The Doctorpreneur Academy

SPACE STANDARDS AND DIMENSIONS IN A HEALTHCARE SET UP

CURATED BY THE DOCTORPRENEUR ACADEMY

About us

Dr Pranav Sharma

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Dr. Pranav Sharma has been in Healthcare Industry for last 15 years in various roles. After completing his education from AIIMS, he started with career in U.N. Mehta Institute of Cardiology & Research Centre, Ahmedabad as Assistant Professor of Cardiac Surgery. Soon he was promoted to Professor of Cardiac Surgery and was one of the most influential voice in this space. He has more than 25 papers published in various national and international journals. Rising the corporate ladder, he became the Chief Medical Administrator at U.N. Mehta where he oversaw the expansion of the hospital from 200 bed to 1200 bed in a very short span of time. After his stint in the corporate world, he decided to do something different and independent and start his own health consultancy where he has helped hundreds of doctors to open new hospitals across India.

SPACE STANDARDS AND DIMENSIONS IN A HEALTHCARE SET UP

Mr. Amit Singh Moga

MBA (IIM AHMEDABAD), B.TECH (IIT ROORKEE)

Wearing multiple hats, Mr. Amit Singh Moga is an entrepreneur at heart. Being an engineer from IIT Roorkee and MBA from IIM Ahmedabad, it was very easy for him to rise in the corporate world and live in his comfort zone but he decided to travel the road less taken. After spending 10+ years in various businesses, last being a banker in a bank where he oversaw many big healthcare projects been funded, he quit the job world and started in entrepreneurship journey. He spoke on TEDx platform about the issue of depression in students, wrote a book named "The Black Book" and founded couple of successful start-ups. If you need a motivation to start your own venture against all odds, listen to his story of venturing into entrepreneurship against all odds.

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Chapter 1 Patient corridors

Figure 1.1: Corridor Plan – width clear of handrails and obstructions

Patient Corridors

In patient areas such as Inpatient Units, Operating Units and Intensive Care Units, where beds, trolleys and stretchers will be moved regularly, minimum clear corridor widths of 2450mm are recommended. Refer to Figure 1.2 below.

