushing/ testing)
- Ensuring ventilation is appropriate for the intended use of each area.

The recommendations contained in this document are intended to minimise the risk of transmission of microbes for service users receiving care in hospitals and other health and social care settings.

4.0 RECOMMENDATIONS

Part 1 Governance

4.1 Planning and Governance

4.1.1 Planning and Design

4.1.1.1 Planning and design of new health and social care facilities, or major refurbishments, should take account of relevant UK NHS Health Technical Memoranda (HTM), Health Building Notes (HBN), NHS Estates Technical Bulletin (NETB) or an equivalent international guidance document that has been approved by HSE Capital and Estates.

4.1.1.2 Initial planning and design of all new builds, upgrades and refurbishments should maximise the available space for service user accommodation and support services within a design that allows for future reconfiguration of inpatient accommodation and evolving design approaches to mitigate risks of HCAI.

4.1.1.3 Community setting advice should be sought from HIQA at project briefing stage.

4.1.1.4 In the design and planning of new developments cognisance should be taken of future service needs and the flexibility of layouts and functions should be considered.

4.1.1.5 The overall shape and layout of new healthcare facility buildings, upgrades or refurbishments should optimise staff workflow, service user comfort, service user flow, goods and consumables flow/ storage, aspects of water safety, waste flow, storage while providing for cleaning and disinfection facilities. Service user and staff comfort, health and safety requirements need to be addressed while allowing for optimal delivery of healthcare in consultation with infection prevention and control staff.

4.1.1.6 All new builds and refurbishments should be designed with future developments/ requirements in mind – including requirements for surge response in a pandemic as per site development control plan.

4.1.1.7 Buildings should be designed to support future service requirements such as may be required during an outbreak/ pandemic. Consideration should be given as to how the building could, to the greatest practical extent, support a self-contained area with capacity to receive and care for service users and provide services for staff working in that area if required in an outbreak/ pandemic. This may require multiple access points to stream service users through separate entrance and exits. This may also require modification of the ventilation of that area to support a different use for the area, such as for service users with infectious diseases transmissible through the air.

Building design should also take cognisance of the HSE Climate Action and Sustainability Strategy 2023-2050

https://www.hse.ie/eng/about/who/healthbusinessservices/national-health-sustainability-office/climate-change-and-health/hse-climate-action-strategy-2023-50.pdf

4.1.1.8 In relation to areas other than single service user rooms, consideration should be given to facilitating ease of placement of mobile or fixed partitions if required as part of the response to an outbreak/ pandemic.

4.1.1.9 If partitions are considered in specific circumstances, a risk assessment is required. The risk assessment should take into account the size of the area, can minimum distancing be maintained, the type of service being delivered and the ease of access to bed space required during emergencies (for example a cardiac arrest trolley).

If partitions are used, they must be made of material that is smooth and cleanable preferably with an impervious surface (no grooves).

https://www.england.nhs.uk/publication/infection-control-in-the-built-environment-hbn-00-09/ (Section 3.140)

4.1.1.10 All clinical areas should have capacity for appropriate ventilation for their intended use as per HTM03, HPSC, H.S.A, CIBSE guidance and Irish Dept. of Housing local Government and Heritage Building Control Technical Guidance Documents (TGDs).

HTM 03-01 Part A provides guidance on the ventilation requirements of different room types in the clinical setting including minimum air change rates.

https://www.england.nhs.uk/publication/specialised-ventilation-for-healthcare-buildings/

Where local exhaust ventilation is required, it is preferable that it is located at the bedhead.

Computerised Fluid Dynamic (CFD) modelling and test methods as per HTM03, HBNs, ISEW, ISO14644 series are useful methods and design tools that can be applied to demonstrate adequate ventilation in rooms for managing service users with respiratory viral infections. It has particular benefit where there is a need to demonstrate a ‘clean air path’.

4.1.1.11 Alcohol-based hand rubs should be placed at entrances and exits and at the point of care, as appropriate, based on risk assessment, in relation to service users for that setting.

4.1.1.12 Walls: Smooth cleanable impervious surfaces are recommended in clinical areas. Design should ensure that surfaces are easily accessed, will not be physically affected by detergents and disinfectants, and will dry quickly. Additional protection to the walls should be considered to guard against gouging/ impacts with bedheads and trolleys. Wall surfaces should be maintained so that they are free from fissures and crevices (see also Health Building Note 00-10 Part B – 'Walls and ceilings').

