

**Standard Infection Control Precautions Literature Review:  
Patient Placement (Providing care in the most  
appropriate place in the healthcare setting)**

**Version:** Version 3.0  
**Owner/Author:** Infection Control Team  
**Review date:** Financial year 2019/20

## DOCUMENT CONTROL SHEET

Key Information:		
Title:	Standard Infection Control Precautions (SICPs) Literature Review: Patient Placement (Providing care in the most appropriate place in the hospital setting)	
Date Published/Issued:	October 2016	
Date Effective From:	October 2016	
Version/Issue Number:	3.0	
Document Type:	Literature Review	
Document status:	Final	
Author:	Name:	Adriana Zalewska
	Role:	Healthcare Scientist (Health Protection)
	Division:	HPS
Owner:	Infection Control	
Approver:	Lisa Ritchie	
Approved by and Date:	October 2016	
Contact	Name:	Infection Control Team
	Tel:	0141 300 1175
	Email:	<a href="mailto:nss.hpsinfectioncontrol@nhs.net">nss.hpsinfectioncontrol@nhs.net</a>

Version History:			
This literature review will be updated in real time if any significant changes are found in the professional literature or from national guidance/policy.			
Version	Date	Summary of changes	Changes marked
3.0	October 2016	<p><b>What are the standard infection prevention and control considerations relating to patient placement?</b></p> <p>Addition of new recommendations in line with NIPCM: Patients who may present a particular cross-infection risk include those:</p> <ul style="list-style-type: none"> <li>• Known to have been previously positive for a Carbapenemase- producing Enterobacteriaceae (CPE) or who have been hospitalised outside Scotland in the last 12 months.</li> </ul> <p>In addition to those:</p> <ul style="list-style-type: none"> <li>• With diarrhoea, vomiting, an unexplained rash, fever or respiratory symptoms.</li> </ul>	
2.0	April 2014	Defined as final	
1.0	January 2012	Defined as final	

Approvals – this document requires the following approvals (in cases where signatures are required add an additional 'Signatures' column to this table)::				
Version	Date Approved	Name	Job Title	Division
3.0	October 2016	National Policies, Guidance and Outbreaks Steering Group		
2.0	April 2014	Steering (Expert Advisory) Group for SICPs and TBPs		
1.0	January 2012	Steering (Expert Advisory) Group for SICPs and TBPs		

<b>HPS ICT Document Information Grid</b>	
<b>Purpose:</b>	To inform the Standard Infection Control Precaution (SICP) section on Patient Placement (Providing care in the most appropriate place in the hospital setting) in the National Infection Prevention and Control Manual in order to facilitate the prevention and control of healthcare associated infections in NHSScotland hospital settings.
<b>Description:</b>	This literature review examines the available professional literature on patient placement in the hospital setting.
<b>Target audience:</b>	All NHS staff involved in the prevention and control of infection in NHSScotland.
<b>Circulation list:</b>	Infection Control Managers, Infection Prevention and Control Teams, Public Health Teams
<b>Update/review schedule:</b>	Updated as new evidence emerges with changes made to recommendations as required.
<b>Cross reference:</b>	National Infection Prevention and Control Manual <a href="http://www.nipcm.hps.scot.nhs.uk">http://www.nipcm.hps.scot.nhs.uk</a>  SICPs Literature review: Hand Hygiene: Hand washing. <a href="http://www.nipcm.hps.scot.nhs.uk/documents/sicp-hand-hygiene-hand-washing-in-the-hospital-setting/">http://www.nipcm.hps.scot.nhs.uk/documents/sicp-hand-hygiene-hand-washing-in-the-hospital-setting/</a>  SICPs Literature review: Hand Hygiene: Use of Alcohol Based Hand Rub <a href="http://www.nipcm.hps.scot.nhs.uk/documents/sicp-hand-hygiene-use-of-alcohol-based-hand-rub-in-the-hospital-setting/">http://www.nipcm.hps.scot.nhs.uk/documents/sicp-hand-hygiene-use-of-alcohol-based-hand-rub-in-the-hospital-setting/</a>
<b>Update level:</b>	Change to practice – No significant change to practice  Research – No significant change to research

---

## Contents

1. Objectives .....	5
2. Methodology .....	5
3. Recommendations .....	6
4. Discussion .....	9
4.1 Implications for practice .....	9
4.2 Implications for research .....	12
5. References .....	13
Appendix 1 .....	15

## 1. Objectives

The aim of this review is to examine the extant scientific literature regarding the appropriate placement of patients for care in healthcare settings. The specific objectives of the review are to determine:

- What are the bed spacing requirements for infection control purposes?
- What is the standard space per bed or space per patient?
- What are the minimum standards for multi-bed rooms?
- What is the minimum standard for a single room?
- What are the minimum standards for the provision of hygiene/sanitation facilities?
- What is the current guidance on single room provision in new build hospitals and refurbishments?
- What are the standard infection prevention and control precautions relating to patient placement?