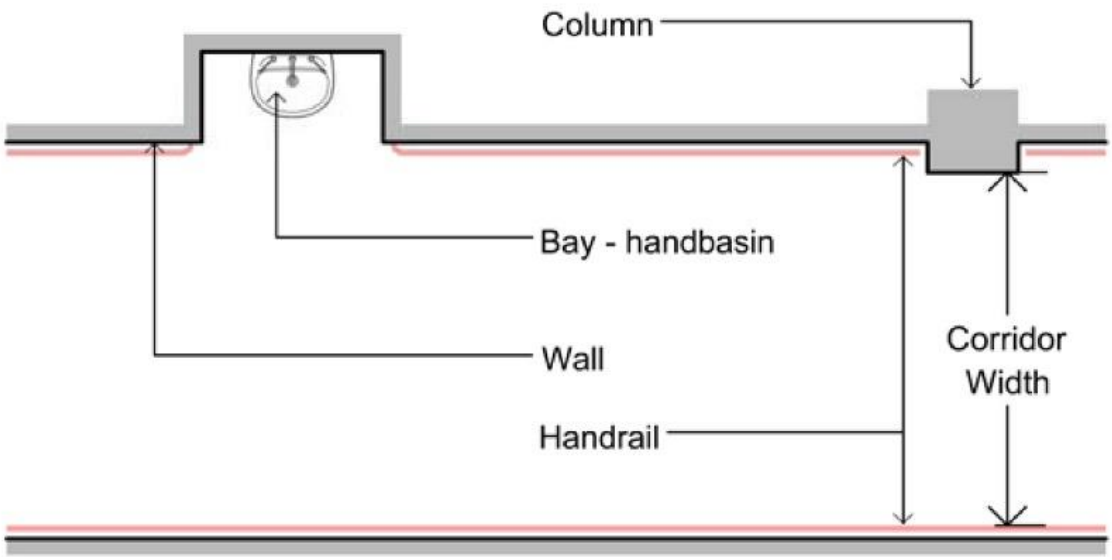


Figure 1.2: Corridor plan showing minimum clearance

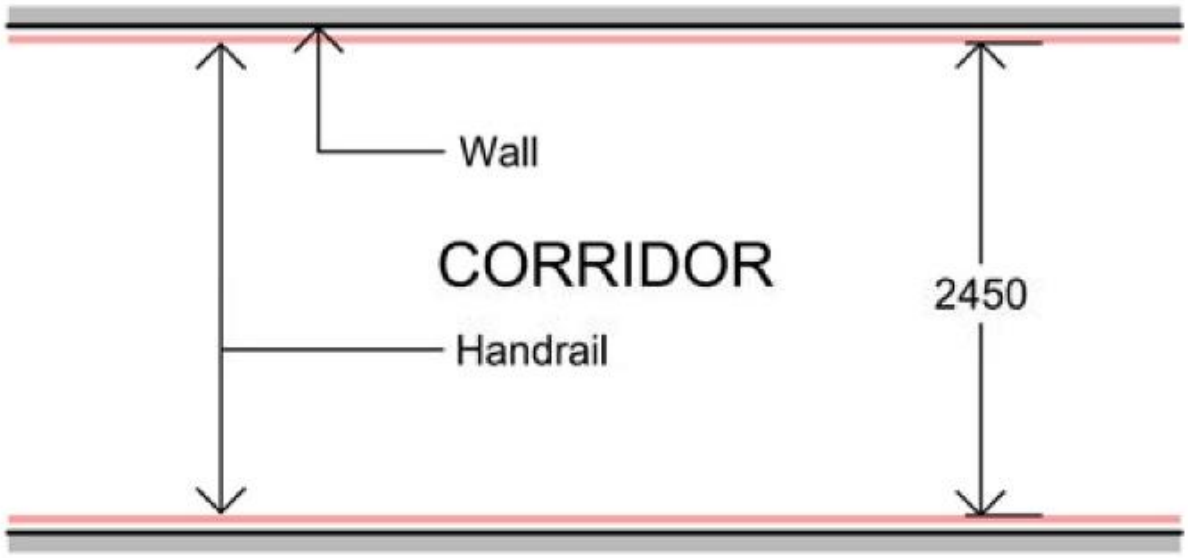
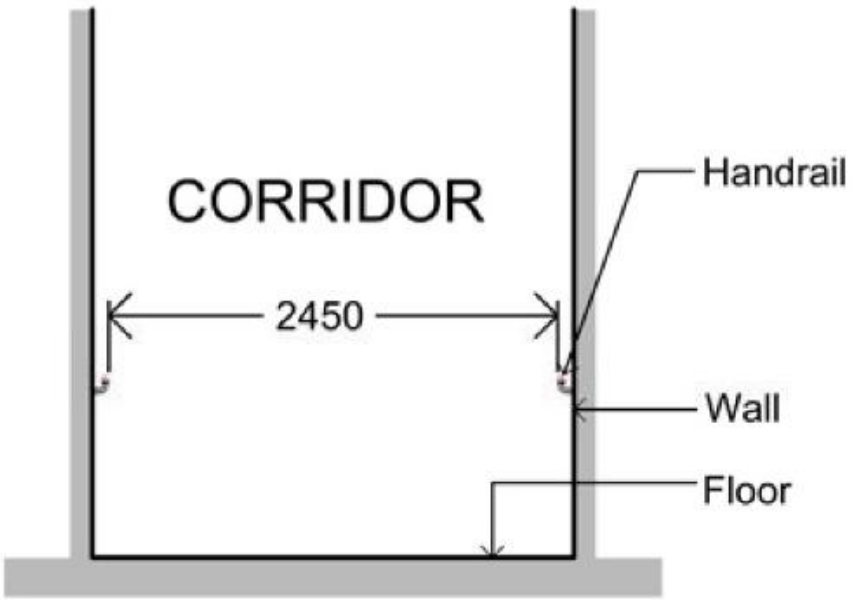


Figure 1.3: Corridor section



In all corridors special consideration must be given to the width of doorways into connecting rooms. Corridors may need to be widened at the entry to rooms to allow for beds/ trolleys to turn into the room.