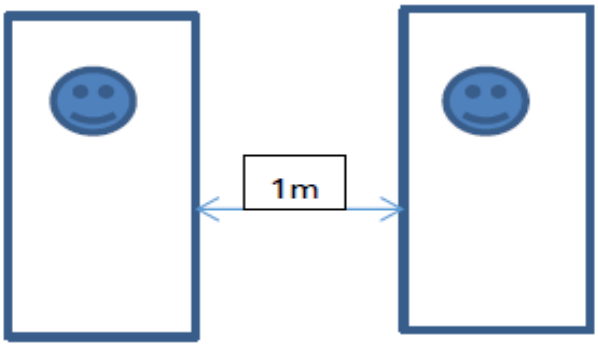
4.1.1.13 Distancing (including physical distancing)

The following reflects minimum distancing that meets IPC requirements as informed by COVID-19 pandemic and in line with NCEC National Clinical Guideline No. 30 [https://www.gov.ie/en/publication/a057e-infection-prevention-and-control-ipc/].

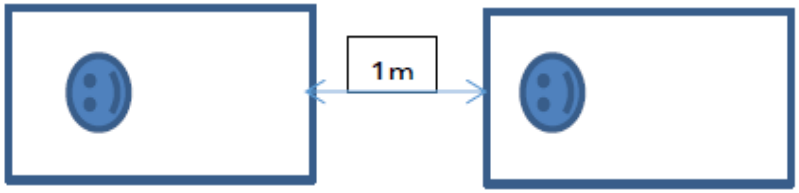
New builds and refurbishments should ensure that these requirements are achieved.

Spacing between beds and trolleys

When lined up side to side **a minimum distance** of 1m is required from edge of bed/ trolley to edge of bed/trolley.



When lined up end to end **a minimum distance** of 1m is required from foot of bed/ trolley to head of bed/ trolley.



Corridors

Newly constructed corridors should be of sufficient width to facilitate minimum distancing between people passing in the corridor. Where practical, the layout should support unidirectional flow when this is required.

Lifts/ Elevators

When installing new lifts they should be of sufficient size to facilitate minimum distancing.

Waiting areas

The design of waiting areas should facilitate minimum distancing between service users/ couples. A distance of 1m should be maintained between individual service user seats and between paired seats for couples (that is to allow a service user and accompanying person who is supporting them to sit side by side). The distance applies side to side and between seats in different rows. All seats should face the same direction (as per arrows) to avoid people being seated face to face. Separate identified and dedicated access routes for service users with suspected or known airborne infectious disease is required to reduce **environmental contamination exposure risk** during their movement to and within the Emergency Department to a dedicated isolation room facility**.**

4.1.2 Involvement of infection prevention and control teams and HSE Capital and Estates

4.1.2.1 HSE Capital & Estates and AMRIC should identify infection prevention and control liaison expert lead from both HSE Capital & Estates and AMRIC at national level to input to national estates frameworks for new builds; local or regional IPC input should also be sought in relation to IPC requirements for new builds, infrastructural developments and the refurbishment/ upgrades of existing facilities. The advice of clinical specialists should be sought, as appropriate to ensure that any involvement of specialist services/areas/departments are considered at a planning and design phase.

4.1.2.2 Local IPC advisors must be involved at all stages of new healthcare developments; particularly development briefing/ planning meetings, design development, planning, construction planning, equipping and commissioning of the new facility. The local IPC advisors must be represented on the client project team for the new development. Their advice and recommendations should be consistent and aligned to national IPC guidance and the recommendations detailed in HBN 00-09 (“Infection control in the built environment”) [6].

4.1.2.3 There should be consultation with all grades of staff who will be potential users of the facility early in the briefing/-planning phase, to ensure adequate space is allocated for all services, including ancillary or support services (such as storage and collection and disposal of healthcare waste). Service users and other potential stakeholders should be included in the consultation process, where relevant.

4.1.2.4 IPC requirements must be incorporated in the design and fit-out of all service user care areas in acute and community healthcare facilities and community residential facilities. These include

inpatient care areas, outpatient departments, day wards, operating theatres, physiotherapy departments, accident and emergency departments, central sterile supplies departments, primary care settings etc. The design of such areas should take account of the relevant Health Technical Memoranda (HTMs) which give comprehensive advice and guidance on the design, installation and operation of specialised building and engineering technology used in the delivery of healthcare (or its equivalent), where one exists.