**N.B.** Placement of patients who are either suspected or known to be infected with a specific infectious agent is considered as part of the Transmission Based Precautions (TBPs), and therefore is not within the scope of this review.

Recommendations relating to sink design and provision are outlined in the [Hand Hygiene: Hand Washing Literature Review](#).

Recommendations relating to placement of alcohol-based hand rub products in the patient care environment are outlined in the [Use of Alcohol Based Hand Rub Literature Review](#).

## 2. Methodology

This targeted literature review was produced using a defined methodology as described in the [National Infection Prevention and Control Manual: Development Process](#).

### 3. Recommendations

This review makes the following recommendations based on an assessment of the extant scientific literature on patient placement:

#### **What are the bed spacing requirements for infection control purposes?**

Limited evidence was identified in relation to bed spacing and infection control. The majority of documentation relates to ergonomic considerations; however healthcare settings should adhere to national NHSScotland guidance.

**(Mandatory)**

#### **What is the standard space per bed or space per patient?**

The minimum bed space in both single and multi-bed rooms should not be less than 3.6m (width) x 3.7m (depth).

Spacing should allow clinical/care procedures to be carried out from either side of the bed, with adequate circulation space to allow medical emergency teams and medical equipment to gain access to the patient.

**(Mandatory)**

#### **What are the minimum standards for multi-bed rooms?**

The acceptable maximum number of beds in a multi-bed room is four.

Four-bed rooms require a total area of 72.5m<sup>2</sup>.

Four-bed rooms require two clinical wash-hand basins for staff; one close to the entrance of the room, and another in an obvious and convenient position at the other end of the room.

Multi-bed rooms must have en-suite sanitary facilities. Best practice is to provide an assisted shower room (with WC, shower and wash-hand basin) and a separate semi-ambulant WC (with wash-hand basin) both en-suite to the bedroom area.

En-suite doors should not open directly onto adjacent bed areas.

**(Mandatory)**

**What is the minimum standard for a single room?**

A single-bed room should contain a clinical wash-hand basin in a visible and convenient location.

Single rooms should also have en-suite sanitary facilities comprising of a shower, WC and a wash-hand basin.

Single rooms require a total area of 23.5m<sup>2</sup>.

**(Mandatory)**

**What are the minimum standards for the provision of hygiene/sanitation facilities?**

All single-bed and multi-bed rooms should have en-suite facilities with a WC and shower.

Toilet facilities should not be located more than 12m from bed areas or day rooms.

There should be clearly labelled separate, designated sanitary facilities for in-patients, clinical staff and visitors on wards in convenient locations.

There should be a sufficient number of wash-hand basins in all clinical areas.

Antibacterial hand rub dispensers should be made available at the entrance to wards.

**(Mandatory)**

**What is the current guidance on single room provision in new build hospitals and refurbishments?**

There should be 100% single room provision in new build hospitals, unless there are clinical reasons to necessitate the availability of multi-bed rooms.

In refurbishments, NHS boards should seek to maximise the number of single rooms consistent with the recommendation for new builds.

The minimum single room provision in refurbishments is 50%, but as close to 100% single room provision as possible is expected.

**(Mandatory)**

### **What are the standard infection prevention and control considerations relating to patient placement?**

Patients must be promptly assessed for infection risk on arrival at the care area (if possible, prior to accepting a patient from another care area) and should be continuously reviewed throughout their stay. An assessment of the potential transmission, route of transmission and potential spread of infection; risk factors associated with exposure to blood and body fluids; and spatial considerations should be made when considering where to place a patient.

#### **(AGREE rating: Recommend)**

Patients who may present a particular cross-infection risk include those:

- Known to have been previously positive for a Carbapenemase- producing Enterobacteriaceae (CPE) or who have been hospitalised outside Scotland in the last 12 months.

#### **(Mandatory)**

In addition to those:

- With diarrhoea, vomiting, an unexplained rash, fever or respiratory symptoms.

#### **(Good Practice Point (GPP))**

Further information on the placement of patients who are either suspected or known to be infected with a specific infectious agent is considered as part of the Transmission Based Precautions (TBPs).

