Part W – Wayfinding Guidelines

iHFG

International Health Facility Guidelines

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Table of Contents

1 Introduction to Wayfinding

1.1 Description

Wayfinding is a concept that describes the dynamic relationship people have to space, incorporating all the cognitive, perceptual, problem-solving and decision-making processes that are required to orientate oneself within and navigate through a space. It also outlines the factors external to us that impact, positively or negatively, on our ability to complete a journey successfully.

In a health care facility the purpose of wayfinding systems is to direct patients, visitors and staff from entryways and carparks to their destinations and back again. Wayfinding elements should complement each other to create and maintain a robust yet clear circulation system to facilitate movement between destinations. Further objectives of wayfinding devices are to:

- Identify the locations of services
- Control vehicle and pedestrian circulation
- Clearly identify public and restricted staff areas
- Help manage risks to consumers due to workplace health and safety, medical and security issues

Successful wayfinding relies on the availability and perception of clues from the space. The wayfinding strategy should take in the complete site environment to help consumers navigate the healthcare facility, including:

- The layout of site and the site's relationship to the community and current methods of transport
- The layout of the building and logical progression of space
- Interior design, differentiation of space and interior landmarks
- Landscaping and exterior landmarks
- Views to outside
- Lighting
- Signage, maps and directories
- Graphic design and colour
- Virtual elements, including websites and smart phone applications
- Floor and room numbering
- Staff knowledge and communication.

The complete journey from home to the facility and back again should be addressed. Information sheets, appointment letters, websites and verbal directions must be coordinated with the physical site and the wayfinding system, ensuring that landmarks, roads and parking signs, building and department names, interior directional signs and other wayfinding tools are up-to-date and consistent in terminology and graphic communication.

1.2 Consumer Focus

Consumer focus is a core driver for an effective wayfinding system. The specific needs of each consumer grouping needs to be identified and understood to provide a clear, easy to understand wayfinding system. A well designed wayfinding system will guide a consumer to their destination without inconvenience or adding to the stress and worry they may already being experiencing.

Inefficient Wayfinding Systems

Poor wayfinding may cause stress and frustration, result in inefficient and ineffective use of staff time, reduce accessibility for people with sensory, cognitive or physical impairment or compromise consumer safety, particularly in emergency situations.

Stress and Frustration

Visitors to health care facilities are often worried or anxious to begin with. A poor wayfinding system can increase this anxiety by creating feelings of disorientation and helplessness. This can result in

the consumer becoming stressed and frustrated which may in turn lead to undesirable behaviour that is detrimental to the health and wellbeing of staff, patients and other visitors using the healthcare facility. Stress caused by disorientation can result in raised blood pressure, headaches and fatigue, none of which facilitate healing or produce a favourable work environment.

As stress increases, people are less able to take in information and are often less perceptive of the environment around them. This reduces their ability to scan the environment for cues and prevents them from continuing on their journey. It also reduces their ability to retrace their steps on a return journey.

Consumers often experience feelings of self-blame, for not being able to follow the signs and maps, or resentment towards the facility, for not providing clarity. After experiencing a poor wayfinding system, consumers often arrive at their destination with a negative mind set. This is not desirable for patients attending consultations/ treatment, staff providing care or family and friends visiting patients.

Inefficiency

An ineffective wayfinding system that leads to people becoming lost wastes staff, patient and visitor time. Many hours of staff time can be lost to the task of redirecting and even escorting patients to their destination if a wayfinding system is poor. While escorting some health facility users, such as frail elderly or those with sensory or cognitive impairment, is encouraged, the need to escort many users is an inefficient use of time and resources that are better directed at patient care. Also, relying on all staff to direct people, not just staff who know the site and have been trained to provide clear directions, can become an issue as it increases the chance of users receiving inaccurate or unclear directions.

If patients become lost in a healthcare facility or have not left enough time to find their way may be late or miss appointments. This can impact the facility financially, when appointments are missed with no time to fill them, as well as impacting the quality of patient care as patients who have arrived late often report that they feel their appointment has been hurried.

Accessibility Issues

People with varying abilities to negotiate the built environment must be considered when designing a wayfinding system. Healthcare facilities need to accommodate a large number of people with many types of temporary or permanent disabilities. Failure to make a site accessible to everyone, free from physical, cognitive and psychosocial barriers, means people are being discriminated against. A wayfinding system that creates, or does not address barriers experienced by those with physical, sensory or cognitive impairment is considered to be ineffective and may even be against disability discrimination laws in some countries.

Healthcare facilities should be striving to produce an inclusive wayfinding system that can be used equitably by all users. People with disabilities should be able to use the same routes as easily as other users to navigate a building. In general, a building designed with the needs of people with physical, sensory or cognitive impairment in mind is much easier to use by all.