4.1.2.5 Prior to Construction Contract Award, the following items need to be considered, specified and incorporated (as appropriate) into any tender specifications and documentation, to form part of the suite of Construction Contract documentation:

- The requirement for all works to be carried out in compliance with the latest version of the 'National Guidelines for the Prevention of Nosocomial Aspergillosis' HPSC https://www.hpsc.ie/a-z/respiratory/aspergillosis/guidance. Any and all requirements for aspergillosis protection and enabling works and control parameters need to be reviewed, considered and risk assessed to determine the appropriate measures required depending on the type of healthcare facility and service user/client risk factors, and designed with the Client Stakeholder Group and Project Design team
- The requirement for work permit system/submission of method statements to be presented for review and comments to the client stakeholder team in line with local governance structures (including infection prevention and control representation), as appropriate, with adequate review periods agreed at the outset
- Any and all testing and monitoring protocols required during construction works as well as prior to substantial completion, handover and occupancy, and assignment of responsibility for same, including scheduling, testing frequencies and periods, intervals, methods, timelines for results and results reviews and actions need to be clearly specified and set out; responsibility for these protocols lie with estates team
- With respect to **community** settings in which the risk profile of the service users is generally in a lower risk category, the focus should be on the components of the guidance that address risk assessment, dust containment and thorough cleaning after completion of works. Where higher risk residents or service users are identified, other mitigations should be deployed. There is not a requirement for air sampling after completion of works; instead the focus at that point should be on thorough cleaning during and after completion of works.

4.1.3 Carrying out the works

4.1.3.1 Appropriate safeguards must be put in place to minimise the risk of transmission of infection during the construction period, with particular reference to prevention of aspergillus and legionella transmission as appropriate to the type of healthcare facility following risk assessment, in accordance with relevant national guidelines [7].

4.1.3.2 When working in or around "live" healthcare facilities or where construction work may impact on the provision of services, a work permit system/method statement must be in place and adhered to by all parties. Prior to any works commencing, the works (and the time period for same) must be signed off by the appropriate parties (which may include local infection prevention and control professionals). The contractors (and or sub-contractors) must abide by the terms of the work permit. The work practices must be adequately supervised and be compliant with the local infection prevention and control requirements.

4.1.3.3 Technical details of submissions for building services, systems, finishes, infrastructure, plant, ironmongery and Group 1 items should be presented for review and comment to the infection prevention and control stakeholder team, as appropriate, with adequate review periods permitted.

4.1.3.4 Local IPC staff should be involved and have final sight of all Room Data Sheets (RDSs) prior to final sign- off. They need to be involved in not only the room layout, but also all the room fitting out, plumbing in particular placement of sinks/ bedpan washers/ sluice hoppers, all of which are contained within the RDSs.

4.1.4 Sign-off of completed projects

4.1.4.1 On completion of all works, and prior to substantial completion certificate being issued, the IPC team/ project team will be afforded the agreed and allocated agreed time periods, intervals and frequencies for undertaking all appropriate testing and monitoring in accordance with the contract documentation. The contract timeline will account for these testing timelines (as agreed prior to tender) and should not incur delays to handover timelines.

4.1.4.2 On completion of a project the design team (usually the architect normally) will issue a Certificate of Substantial Completion. This certificate will state that the works are substantially complete and are in accordance with the design and specifications for the project. The relevant members of the Design Team will also, where necessary, issue a statement of compliance with Planning Permission, Fire Certification and Building Regulations.

4.1.4.3 On receipt of practical completion, the local IPC team will support and provide advice as relevant to the Design team, HSE Capital & Estates and Service Management in snagging, de-snagging and commissioning the facility.

Part 2 – Acute Hospital Settings – Infection Prevention and Control

4.2 Inpatient accommodation for new hospital builds or renovations

These infection prevention and control recommendations apply to:

- New hospital builds (that is where a wholly new acute hospital facility is being constructed)
- Additions to existing hospitals, such as where newly constructed inpatient accommodation is added on an existing hospital site, such as the addition of a new ward block or wing
- Renovations and infrastructural developments to existing hospital in-patient accommodation areas such as where an existing inpatient accommodation area is entirely re-modelled, including an extension to provide significant increase in the footprint of the inpatient accommodation area

4.2.1 Proportion of single patient rooms

Newly built acute hospital inpatient accommodation should generally comprise entirely or almost entirely of single service user en suite rooms. Some provision for two bed units (although with individual service user toilets) may be considered where appropriate to meet the overall care needs of some people [7].

4.2.2 Single service user room design

Please read this in conjunction with the section on guiding principles for infection prevention input into buildings work.

All single service user rooms should have en suite shower and toilet facilities. All single service user rooms should have a clearly visible clinical hand wash basin (HBN 00 -09), in close proximity to the entrance to the room and recommended to be 2m from the service user bed (in addition to a basin for service user use, included as part of the en suite facilities). The en suite facilities should be for the sole use of the person occupying the room, however, modifications to this arrangement should be based on a local risk assessment. They should be designed and installed so as to minimise risk of pooling of water after use or reflux or back splash from the drainage system

The design and space requirements of single service user rooms should follow the specifications outlined in UK HBN 04-01 “Adult In-patient Accommodation” Supplement, or equivalent international guidance document.