## 4. Discussion

### 4.1 Implications for practice

All UK guidance relevant to Patient Placement is presented in [Appendix 1](#).

#### **What are the bed spacing requirements for infection control purposes?**

The majority of recommendations in guidance documents are based largely on ergonomic requirements rather than infection control needs.<sup>1-7</sup> However, guidance produced in 2007 by Health Facilities Scotland 'Infection Control in the Built Environment: Design and Planning'<sup>8</sup> and similarly, UK guidance produced in 2013 by Department of Health Estates and Facilities 'Infection Control in the Built Environment',<sup>9</sup> specifically recognise the important role of bed spacing in the prevention and control of infection. Specifically, the latter states that 'the principle should be to maintain sufficient space for activities to take place and to avoid cross-contamination between adjacent bed spaces'.

#### **What is the standard space per bed or space per patient?**

There is consensus on minimum bed spacing; bed spaces should not be less than 3.6m (width) x 3.7m (depth), since it is considered that most activities can be carried out within this space.<sup>1-5;7</sup> Spacing should allow clinical/care procedures to be carried out from either side of the bed, with adequate circulation space to allow medical emergency teams and medical equipment to gain access to the patient.<sup>5;6</sup>

#### **(Mandatory)**

#### **What are the minimum standards for multi-bed rooms?**

The acceptable maximum number of beds in a multi-bed room is four.<sup>3;5;5;6</sup> Four-bedded rooms require two clinical wash-hand basins for staff; one close to the entrance of the room, and another in an obvious and convenient position at the other end of the room.<sup>5;6;9;10</sup> Multi-bed rooms must have en-suite sanitary facilities.<sup>5;6;9</sup> Best practice is to provide an assisted shower room (with WC, shower and wash-hand basin) and a separate semi-ambulant WC (with hand-rinse basin) both en-suite to the bedroom area.<sup>5</sup> En-suite doors should not open directly onto adjacent bed areas.<sup>5</sup> Four-bed rooms require a total area of 72.5m<sup>2</sup>.<sup>3;5</sup>

#### **(Mandatory)**

### **What is the minimum standard for a single room?**

A single-bed room should contain a clinical wash-hand basin in a visible and convenient location.<sup>2;3;5;7;8</sup> Single rooms should have en-suite sanitary facilities.<sup>2;3;5-8</sup> Specifically, en-suite facilities should contain a shower, WC and a wash-hand basin.<sup>5;7</sup> Single rooms require a total area of 23.5m<sup>2</sup>.<sup>3;5</sup>

**(Mandatory)**

### **What are the minimum standards for the provision of hygiene/sanitation facilities?**

In general, all single-bed and multi-bed rooms should have en-suite facilities with a WC and shower.<sup>3;5;6;9</sup> Toilet facilities should not be located more than 12m from bed areas or day rooms.<sup>2</sup> There should be clearly labelled, designated separate sanitary facilities for in-patients, clinical staff and visitors.<sup>3;5</sup> There should also be a sufficient number of wash-hand basins in all clinical areas.<sup>3;5;6;9</sup>

**(Mandatory)**

### **What is current guidance on single room provision in new build hospitals and refurbishments?**

It has been recommended that there is 100% single room provision in new build hospitals, unless there are clinical reasons to necessitate the availability of multi-bed rooms.<sup>1;2;5;7;11</sup> Single-bed rooms with en-suite sanitary facilities are considered to be optimum for infection prevention and control design.<sup>10</sup> In refurbishments, NHS boards should seek to maximise the number of single rooms consistent with the recommendation for new builds.<sup>1;2;5;7;11</sup> The minimum recommended single room provision in refurbishments is 50%, but as close to 100% single room provision as possible is expected.<sup>1;2;5;7</sup>

**(Mandatory)**

### **What are the standard infection prevention and control considerations relating to patient placement?**

Patients must be promptly assessed for infection risk on arrival at the care area (if possible, prior to accepting a patient from another care area) and should be continuously reviewed throughout

their stay. The appropriate placement of patients within the acute healthcare setting should be determined by an assessment of the following aspects:

- The potential transmission of a healthcare associated infection when receiving healthcare in an NHSScotland facility.
- The risk factors posed by exposure to blood and body fluids by healthcare workers, patients, visitors and others.
- The potential route of transmission and spread of healthcare associated infection by blood and body fluids.
- Spatial considerations – including the availability of single rooms and the current built environment within specific NHSScotland healthcare facilities.<sup>12</sup>

**(AGREE rating: Recommend)**

Patients who may present a particular cross-infection risk include those:

- Known to have been previously positive for a Carbapenemase- producing Enterobacteriaceae (CPE) or who have been hospitalised outside Scotland in the last 12 months.<sup>13;14</sup>

**(Mandatory)**

In addition to those:

- With diarrhoea, vomiting, an unexplained rash, fever or respiratory symptoms.