Where an existing building is being redesigned, corridor widths that are smaller than the recommend dimensions may be permitted. However special consideration should be given to emergency egress and evacuation.

Note: Whatever building conditions prevail, any corridors which may be used by a patient for any purpose should not be less than 1850mm wide except where written approval has been obtained for the reduced width. Corridors where irregular bed or trolley traffic is anticipated, such as Radiology, can be reduced to 2000mm clear width.

In this case however special consideration must be given to door widths or local corridor widening to ensure the movement of beds or trolleys from corridor to connecting rooms is not restricted. Corridor widths to permit turning are demonstrated in the diagrams below.

Figure 1.4: Corridor width permits turning into a room

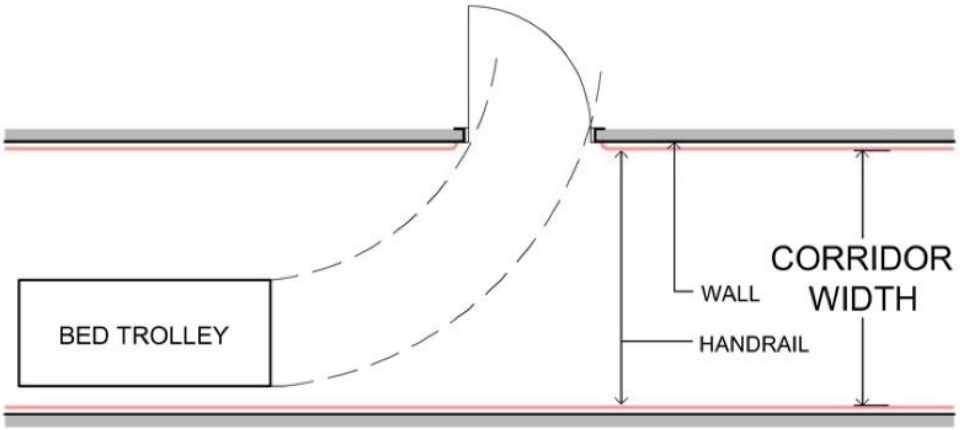
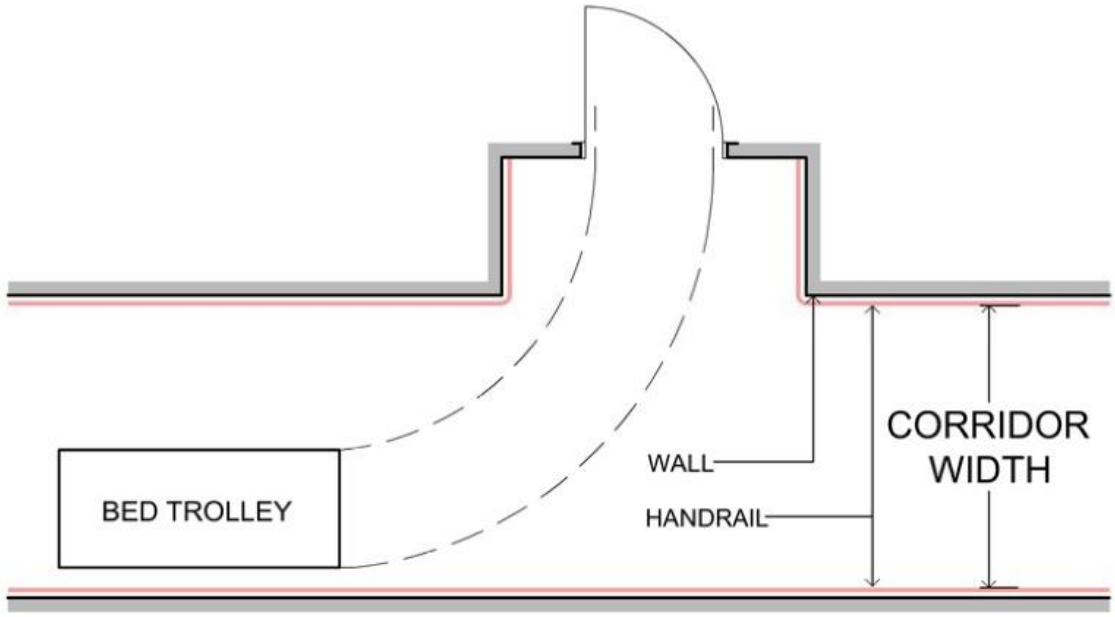