Single service user rooms in critical care areas (for example intensive care units) should have a minimum floor area of 26m^2 (not including en suite sanitary facilities, if such facilities are present) [HBN 04-02].

Single occupancy en suite rooms should be designed in a way that balances the need for maximised visibility of service users by healthcare staff with the need for service user privacy, with consideration for the cohort of service users and the level of monitoring required.

In the case of hospital facilities for children, the design should take account of the need to accommodate a parent or guardian in the room to accompany the child.

In the case of designing maternity facilities the requirements of a mother to have an accompanying partner should be considered.

4.2.3 Proportion of airborne isolation rooms

The ratio of airborne isolation rooms to general rooms required for a given hospital is dependent on local, regional, and potentially national prevalence of infections requiring airborne isolation, local IPC policy and national IPC strategy, and requirements for future emergency/ pandemic response planning.

As a guide, one single occupancy en suite room with negative pressure (relative to corridor and adjoining spaces, other than en suite) per 75 beds should be considered a minimum for all new acute hospital builds and one negative pressure or positive pressure ventilated lobby (PPVL) room per 25 to 30 bed ward may be more appropriate [1].

Single occupancy en suite rooms with mechanical ventilation to support management of a person with an airborne infection should be provided within both critical and non-critical care areas including emergency departments.

Newly built emergency departments and critical care units should include at least one such airborne isolation room based on local risk assessment and infrastructural/ geographical requirements.

Some hospital units will require a higher proportion of isolation rooms with controlled ventilation, based on local risk assessment. These decisions should be made in consultation with the IPC in the hospital. Such units could include:

- Those likely to accommodate service users with infections transmissible by the airborne route, such as infectious disease units or respiratory units
- Those likely to house service users with profound immunosuppression, requiring protective isolation, such as solid organ or bone marrow transplantation units

4.2.4 Airborne isolation room design

Airborne isolation rooms **should not** be based on a “switchable” negative/ positive pressure design. HBN 04-01 Supplement 1
https://www.england.nhs.uk/wp-content/uploads/2009/12/PRN00979-health-building-note-04-01-supplement-1-special-ventilated-isolation-facilities-for-patients-in-acute.pdf [Updated 2024]

Airborne isolation rooms require a dedicated ante room, which should have a minimum floor area of $4m^2$.

4.2.5 Multiple patient room design

Where rooms accommodating more than two beds must be accepted in a plan for major renovation they should not contain any more than four beds per room (HBN 00-09).

Multiple-bedded rooms should be designed in a way that maximises the potential for future reconfiguration of such rooms.

All multiple-bedded rooms should include shower and toilet facilities for the sole use of the people occupying the room.

There should be a minimum floor space for each bed of 19m^2 (3,600mm x 3,700mm) space which includes the bed, to allow for clinical activity and potential future reconfiguration of rooms.

4.2.6 Ward/ unit layout

Design of wards/ units that include in-patient accommodation should take account of recommendations set out in UK HBN-04, or equivalent international guidance document.

Wards/units should be designed so that the flow of goods, services and waste materials is such that cross-contamination between contaminated and clean items is avoided.

In areas such as emergency departments and outpatient services where individual service user rooms with own toilet are not the model, there should be sufficient toilet facilities to manage needs at peak occupancy. There should be separate toilet facilities for those awaiting care and those receiving care.

At planning stage, consideration should be given to how the facility would manage separate entrance / triage/ waiting area if these were required during an outbreak/ pandemic response.

4.2.7 Ward/ unit fixtures and fittings

Furniture, surface finishes and other fixtures and fittings within any ward/unit that includes in-patient accommodation should be easily cleaned and disinfected, and designed to minimise the risk of transmission of infection, in line with the recommendations in HBN 00-09 2013, or equivalent international guidance document.

Advice should be sought, early in the design phase, on selection of furniture, surface finishes and other fixtures and fittings from the infection prevention and control team.

4.2.8 Hand hygiene facilities and clinical hand wash basins

In new builds and in works as detailed in section 4.2 the following apply:

- Hand hygiene facilities in service user care areas should follow the recommendations included in the Department of Health (2023) NCEC National Clinical Guideline No. 30 Infection Prevention and Control, available at: https://www.gov.ie/en/publication/a057e-infection-prevention-and-control-ipc/

- Wall-mounted hand hygiene stations with alcohol-based hand rub should be available at all entrances and exits and outside every room/ ward.

Alcohol based hand rub dispensers should be available at the point of care, as appropriate. Consideration should be given to their placement and this should be locally assessed for each individual area.