**(Good Practice Point (GPP))**

Further information on the placement of patients who are either suspected or known to be infected with a specific infectious agent is considered as part of the Transmission Based Precautions (TBPs).

## 4.2 Implications for research

Limited literature was identified by this review regarding the appropriate placement of patients, although there is acknowledgement within guidance that adequate bed spacing, provision of single rooms and provision of separate sanitary facilities for staff and visitors are important factors in infection control.<sup>3;4;8</sup>

A high quality literature review was identified that examined the benefit of single rooms to patients in terms of; privacy and dignity, noise and quality of sleep, satisfaction with care, infection, safety and recovery rates. The authors found that evidence on the topic was scarce and could make no recommendations regarding single rooms and infection prevention and control. On the basis of the limited literature, they concluded that single rooms may have a moderate impact on patient satisfaction only.<sup>15</sup> In addition, a recent observational study conducted before and after a move to a newly built acute hospital in the UK, with 100% single rooms, found that the majority of patients preferred the new design, specifically in terms of privacy and flexibility for visitors. Staff reported improvements in patient comfort and confidentiality but also a number of disadvantages, including concerns over patient safety. Collectively, staff also reported that they perceived the new single room layout supported infection control, although no reduction of infection rates was demonstrated.<sup>16</sup>

Further research is required to ascertain the impact of single room provision on infection control across NHSScotland inpatient facilities.

## 5. References

- (1) Chief Executives Letter. CEL (2008) 48. Provision of single room accommodation and bed spacing. 2008. The Scottish Government.
- (2) Chief Executives Letter. CEL (2010) 27 Provision of single room accommodation and bed spacing. 2010. The Scottish Government.
- (3) Health Building Note HBN04-01: Adult in-patient facilities. 2013. Department of Health.
- (4) Ward Layouts with Single Rooms and Space for Flexibility. 2005. NHS Estates.
- (5) In-patient care Scottish Health Planning Note SHPN 04-01: Adult in-patient facilities. 2010. Health Facilities Scotland.
- (6) Health Building Note HBN 00-03: Clinical and Clinical Support Spaces. 2013. Department of Health.
- (7) The Scottish Government. Single Room Provision Steering Group Report. 2007.
- (8) Scottish Health Facilities Note SHFN 30 (Version 3): Infection Control in the Built Environment. 2007. Health Facilities Scotland.
- (9) Health Building Note HBN 00-09: Infection Control in the Built Environment. 2013. Department of Health Estates and Facilities.
- (10) Health Facilities Scotland. SHFN 30 Part A: Manual Information for Design Teams, Construction Teams, Estates & Facilities and Infection Prevention & Control Teams. 2014.
- (11) Dowdeswell B, Erskine J, Heasman J. Hospital ward configuration. Determinants influencing single ward provision. A report for NHS Estates, England by the European Health property Network. 2004.
- (12) Siegel JD, Rhinehart E, Jackson M, Chiarello L. Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings 2007. Centres for Disease Control and Prevention 2007 [cited 2011 Sep 19]; Available from: URL: <http://www.cdc.gov/hicpac/2007IP/2007isolationPrecautions.html>
- (13) Health Protection Scotland. Interim Guidance: Non-prescribing control measures to prevent cross transmission of Carbapenemase-producing Enterobacteriaceae in acute settings. 2013.
- (14) Scottish Government. CMO/SGHD(2013)14: Antimicrobial Resistance. 2013.
- (15) van de Glind I, de Roode S, Goossensen A. Do patients in hospitals benefit from single rooms? A literature review. [Review] [40 refs]. Health Policy 2007 Dec;84(2-3):153-61.
- (16) Maben J, Griffiths P, Penfold C, Simon M, Anderson J, Robert G, et al. One size fits all? Mixed methods evaluation of the impact of 100% single-room accommodation on staff and patient experience, safety and costs. BMJ Quality and Safety 2016;25:241-56.

- 
- (17) Health Building Note HBN 00-02: Sanitary Spaces. 2016. Department of Health.
- (18) Health Building Note HBN 00-10 Part C: Sanitary Assemblies. 2013. Department of Health.