Safety Issues

Wayfinding, besides helping the consumer to navigate the facility or site, must also be concerned with the reduction of risks to consumers and staff, the nature of which can be wide ranging and often only identified through staff experience and reported cases. Clearly identified restricted access areas can reduce the safety risks for patients and visitors in medical areas, while regulated signage, such as those indicating the storage of flammable chemicals or areas requiring staff to wear protective equipment, reduce workplace health and safety risks. Reducing workplace health and safety issues reduces the financial and human cost of the healthcare facility.

Wayfinding systems not only need to get people in and around a building, they also must get them out again. Egress in an emergency is particularly problematic and wayfinding systems have a vital role to play in fire and evacuation safety. Requirements for exit routes and emergency lighting and signage are often regulated by government bodies and legislation but should also be a key issue for the design team.

A setting is safer if it is well understood by all users, not just those who spend a lot of time in the space. If exits and routes are legible to even those who have never been in that space before, then users are more likely to be able to find their way out and find alternative routes should their exit be barred by hazards. People with physical, cognitive or sensory disabilities should also be considered

when planning for emergency egress. Issues surrounding the evacuation of wheelchair users, alerting those with hearing impairment to the emergency and assisting those with poor vision should all be considered to recognise areas if and where wayfinding devices and systems can address these concerns.

Effective Wayfinding Systems

Effective wayfinding systems can provide benefits beyond making it easier for people to use the space. They can contribute to the healing process and care of patients as well as strengthening the professional image of the health facility.

Promote a Healing Environment

It has already been said that stress, anxiety and fear caused by disorientation can cause unfavourable physical reactions. These negative reactions can undermine the body's ability to heal. Removing this cause of stress, which is quite often in addition to many other stresses experienced by patients in a healthcare setting, will reduce the load on the patient. Removing the likelihood of patients becoming disoriented is good, but providing more control and understanding of the space through wayfinding devices is even more effective. The sense of control and empowerment that is provided by being able to understand and navigate a space reduces these feelings of stress and anxiety, contributing to the healing process.

Professional Image

Ensuring users of a space feel comfortable with basic navigation from the beginning of their journey communicates a sense of organisation, professionalism and capability. It tells them that their needs have been considered and that the facility is well-planned and orderly. Patients are more likely to arrive to their appointments on time with a trusting and more optimistic attitude, making them more open to forming a positive impression of the facility and staff.

Consumer Categories

The consumers of a health facility may be generally classified under the following categories:

Patients and Service Users

Patients are the most recognisable consumers of health facility services and, consequently, the facility's wayfinding information. They are usually classified simply as inpatients or outpatients or more comprehensively as admitted acute care, emergency care, intensive care, mental health care, sub-acute/non-acute care, non-admitted care (outpatients), day of surgery patients etc.

When preparing to design or review a wayfinding system, a comprehensive list of service user categories should be compiled and analysed in relation to their length of stay (e.g. short stay for acute treatment, regular visits for successive treatments, long term stay for residential care, etc.). Such a list should identify:

- The destination of people within the facility
- The movement of people within it
- The point of initial reception
- The point of completion of service
- The time of day such events take place.

This will enable an overview of the wayfinding needs of the service users, strategies for simplifying access to common and disparate services and elements of the operational policies, physical environment and information systems that could contribute to effective wayfinding.

Visitors

Family and friends are vital to the care and healing of patients and make up most of the visitor group of consumers, accompanying outpatients or visiting inpatients. Evidence is emerging that supports the increased inclusion of family, friends and carers in the healthcare environment, therefore their needs need to be accommodated in the wayfinding system. Their need for information, for respite, for nourishment and for support should be considered. The informational/ wayfinding needs of relatives and friends of people entering the Emergency Department require particular consideration in view of their potentially distressed state.

Other visitors to a facility include commercial or service representatives, deliverers of stores and supplies, ambulance and police officers, fire brigade officers, assorted health and welfare workers and other official representatives. Identify the variety of visitors so that the means and purpose of their access to and navigation of the particular facility can be understood. Not only will such preparation assist in identifying wayfinding needs, the act of review will confirm that appropriate operational policies regarding to security, access and function are in place.

Staff

Staff are both the most advantaged and most obligated of the consumer groups. They are advantaged in that their frequency of attendance grants them great familiarity with the facility, inevitably reducing their dependence on signage. The obligation of staff is in sharing their knowledge of the facility with service users and visitors and, by virtue of their understanding of intended traffic flow, in recognising when people are lost or in need of assistance. Staff may require training to ensure their communication of directions is clear, comprehensible and consistent with terminology of wayfinding signs.