As detailed in the section on guiding principles for infection prevention input into buildings work, in circumstances where a risk assessment has determined the need to place a clinical hand wash basin outside a patient area, such as in a lobby or corridor (recessed) or en suite rather than within a patient's bedroom, then, clinical hand wash basins should:

- be dedicated for the purpose and labelled accordingly
- conform to HBN 00-10 Part C Sanitary Assemblies (there may be situations, for example in mental health facilities, where alternative hand washing facilities such as anti-ligature sinks are required; this should be informed by local risk assessment)
- be accessible and located so that they are convenient for use
- not be situated behind curtain rails
- be a minimum of 2m distance from hand wash basin to the service user bed space to minimise the potential risk of splashing into the service user environment. Factors which promote spray/splashing include:
  - the depth of the clinical hand wash basin/patient's sink, as shallow basins promote splashing and risk contamination of hands during handwashing
  - the position of the tap relative to the drain (water directly hitting the drain promotes splashing
  - It is important to control water pressure and not to position the water outlet jet spray over drainage outlet.

- Some engineering modifications therefore can minimise contamination of surrounding surfaces. These include:
- improved sink design
- the use of splash reducing sanitary ware
- the use of splash guards or barriers, as appropriate
- reorganisation of the surrounding space, ensuring that there is allocated storage space of personal items and equipment away from these areas.

Where a risk assessment has determined the need to remove a clinical hand wash basin from a single service user room and place in the en suite as part of the en suite facilities (space permitting), the clinical hand wash basins use can be designated for both service user and clinical staff. The risk assessment should include access to and use of alcohol based hand rub as appropriate by staff; workflow considerations should include access to proximal hand wash facilities including en suite if required by staff. In new builds or extensive refurbishments, it may be appropriate to consider touchless door opening technologies.

4.2.9 Sanitary assemblies

Refer to the HBN 00 10 Part C Sanitary Assemblies for details

https://www.england.nhs.uk/wp-content/uploads/2021/05/HBN_00-10_Part_C_Final.pdf

- All single service user rooms should have en suite shower and toilet facilities. They should be designed and installed so as to minimise risk of pooling of water after use or reflux or back splash from the drainage system

  Practical considerations when designing or refurbishing en suite facilities include the following:
  - location of the shower drain outlet, do not place directly under the nozzle spray
  - location of the shower drain, do not place where the patient stands within the shower, (where possible)
  - Ensure that shower drains are easy to clean and disinfect
  - Consider shower outlets that have a stainless steel lid to help prevent spray and backflow into the environment
  - Consider a backflow device within the shower outlet drain which can be removed for cleaning/ disinfection.

- There is inconclusive evidence from an infection prevention and control perspective to have a consensus in relation to whether toilet seats should have a lid, or not. Advice will be given on a case by case basis taking all factors into account (e.g. type of setting, client vulnerability/ disability, requirements for coloured toilet seats to assist patients with cognitive loss/dementia etc.)
- If toilet seat lids / covers are to be considered, consultation should take place with the infection prevention and control team at the planning stage, although it must be noted that they are not recommended for independent wheelchair and assisted toilets, as they prevent the use of the backrest.
- Decisions regarding the number and location of grab rails should be guided by risk assessment, taking into account factors including the patient population, infrastructure, facility requirements, spacing and ergonomics.
- Regular cleaning schedules mitigate against the potential risk of cross transmission.

4.2.10 Dirty Utility

Dirty utility rooms should conform with HBN 00-09 IPC in the built environment, with a clear demarcation between clean/unused equipment and soiled/dirty equipment, clean and dirty areas should be kept separate and the workflow patterns of each area should be clearly defined.

Bedpan washers/macerators: There is no persuasive evidence or consensus of expert opinion to favour use of either reusable or disposable bedpans or urinals from an infection prevention and control perspective. Whichever approach is chosen, there is a requirement from an infection prevention and control perspective for appropriate equipment (bedpan washer disinfectors or macerators) that is appropriately installed and maintained and which can be repaired promptly.

Planning the appropriate number of bedpan washers, macerators and other critical waste disposal services should take account of the need for continuity of service during equipment failure or scheduled downtime or as otherwise required by local authority. This is particularly important in areas intended for high-risk infectious service users and areas intended to have capacity to function as self-contained units.

Consideration should be given to the location of the dirty utility room, they should be easily accessible in relation to patient's rooms.

4.2.11 Cleaners' room

A separate cleaner's room should be provided, inclusive of a janitorial unit, which is a combination of bucket sink and wash-hand basin used by domestic services staff for the disposal of liquid waste. These units are beneficial where space restricts the installation of a separate sink and wash-hand basin. Refer to HBN 00-10 part C Sanitary assemblies for further detail. Cleaners should have sufficient and appropriate storage for cleaning consumables and cleaning equipment.