## Appendix 1

### UK Organisations: Providing care in the appropriate place– Specific Guidance

Organisation/ Guidance	Single room provision	Multi-bed rooms	Single-bed rooms	Bed spacing	Sanitary/Hygiene facilities	Infection control
<b>The Scottish Government (2008), CEL 48: Provision of single room accommodation and bed spacing</b>	<p>Minimum 50% in refurbished accommodation. NHS boards should seek to provide the maximum number of single rooms consistent with the approach for new build i.e. 100%.</p> <p>100% in new builds unless there are clinical reasons for multi-bedded rooms to be available.</p>	-	-	Minimum bed space should not be less than 3.6m x 3.7m. This is based on ergonomic considerations.	-	-
<b>The Scottish Government (2010), CEL 27: Provision of single room accommodation and bed spacing</b>	<p>Consistent with <b>The Scottish Government (2008), CEL 48.</b></p> <p>Minimum 50% single room accommodation in refurbished accommodation allowed, but as</p>	See 'Bed spacing'.	-	Minimum bed space for multi-bedded rooms should not be less than 3.6m (wide) x 3.7m (deep). This is based on ergonomic considerations. In refurbishments to multi-bedded ward accommodation, NHS Boards should seek to achieve this bed spacing.	-	-

**UK Organisations: Providing care in the appropriate place– Specific Guidance**

Organisation/ Guidance	Single room provision	Multi-bed rooms	Single-bed rooms	Bed spacing	Sanitary/Hygiene facilities	Infection control
	<p>close to 100% as possible expected.</p> <p>100% single room provision is clinically appropriate in most clinical settings. There should be 100% single room provision in new builds unless clinical reasons for not doing so are identified and articulated in a Business Case.</p>			<p>This may require considering reducing the number of beds in the room. NHS Boards should also seek to achieve this bed spacing in standard accommodation which is not being refurbished or replaced.</p>		
<p><b>NHS National Services Scotland: Health Facilities Scotland (2007), SHFN 30 (Version 3) Infection Control in the Built Environment: Design and Planning</b></p>	<p>There should be sufficient single rooms to prevent the spread of infection both to and from patients as a result of being 'housed' in open ward areas.</p>	<p>'Multiple beds in a single area should be kept to the minimum number possible as this will assist in the prevention of cross infection.'</p>	<p>'A minimum of one hand-wash sink in each single room is required. En-suite single rooms should have a hand-wash basin in the en-suite facility in addition to a clinical hand-wash basin in the patient's room.'</p> <p>'Sufficient hand-wash basins must be supplied in a room used to isolate</p>	<p>Bed spacing should be consistent with current guidance provided by Health Facilities Scotland.</p> <p>'Spacing must take into account access to equipment around the bed and access for staff to hand-hygiene facilities. Sufficient space for equipment (e.g. hoists) is a health and safety issue for staff and patients.'</p>	<p>'Healthcare facilities must provide enough sanitary facilities and showers/bathrooms to ensure easy access, convenience and independence where possible.'</p> <p>'Toilet facilities should be no more than 12m from the bed area or dayroom.'</p>	<p>'Single rooms with en-suite facilities allow for easier management of infection than wards.'</p> <p>'Mode of transmission of infection should be taken into account when bed space and size of facility are being discussed.'</p>

**UK Organisations: Providing care in the appropriate place– Specific Guidance**

Organisation/ Guidance	Single room provision	Multi-bed rooms	Single-bed rooms	Bed spacing	Sanitary/Hygiene facilities	Infection control
			<p>patients (and attached ante-room) and single room. This is in addition to the basin provided for patient wash facilities.'</p> <p>'Single rooms should be provided with en-suite sanitary facilities.'</p>		<p>'Ideally, in intensive care and high dependency units (critical care areas), [there should be] one hand-wash basin at the front of each bed space.'</p> <p>'[There should be] one sink between four patients in acute, elderly and long-term care settings.'</p> <p>'[There should be] one sink between six patients in low-dependency settings, for example mental health units and learning disability units.'</p>	<p>This includes direct transmission, indirect transmission via fomites (e.g. door handles, clothing, instruments, kidney dishes etc) and airborne transmission. The principle should be to maintain sufficient space for activities to take place and to avoid transmission of organisms either by air or by contact with blood or body fluid or equipment.'</p>
<p><b>Department of Health Estates and Facilities (2013), HBN 00-09: Infection Control in the</b></p>	<p>-</p>	<p>'It is best practice for multi-bed rooms to have both en-suite WC/shower and doors to the main ward area.'</p>	<p>'[A single bed room is] a room with space for one patient and usually contains as a minimum: a bed; locker/wardrobe; and clinical wash-hand</p>	<p>'Spacing should take into account the amount of, and easy access to, equipment around the bed area and access for staff to clinical wash-hand</p>	<p>'All clinical wash-hand basins should be accessible and should not be situated behind curtain rails.'</p>	<p>'The route of spread of infection is a basic concept in preventing cross-infection, and [bed] spacing has direct</p>