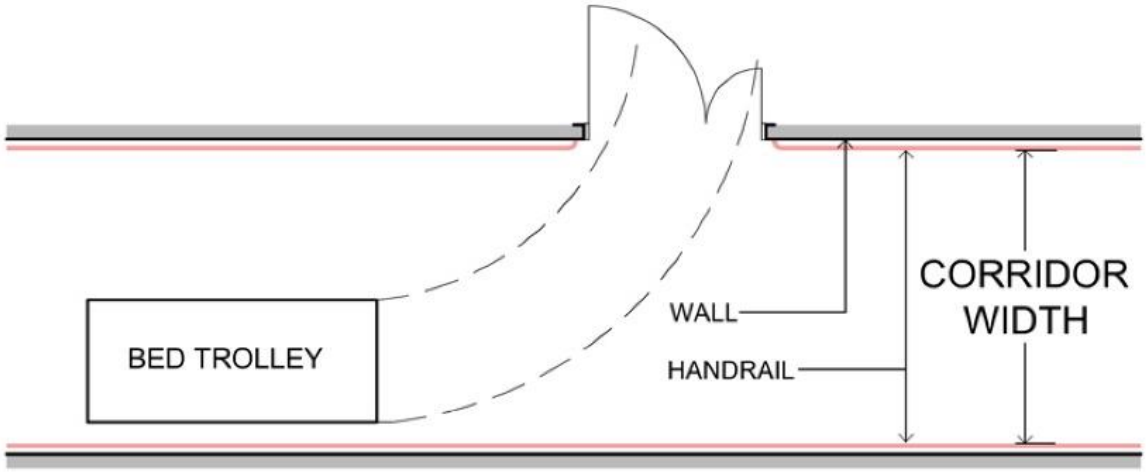
Figure 1.5: Corridor with recessed door entry to allow for turning



In the figure shown above, corridor width is sufficient for a bed trolley can be manoeuvred to enter a room for which the entry door is located on corridor wall.

In the figure shown above, where the corridor width is not sufficient to allow a bed trolley to turn into a room, a recessed entry door is provided.