4.2.12 Layout and flow

Acute settings/wards and departments should be designed so that the flow of service users, staff, equipment, goods, trolleys and waste materials is such that cross infection between service users is avoided and cross-contamination between contaminated pathways and clean pathways is avoided.

4.2.13 Ventilation

It is important to ensure adequate ventilation as per HTM03, HBNs in all areas consistent with comfort and without introducing other potentially greater risks (see above relevant section).

4.3 Re-modelling of in-patient accommodation in existing acute hospitals

These recommendations apply to internal renovations or re-modelling of existing in-patient accommodation areas. Such renovations may involve major internal construction work, including re-modelling, which may include removal of external walls to ensure compliance with infection prevention and control requirements.

4.3.1 Infection prevention and control and hospital refurbishment

The recommendations outlined in Recommendation 4.1 apply to all renovation, re-modelling or refurbishment projects in existing acute hospitals.

Any such project in existing acute hospitals should be seen as an opportunity to improve infection prevention and control infrastructure.

4.3.2 Hospital development plans

Acute hospitals should produce a development control plan/ spatial strategy, in consultation with the local infection prevention and control team, to examine ways of maximising the proportion of single rooms with en suite facilities and minimising the proportion of multiple-bedded rooms and the number of beds in each multiple-bedded room. The plan should take account of current and future bed capacity and bed usage, in line with HSE regional and national policy. The plan should prioritise delivery of improved infection control-related infrastructure within as brief a time period as possible. The goals of ensuring that all multiple-bedded rooms have a toilet dedicated for use of people in that room and that multiple-bedded rooms with more than four beds are eliminated merits high priority in any such plan.

4.3.3 Internal reconfiguration

If an extension to the existing hospital footprint, or construction of new hospital buildings, is not planned within 10 years, hospitals should aim to convert existing in-patient accommodation in line with the recommendations outlined in this document.

Where the recommendations in section 3 are not achievable within the existing hospital footprint, hospitals should reconfigure existing inpatient accommodation to achieve a mixture of single and multiple-bedded rooms with avoidance of rooms with more than four beds to the greatest extent possible.

Part 3 – Community Settings - Infection Prevention and Control

4.4 Service user accommodation for new builds or major renovations in community settings

These recommendations are similar to those outlined in Recommendation 4.1 above and apply to:

- New Residential Care Centres (that is where a wholly new facility is being constructed)
- Major additions to existing Residential Care Facilities (that is where newly constructed resident accommodation is added on an existing site, such as the addition of a new ward block or wing)
- Major renovations to existing residential accommodation areas (that is where an existing residential accommodation area is entirely remodelled, including an extension to provide significant increase in the footprint of the accommodation area)

4.4.1 Proportion of single person rooms

Newly built accommodation in residential care facilities should generally be made up of single person en suite rooms unless there is a specific requirement for some twin rooms to meet the needs of some residents. This relates to people's general preference and as the facility may be the person's home for the foreseeable future.

4.4.2 Single resident room design

All single resident rooms should have en suite shower and toilet facilities.

In residential care facilities, there is no requirement for a clinical hand wash basin in every resident's room. If clinical hand wash basins are omitted from some bedrooms they shall be strategically located along the adjacent access corridor.

It is recommended that residential care facilities should be designed to include some resident rooms with a clinical hand wash basin to cater for the care of residents with specific needs; for example, this might include residents with diarrhoea, stomas or discharging wounds. The number of such rooms required will depend on the intended profile of residents and local risk assessments. The resident's hand wash basin in a room should not be considered as serving a dual purpose as both a resident and/or clinical hand wash basin.

Single person rooms, including en suite sanitary facilities, should have a floor area of at least 23.5m2. This should include en suite facilities of 4.5m2

There should be sufficient space for residents to store and easily access their personal belongings

Single person rooms should have adequate seating space for family and other visitors that does not interfere with care of the person.

4.4.3 Hand hygiene facilities

When installed, the following should apply to clinical hand wash basin:

- Should conform to HBN 00-10 Part C Sanitary Assemblies; however, there may be situations e.g. mental health facilities where alternative hand washing facilities are required and in these circumstances a local risk assessment should be conducted, (see previous point 4.2.8)

- Should be accessible and located so that they are convenient for use; they should not be situated behind curtain rails, or in an area which can lead to potential contamination into the surrounding area from splashing
- Hand hygiene can generally be supported by having a clinical hand wash basin within easy walking distance of each room together with appropriate access to alcohol-based hand rub. As a guide, there should be approximately 1 clinical hand wash basin for every 10 resident rooms
- Wall-mounted hand hygiene stations with alcohol-based hand rub should be available at all entrances and exits and outside every room/ward, clinical areas and at point of care. Consideration should be given to their placement and this should be locally risk assessed for each individual area and service user needs
- When considering clinical hand wash basin placement there should be a minimum of 2m distance from hand wash basin to the service user bed space to minimise the potential risk of splashing into the service user environment.