**UK Organisations: Providing care in the appropriate place– Specific Guidance**

Organisation/ Guidance	Single room provision	Multi-bed rooms	Single-bed rooms	Bed spacing	Sanitary/Hygiene facilities	Infection control
<b>Built Environment</b>		<p>‘Two clinical wash-hand basins in multi-bed rooms (note that there should be no more than four beds in a multi-bed room in line with Health Building Note 04-01).’</p>	<p>basin plus a small cupboard with worktop. (Note: single-bed rooms without en-suite sanitary facilities are not recommended.)’</p> <p>‘A minimum of one clinical wash-hand basin in each single-bed room is required. En-suite single-bed rooms should have a general wash-hand basin for personal hygiene in the en-suite facility in addition to the clinical wash-hand basin in the patient’s bedroom.’</p>	<p>basins. The principle should be to maintain sufficient space for activities to take place and to avoid cross-contamination between adjacent bed spaces. The exact space needed will vary according to numbers and activity of staff and type of patient.’</p>	<p>‘Hand-hygiene facilities should be readily available in all clinical areas. There should be sufficient numbers and appropriate sizes of clinical wash-hand basins to encourage and assist staff to readily conform to hand-hygiene protocols.’</p> <p>‘In intensive care and high dependency units (critical care areas), a clinical wash-hand basin should be available by each bed space. It should be noted, however, that under-usage of basins encourages colonisation with <i>Legionella</i> and other microorganisms. Designers should be aware of this and, accordingly, should</p>	<p>implications for the prevention of infection.’</p> <p>‘Mode of transmission of infection should also be taken into account. This includes:</p> <ul style="list-style-type: none"> <li>• direct transmission;</li> <li>• indirect transmission via fomites (for example, articles such as hoists, mobile X-ray units etc); and</li> <li>• splash, droplet and airborne transmission.’</li> </ul>

**UK Organisations: Providing care in the appropriate place– Specific Guidance**

Organisation/ Guidance	Single room provision	Multi-bed rooms	Single-bed rooms	Bed spacing	Sanitary/Hygiene facilities	Infection control
					<p>balance ease of staff hand-washing with the avoidance of under-used wash-hand basins (see also Health Technical Memorandum 04-01 – ‘Addendum: <i>Pseudomonas aeruginosa</i> – advice for augmented care units’).</p> <p>‘All en-suite facilities should have a wash-hand basin for use by patients and their visitors.’</p> <p>‘Antimicrobial hand-rub dispensers should be available at the point of patient care.’</p> <p>In Mental health and learning disability settings: ‘There is no requirement for a clinical wash-hand</p>	

**UK Organisations: Providing care in the appropriate place– Specific Guidance**

Organisation/ Guidance	Single room provision	Multi-bed rooms	Single-bed rooms	Bed spacing	Sanitary/Hygiene facilities	Infection control
					basin in an en-suite bedroom. Alternative arrangements to provide healthcare staff with access to hand hygiene should be made.'	
<b>NHS National Services Scotland: Health Facilities Scotland (2014): SHFN 30</b>  <b>Part A: Manual Information for Design Teams, Construction Teams, Estates &amp; Facilities and Infection Prevention &amp; Control Teams</b>	-	-	-	-	<p>'The location and provision of clinical wash-hand basins should ensure that they are all readily available and convenient for use. The location of clinical wash-hand basins is as important as the bed-to-basin ratio. Multi-bed rooms' basins should be located to ensure access by staff with the minimum travel between patient and basin; for example, one clinical wash-hand basin on each side of the entrance or at opposite sides of the room.'</p>	<p>'There should be sufficient numbers and appropriate sizes of clinical wash-hand basins to encourage and assist staff to conform readily to hand hygiene practices as set out in the HPS manual'.</p> <p>'Single-bed rooms with en-suite sanitary facilities are optimum for infection prevention and control design'.</p>