Figure 1.6: Corridor with double door room entry to permit turning



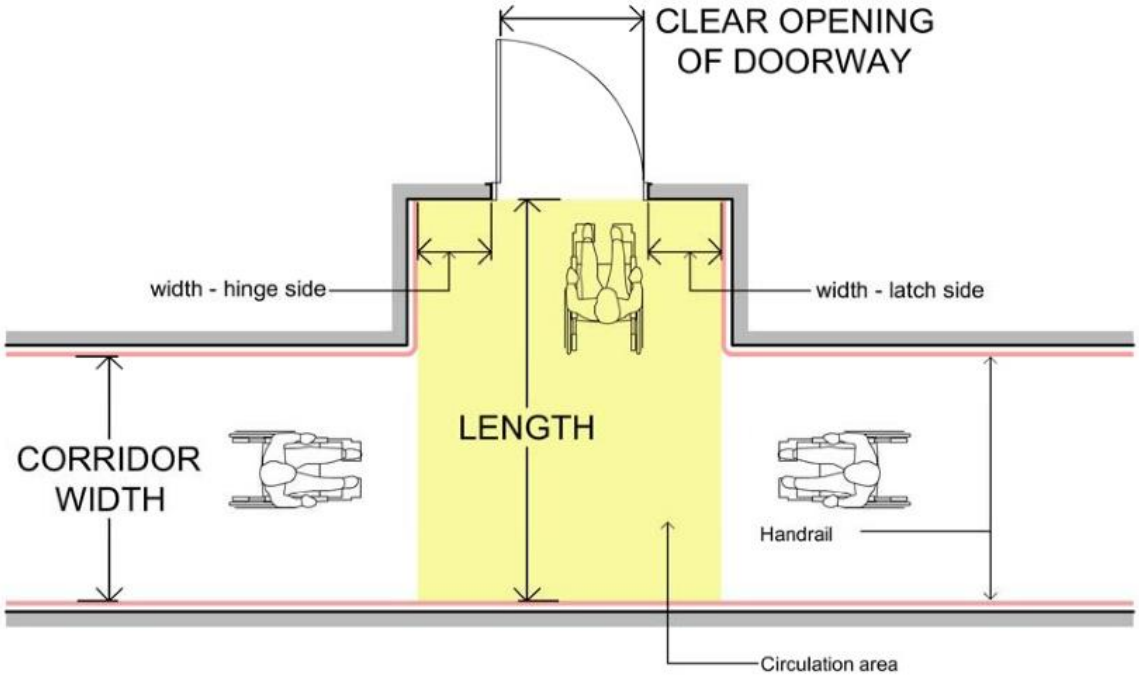
Alternatively, in the figure shown above, where the corridor width is not sufficient to allow a bed trolley to turn into a room, a double door may be provided.

Staff only corridors

Staff only corridors with no patient traffic and where the corridor length is not greater than 12 metres, such as a corridor to a group of staff offices, may have a clear width of 1200mm.

Consideration must also be given to accessibility requirements which may include localised corridor widening or provision of double doors to allow disabled staff to pass or to access doors.

Figure 1.7: Corridor modified for disabled access



In the figure shown above, the corridor has been modified to enable a person in a wheelchair the required circulation space to access and operate the door. The requirements of width - latch side, width - hinge side, clear opening of a doorway, the length, the direction of door swing and the direction of which a person approaches the doorway are inter-related and vary according to local accessibility code and standards.

Travel & Public Corridors

Travel corridors are inter-connecting departmental corridors that may be used by staff, patients and visitors. The width of major inter-department arterial corridors and public corridors generally should be as wide as is deemed necessary for the proposed traffic flow, but should not be less than 2450mm. Public corridors should not be less than 1600mm.

Chapter 2 Ceiling heights

1.2 Ceiling Heights

The minimum acceptable ceiling height in occupied areas is recommended to be 2400mm, but consideration should be given to the size (sensory consideration) and use of the room. Ceilings in patient bed areas including Bed Rooms, Bed Bays and Recovery areas should be a minimum of 2700mm.

Bed Rooms for bariatric care may require an increase in ceiling height to accommodate lifting equipment. In critical care bed areas such as ICU, CCU, HDU and Resuscitation Rooms a ceiling height of 3000mm is recommended to provide sufficient height for ceiling mounted equipment and service pendants.

Seclusion rooms must be designed and constructed to avoid features that a patient could use for injury or self-harm.

The recommended ceiling height is 3000mm with a minimum height of 2750mm.

The recommended ceiling height in new areas such as corridors, passages and recesses is 2700mm with a minimum of 2400mm.

In existing facilities being renovated, ceiling heights in Corridors or Ensuites may be reduced to 2250mm, but only over limited areas such as where a mechanical duct passes over a corridor. Wherever possible, reduced ceiling heights adjacent to doors should be avoided.

A ceiling height of 2700mm is recommended in work areas such as Patient treatment areas, Offices, Conference Rooms, Administrative areas and Kitchens.

Figure 1:8: Corridor section showing minimum ceiling heights

In corridor bays or areas with restricted access such as a hand basins or a drinking fountain recess, a minimum ceiling height of 2250mm is acceptable.