  Factors which promote spray/splashing include:
  - the depth of the clinical hand wash basin/patient's sink, as shallow basins promote splashing and risk contamination of hands during handwashing
  - the position of the tap relative to the drain (water directly hitting the drain promotes splashing
  - It is important to control water pressure and not to position the water outlet jet spray over drainage outlet.

- Some engineering modifications therefore can minimise contamination of surrounding surfaces. These include:
- improved sink design
- the use of splash reducing sanitary ware
- the use of splash guards or barriers, as appropriate
- reorganisation of the surrounding space, ensuring that there is allocated storage space of personal items and equipment away from these areas.

Hand hygiene facilities in service user care areas should follow the recommendations included in the Department of Health (2023). NCEC National Clinical Guideline No. 30 Infection Prevention and Control. Available at: https://www.gov.ie/en/publication/a057e-infection-prevention-and-control-ipc/

4.4.3 Multiple resident room design

- Multiple-bedded rooms should not contain any more than **two** beds per room
- Multiple-bedded rooms should be designed in a way that maximises the potential for future reconfiguration of such rooms
- All multiple-bedded rooms should include shower and toilet facilities for the sole use of the people occupying the room
- The layout of the bedroom should allow for care activity to take place adjacent to the bed without intruding into the adjacent bed space.
- There should be sufficient space for residents to store and easily access their personal belongings

4.4.4 Unit layout

Layout and flow

Units should be designed so that the flow of service users, staff, equipment, goods, trolleys and waste materials is such that cross infection between service users is avoided and cross-contamination between contaminated pathways and clean pathways is avoided.

Layout should be such so as to facilitate cohorting and segregation of a group of residents in one self-contained section of the unit where required in the context of an outbreak of infectious disease.

Storage

The ward should be planned and designed to ensure sufficient storage of ward equipment and supplies and also with designated space to store service user assistance equipment/personal items to avoid clutter in patient areas and adjacent to CHWBs due to the risk of splashing into the surrounding area and contamination of patient care equipment, Refer to HBN 00-09.

4.4.5 Dirty utility rooms

- Dirty utility rooms should conform with HBN 00-09 IPC in the built environment, with a clear demarcation between clean/unused equipment and soiled/dirty equipment, clean and dirty areas should be kept separate and the workflow patterns of each area should be clearly defined. Consideration should be given to the location of the dirty utility room, they should be easily accessible in relation to resident's room.

- Bedpan washers/macerators: There is no persuasive evidence or consensus of expert opinion to favour use of either reusable or disposable bedpans or urinals from an infection prevention and control perspective. Whichever approach is chosen, there is a requirement from an infection prevention and control perspective for appropriate equipment (bedpan washer disinfectors or macerators) that is appropriately installed and maintained and which can be repaired promptly

- Planning the appropriate number of bedpan washers, macerators and other critical waste disposal services should take account of the need for continuity of service during equipment failure or scheduled downtime. This particularly important in areas intended for high-risk infectious service users and areas intended to have capacity to function as self-contained units.

4.4.6 Cleaners' room

A separate cleaner's room should be provided, inclusive of a janitorial unit, which is a combination of bucket sink and wash-hand basin used by domestic services staff for the disposal of liquid waste. These units are beneficial where space restricts the installation of a separate sink and wash-hand basin. Refer to HBN 00-10 part C Sanitary assemblies for further detail. Cleaners should have sufficient and appropriate storage for cleaning consumables and cleaning equipment.

4.4.7 Unit fixtures and fittings

- Furniture, surface finishes and other fixtures and fittings within any unit that includes inpatient accommodation should be able to withstand cleaning and disinfection, and designed to minimise

the risk of transmission of infection, in line with the recommendations in UK HBN 00-09, or equivalent international guidance document

- Advice should be sought, early in the design phase, on selection of furniture, surface finishes and other fixtures and fittings from the infection prevention and control team

4.2.8 Sanitary assemblies

Refer to the HBN 00 10 Part C Sanitary Assemblies for details

https://www.england.nhs.uk/wp-content/uploads/2021/05/HBN_00-10_Part_C_Final.pdf

- All single service user rooms should have en suite shower and toilet facilities. They should be designed and installed so as to minimise risk of pooling of water after use or reflux or back splash from the drainage system
- Practical considerations when designing or refurbishing en suite facilities include the following:
  location of the shower drain outlet, do not place directly under the nozzle spray
  location of the shower drain, do not place where the patient stands within the shower, (where possible)
- Ensure that shower drains are easy to clean and disinfect
- Consider shower outlets that have a stainless steel lid to help prevent spray and backflow into the environment
- Consider a backflow device within the shower outlet drain which can be removed for cleaning/ disinfection.