**UK Organisations: Providing care in the appropriate place– Specific Guidance**

Organisation/ Guidance	Single room provision	Multi-bed rooms	Single-bed rooms	Bed spacing	Sanitary/Hygiene facilities	Infection control
					<p>'In en-suite single bedrooms a clinical wash-hand basin should be located in the bedroom and a general wash-hand basin for patient's personal hygiene in the en-suite'</p> <p>'In four bedded rooms there should be two clinical wash-hand basins in the room and a general wash-hand basin for patient's personal hygiene in the en-suite'.</p>	
<p><b>Health Building Note HBN 00-03: Clinical and Clinical Support Spaces. 2013. Department of Health.</b></p>	-	<p>'The preferred maximum number of beds in a multi-bed room is four.'</p>	-	<p>'The bed space should allow procedures to be carried out from either side of the bed with adequate circulation space so that medical emergency teams and equipment can gain access to the patient.'</p>	<p>'All single and multi-bed rooms should be provided with en-suite sanitary facilities'. In addition 'a clinical wash-hand basin (x2 for multi-bed rooms), plus antibacterial hand-rub dispensers' should be provided for staff. In multi-bed rooms wash basins</p>	-

**UK Organisations: Providing care in the appropriate place– Specific Guidance**

Organisation/ Guidance	Single room provision	Multi-bed rooms	Single-bed rooms	Bed spacing	Sanitary/Hygiene facilities	Infection control
					‘should be located to be highly visible and convenient for staff use, both on entering and leaving the room’.	
<p><b>NHS National Services Scotland: Health Facilities Scotland (2010), In-patient care SHPN 04-01: Adult in-patient facilities</b></p>	<p>100% single room accommodation in new build hospitals or healthcare facilities providing in-patient accommodation unless there are clinical reasons for multi-bed rooms to be available.</p> <p>Minimum 50% single room accommodation in refurbished accommodation allowed, but as close to 100% as possible expected.</p>	<p>The acceptable maximum number of beds in a multi-bed room is four.</p> <p>Four bed rooms require a total area of 72.5m<sup>2</sup>:</p> <ul style="list-style-type: none"> <li>• 4-bed room: 64.0m<sup>2</sup></li> <li>• Assisted shower room (en-suite): 6.5m<sup>2</sup></li> <li>• Semi-ambulant WC without luggage space (en-suite): 2.0m<sup>2</sup></li> </ul> <p>‘Four bedded rooms require two clinical wash-hand basins, one close to the</p>	<p>Single-bed rooms require a total area of 23.5m<sup>2</sup>:</p> <ul style="list-style-type: none"> <li>• Single bed room: 19.0m<sup>2</sup></li> <li>• En-suite shower room: 4.5m<sup>2</sup></li> </ul> <p>‘Each single-bed room en-suite will have a WC, shower and general washbasin.’</p>	<p>Minimum bed space should not be less than 3.6m x 3.7m. This is based on ergonomic considerations.</p> <p>In refurbishments to multi-bedded ward accommodation, NHS Boards should seek to achieve this bed spacing. This may require considering reducing the number of beds in the room. NHS Boards should also seek to achieve this bed spacing in standard accommodation which is not being refurbished or replaced.</p> <p>‘The bed space should allow procedures to be carried out from either side of the bed with</p>	<p>‘Sanitary facilities for in-patients must be located en-suite to bed areas.’</p> <p>‘All single and multi-bed rooms must have en-suite sanitary facilities. All sanitary facilities in in-patient areas should be accessible and manageable by people with physical or sensory disabilities with or without assistance.’</p> <p>‘Each room must contain a clinical wash-hand basin located so as to be highly visible to staff entering and leaving</p>	<p>‘For infection control purposes, in-patients, clinical staff and visitors require to be provided with separate sanitary facilities, these must be clearly labelled.’</p>

**UK Organisations: Providing care in the appropriate place– Specific Guidance**

Organisation/ Guidance	Single room provision	Multi-bed rooms	Single-bed rooms	Bed spacing	Sanitary/Hygiene facilities	Infection control
		<p>entrance to the room and the other placed in an obvious and convenient position for staff working at the other end of the room.'</p> <p>'Multi-bed rooms must have en-suite sanitary facilities. Best practice is to provide an assisted shower room (with WC, shower and wash-hand basin) and a separate semi-ambulant WC (with hand-rinse basin), both en-suite to the bedroom area. En-suite doors should not open directly onto adjacent bed areas.</p> <p>For detailed guidance on sanitary facilities for multi bedded rooms, refer to HBN 00-02:</p>		<p>adequate circulation space so that medical emergency teams and equipment can gain access to the patient. There should be adequate space for moveable furniture and unobstructed access for wheelchairs, as well as space to accommodate overnight visitors.'</p>	<p>the room and convenient for them to use. The use of sensor taps may be appropriate to reduce the risk of infection.'</p> <p>'Antibacterial hand-rub dispensers should be provided at the ward entrance.'</p>	