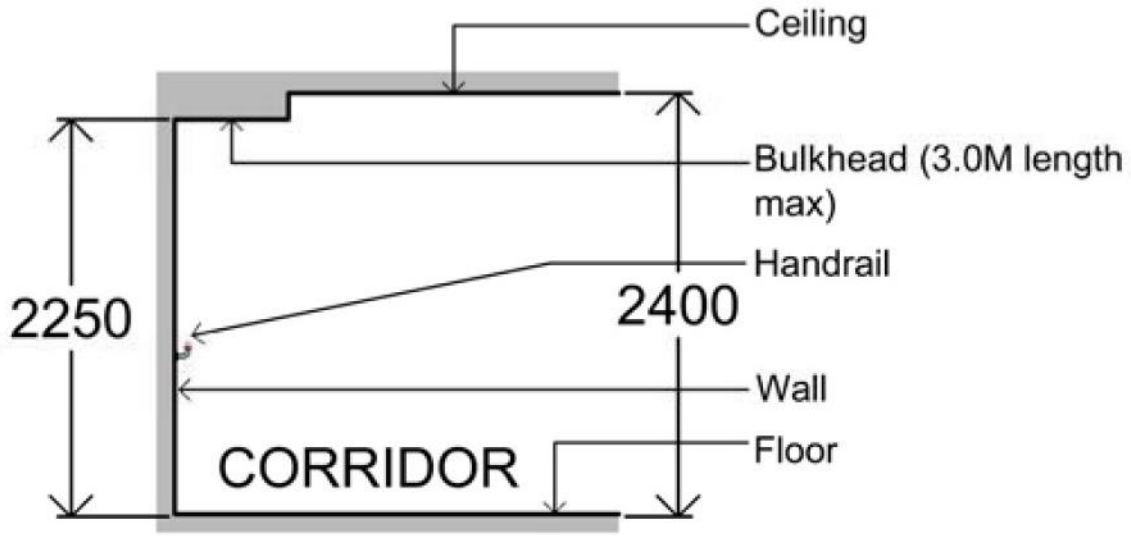
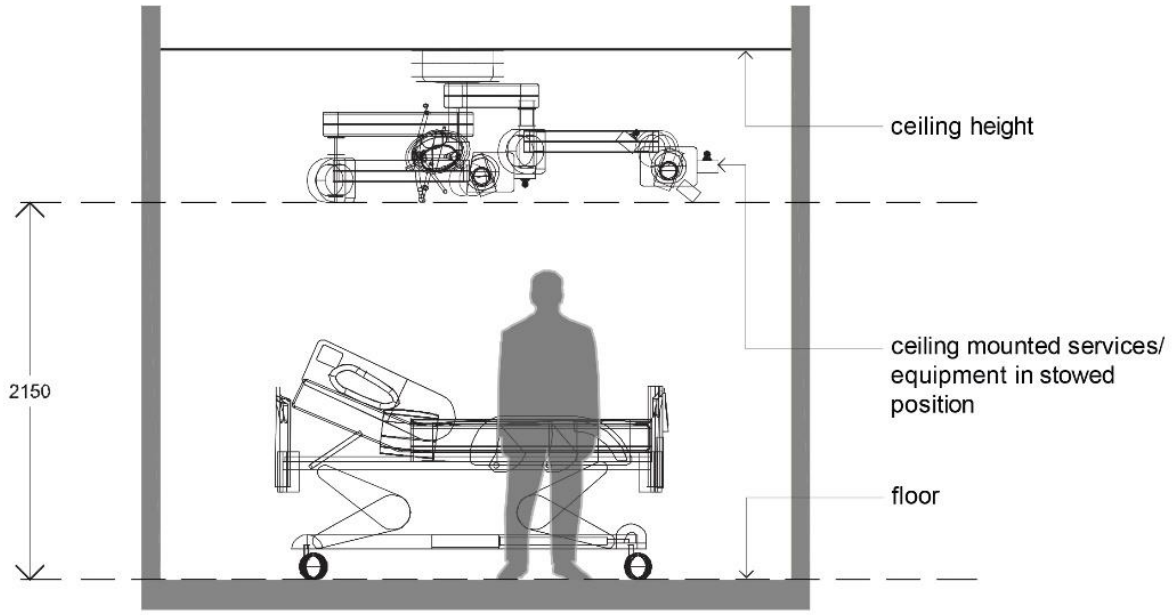


Figure 1.9: Reduced height ceiling within a corridor bay

Rooms with ceiling mounted equipment, such as X-ray Rooms and Operating Rooms may require increased ceiling heights. Ceiling heights should achieve the minimum recommended height and comply with equipment manufacturers' installation requirements.