4.4.8 Ventilation

It is important to ensure ventilation in all areas is appropriate for the intended use as per HTM03. Where specialist ventilation is not required, then ventilation should be optimised as far as is practical. Refer to https://www.who.int/publications/i/item/9789240021280.

4.5 Healthcare Centres and other outpatient-type facilities in the community

Please note specific consideration must be given at design stage to the services that will be provided in the facility so that clinical areas can be designed in line with best practice guidelines to minimise the risk of HCAI.

4.5.1 Clinic/ Unit rooms

- Healthcare is provided in various settings within the community including health centres, primary care centres and clinic rooms within buildings. The general principles outlined above apply and local infection prevention and control staff should be consulted at all stages including design of new builds, upgrading or refurbishment of existing facilities and procurement of equipment for use in these facilities (HBN 00-09)
- Clinic space should be designed to minimise cross-contamination between contaminated and clean items
- Waiting areas should be designed to support minimum distancing between people waiting and appropriate access to toilet facilities. Where possible and necessary, separate and discrete

waiting room or rooms shall be provided for a person/s with a suspected communicable infectious disease waiting to be seen.

4.5.2 Fixtures and fittings

- Furniture, surface finishes and other fixtures and fittings within any clinic room/unit where clinical care is delivered should be easily cleaned and disinfected, and designed to minimise the risk of transmission of infection
- Advice should be sought, early in the design phase, on selection of furniture, surface finishes and other fixtures and fittings from the infection prevention and control team
- Sanitary assemblies - Refer to the HBN 00 10 Part C Sanitary Assemblies for details https://www.england.nhs.uk/wp-content/uploads/2021/05/HBN_00-10_Part_C_Final.pdf
- There is inconclusive evidence from an infection prevention and control perspective to have a consensus in relation to whether toilet seats should have a lid, or not. Advice will be given on a case by case basis taking all factors into account (e.g. type of setting, client vulnerability/ disability, requirements for coloured toilet seats to assist patients with cognitive loss/dementia etc.)
- If toilet seat lids / covers are to be considered, consultation should take place with the infection prevention and control team at the planning stage, although it must be noted that they are not recommended for independent wheelchair and assisted toilets, as they prevent the use of the backrest.
- Decisions regarding the number and location of grab rails should be guided by risk assessment, taking into account factors including the patient population, infrastructure, facility requirements, spacing and ergonomics
- Other factors should be taken into account regarding splash zones and regular cleaning schedules to mitigate against the potential risk of cross transmission.

Part 4 - Other Settings - Infection Prevention and Control

4.6 Settings where end of life care is frequently provided

Hospitals and other settings may have additional non-clinical facilities dedicated for the dignity and comfort of families under special circumstances. These facilities include family rooms and kitchenettes where clinical care does not occur but may be located close to acute clinical care areas. These facilities should be provided with a dedicated toilet with hand hygiene facilities. The furniture and fittings of these rooms may include soft furnishings for comfort but should be selected with a view to ensure that components such as cushions can be detached to facilitate cleaning and that surfaces are cleanable (for example vinyl). Any type of blinds and skirting boards that are easy to clean are acceptable.

5.0 GOVERNANCE AND APPROVAL

- AMRIC Implementation Team
- HSE Capital & Estates
- AMRIC Oversight Group

6.0 COMMUNICATION AND DISSEMINATION

- This guideline is circulated to the office of the Chief Clinical Officer and HSE Access and Integration
- This guideline is circulated through Capital and Estates to all RHA Capital and Estates Leads
- This guideline is also available on line www.HPSC.ie.

7.0 IMPLEMENTATION

Implementation of this guideline is the responsibility of all hospital managers, Chief Officers and Regional and local Capital and Estates and infection prevention and control leads.

8.0 MONITORING, AUDIT AND EVALUATION

The learning from this guideline should be shared with relevant professionals at team meetings.

9.0 REVISION/UPDATE

The AMRIC Implementation Team, Capital and Estates will review this guideline every two years.

10.0 Supporting Evidence

10.1 NCEC National Clinical Guideline No.30 Infection prevention and Control. https://www.gov.ie/en/publication/a057e-infection-prevention-and-control-ipc/

10.2 UK DH Health Building Notes (HBN) https://www.gov.uk/government/collections/health-building-notes-core-elements –(collected current documents)

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