**UK Organisations: Providing care in the appropriate place– Specific Guidance**

Organisation/ Guidance	Single room provision	Multi-bed rooms	Single-bed rooms	Bed spacing	Sanitary/Hygiene facilities	Infection control
		'Sanitary spaces'.'				
<b>Scottish Government (2008), Single Room Provision Steering Group Report</b>	100% single-room accommodation in new builds unless a lower percentage provision has been justified and approved for specific patient groups.  Refurbishments must seek to provide the maximum number of single rooms. Minimum 50%.	-	A single room is defined in the report as: 'a room with space for one patient which normally contains, at a minimum, a bed, locker, clinical wash-hand basin and also sanitary facilities comprising a toilet, shower and wash-hand basin'	Minimum bed space should not be less than 3.6m x 3.7m. This is based on ergonomic considerations.	-	-
<b>Department of Health Estates and Facilities Division (2013), HBN 04-01: Adult in-patient facilities</b>	-	The preferred maximum number of beds in a multi-bed room is four.  Four bed rooms require a total area of 72.5m <sup>2</sup> : <ul style="list-style-type: none"><li>4-bed room: 64.0m<sup>2</sup></li></ul>	Single-bed rooms require a total area of 23.5m <sup>2</sup> : <ul style="list-style-type: none"><li>Single bed room: 19.0m<sup>2</sup></li><li>En-suite shower room: 4.5m<sup>2</sup></li></ul> 'Each single-bed room should contain a clinical wash-hand basin. The	The minimum clear space required around a bed is 3.6m (width) x 3.7m (depth). This is based on ergonomic considerations.	'All single-bed rooms and multi-bed rooms should have en-suite sanitary facilities.'  'Each single-bed room should have an en-suite shower room (with WC, shower and wash-hand basin).'	'For infection control purposes, in-patients, clinical staff and visitors should be provided with separate sanitary facilities, which should be clearly labelled.'  'The use of sensor

**UK Organisations: Providing care in the appropriate place– Specific Guidance**

Organisation/ Guidance	Single room provision	Multi-bed rooms	Single-bed rooms	Bed spacing	Sanitary/Hygiene facilities	Infection control
		<ul style="list-style-type: none"> <li>Assisted shower room (en-suite): 6.5m<sup>2</sup></li> <li>Semi-ambulant WC without luggage space (en-suite): 2.0m<sup>2</sup></li> </ul> <p>'Multi-bed rooms should contain two clinical wash-hand basins, one close to the entrance to the room and the other placed in a convenient position' for staff working at the other end of the room.'</p>	basin should be located to be highly visible to staff entering and leaving the room and convenient for them to use.'		<p>'ABHR dispensers should be provided at the ward entrance.'</p> <p>Although not specific to single/multi-bed rooms: Health Building Note HBN 00-10 Part C: Sanitary Assemblies (2013).and Health Building Note HBN 00-02: Sanitary Spaces (2016) provide further in-depth information.<sup>17,18</sup></p>	taps may be appropriate to reduce the risk of infection.'
<b>NHS Estates (2005), Ward Layouts with Single Rooms and Space for Flexibility</b>	-	-	-	'Most activities carried out at the bedside can be accommodated within the dimensions 3600mm (width) x 3700mm (depth). This represents the clear space around the bed and does not include space for storage, preparation and worktops.'	-	'Provision of adequate space between each bed is perceived as an important consideration to limit cross-infection, although there is currently a need for further research on

**UK Organisations: Providing care in the appropriate place– Specific Guidance**

Organisation/ Guidance	Single room provision	Multi-bed rooms	Single-bed rooms	Bed spacing	Sanitary/Hygiene facilities	Infection control
				Bed-space requirements for rooms with specialist functions are discussed in detail. Guidance is based only on ergonomic considerations.		this subject.'
<b>Dowdeswell, B. <i>et al</i> (2004) Hospital ward configuration Determinants influencing single ward provision. A report for NHS Estates, England by the EHPN</b>	Single room ratios of 50%-100% are recommended.	-	-	-	-	-