A minimum ceiling height of 3000mm is required in Operating rooms, Interventional Imaging rooms and Birthing rooms. Ceiling mounted equipment must be able to achieve the required clearance height of 2150mm when in the stowed position, especially within circulation areas. Refer to Figure 1.10 below.

Figure 1.10: Ceiling mounted services stowed



Minimum ceiling (soffit) heights of external areas such as canopies over main entries, ambulance entries and loading docks should suit the requirements of the anticipated vehicle traffic.

Special consideration should be given to emergency vehicles with aerials fitted.

The recommended minimum ceiling (soffit) height is 3200mm. Plant Room ceiling heights should suit the equipment installed and allow safe access for service and maintenance.

The minimum recommended ceiling height is 2400mm in all trafficable areas.

Variations from recommended ceiling heights should be approved by the relevant health authority in writing.

1.3 Department Sizes

Department sizes will depend upon the perceived role of the facility as determined in the Service Plan and Operational Policies. Department sizes are also affected by the ability to share or combine functions as long as the planning provides for appropriate safety standards and optimal patient care.

Refer to Efficiency Guidelines and Schedule of Circulation Percentages below.

Chapter 3 Efficiency Guidelines

1.4 Efficiency Guidelines

General

The concept of efficiency refers to the proportion of net Functional Areas and circulation space in a brief or a plan. Circulation is generally expressed as a percentage of the net Functional Area. Simplistic guidelines on efficiency tend to be misleading and should not be applied to vastly

Different functional briefs.

It is more appropriate to allocate different circulation percentages according to each specific planning unit. Such a guide has been provided under the Schedule of Circulation Percentages in this section.
It is important to provide an adequate circulation allowance in briefing documents. Insufficient allowance for circulation is not recommended as this may force designers to reduce the size of functional spaces resulting in a sub optimal plan.
Larger and more complex planning units may require a larger circulation percentage.

Schedule of Circulation Percentages

Recommended Circulation Percentages for typical Functional Planning Units (FPUs) are as follows:

Department or Functional Planning Unit (FPU) Minimum Circulation %

Administration Unit 20

Allied Health Unit 25

Biomedical Engineering 20

Catering Unit 25

Clinical Information Unit 15

Coronary Care Unit 35

Day Surgery/ Procedure Unit 35

Dental Unit 25-35

Education & Training Unit 15

Emergency Unit 40

Engineering & Maintenance Unit 15

Housekeeping Unit 10

Inpatient Accommodation Units 32

Intensive Care Units 40

Laundry/ Linen Handling Unit 10

Medical Imaging Units 35

Mental Health Units 32

Mortuary Unit 20

Nuclear Medicine Unit 35

Obstetric Unit 35

Operating Unit 35-40

Outpatient Units 25

Paediatric / Adolescent Unit 32

Pathology Unit 25

Pharmacy Unit 25

Public Amenities Unit 10

Radiation Oncology Unit 35

Rehabilitation Unit 32

Renal Dialysis Unit 32

THE DOCTORPRENEUR ACADEMY

The Doctorpreneur Academy(TDA) is here to empower doctors/healthcare professionals to become an independent entrepreneur so that every Indian has easy access to quality healthcare in India by 2030. Our VISION is to provide easy access to quality healthcare for all Indians by 2030. Doctor Fraternity will be instrumental in achieving this vision. Hence, we are on the path of empowering doctors in the country with guidance, information and technology and help them become independent entrepreneurs by opening new clinics and hospitals. We can help you if you want to start your own clinic/hospital or you already have a setup and want to grow really fast .
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