While, in general, their dependence on directional and locational wayfinding devices is reduced as their familiarity with the facility increases, their need for safety, hygiene, health and safety and other regulation signage is more complex than other consumer groups.

Consumers with Special Needs

Wayfinding elements should communicate effectively to the broadest group possible, including people with a wide range of sensory, physical, language and intellectual abilities; social and cultural backgrounds; age, gender, and stature differences. Universal and inclusive design is the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialised design. To do this, users with varying abilities must be taken into account.

The Unimpaired User

Impairment can be conceptualised as a spectrum, and where someone lies on the spectrum is determined by the relationship between the environment, the person's physical, cognitive and psychosocial abilities, and the task that is required of them.

An unimpaired user is a user who's physical, cognitive and psychosocial abilities are equal to the task they need to perform in the environment it is to be performed. In regard to wayfinding, the unimpaired user would therefore have no limitation of their sensory abilities (e.g. vision and hearing), no impairment of their physical ability, no impairment of their cognitive ability (e.g. reading, comprehending, problem solving, memory, etc.) and would be able to navigate and orientate themselves in a space. Poorly designed spaces can still impair this user to a certain degree.

At one time or another everyone is "impaired", for example, if someone is upset or distraught their cognitive abilities may be impaired and may no longer be sufficient to navigate their environment. Another example is of a user who may be using a pram, if the environment does not provide level access or lifts then this person's physical mobility is impaired. These examples are of temporary impairment and environmental impairment and can occur to anyone, including those without a diagnosed / formal disability.

Sensory Impairment

Vision impairment and hearing impairment are the two main sensory impairment that affect a person's ability to find their way.

285 million people are estimated to be visually impaired worldwide; 39 million are blind and 246 million have low vision. The majority of people classified as "visually impaired" are over the age of 50. Those with limited vision rely on strong colour contrast between surfaces, reduced glare, definition of main circulatory routes with tactile and visual cues and large, legible signage. Users who are severely visually impaired rely on auditory and tactile cues (only in rare circumstances do they use olfactory or heat perception). These cues need to be carefully considered when designing for visually impaired users, background noise should be minimised and warning noises should be clear and informative.

360 million people worldwide have disabling hearing loss. Hearing loss may be inherited, caused by complications at birth, exposure to certain infectious diseases, the use of ototoxic drugs, exposure to

excessive noise and ageing. People with hearing impairment rely on written messages, sign language and lip-reading to communicate. The visual legibility of the built environment is the main supportive wayfinding element for people with hearing impairment.

Cognitive Impairment

Cognitive impairment can range from temporary distress due to becoming overwhelmed by information or a situation (situational impairment) to impairment caused by disease, accident, age or developmental delay (developmental impairment). Cognitive impairment can affect language abilities independently of spatial processing abilities.

In order to facilitate wayfinding for people with cognitive impairment the design of the setting should include clearly defined paths to destinations, striking landmarks and additional reinforcement of the route and destination along the way. Reducing the number of decisions that are required along the route and the simplification of terminology are other ways wayfinding can be supported for people with cognitive impairment.

Mobility Impairment

Mobility impaired users are those who use wheelchairs, or walking aids such as crutches or walking-frames, as well as those who find movement difficult due to fatigue, frailty and balance. The routes taken by the mobility impaired, if different to their able-bodied peers, should not require more decision points or be more difficult to navigate. Ideally people with mobility impairment should be able to take the same route as everyone else. If a certain portion of a route is inaccessible for a person in a wheelchair, for example, then they should be made aware of it and provided with an alternative before they reach the obstacle.

A common issue for many people with mobility impairment is their lowered field of vision. Wheelchair users have a lower field due to their seated position while those using mobility aids such as frames or crutches often direct their vision downward. For this reason it is recommended that signs are placed between 1200 mm and 1600 mm above the finished floor level, achieving a reasonable compromise.

Language and Illiteracy

Functional illiteracy is reading and writing skills that are inadequate to manage daily living tasks that require reading skills beyond a basic level. Causes of illiteracy include the influences of the home and family on the need and value of reading during childhood, non-attendance at school or not finishing school and learning disabilities such as dyslexia. Foreigners who cannot read and write in the native language where they live may also be considered functionally illiterate.

Symbols and pictographs are an obvious complement to written signage that can support the wayfinding of people who are functionally illiterate. However, pictorial language should be based on recognisable elements and there are limits to what can be described/ identified.

1.3 Factors Affecting Wayfinding

Many factors influence the success of a journey through a health care facility. People factors, environmental factors and information factors can all hinder a person's ability to find their destination and know that they have arrived.

Person Factors

Factors related to people using the wayfinding system include:

- Prior knowledge of, and familiarity with, the environment
- Prior experiences in other healthcare environments
- Attitude and preconceptions of the environment
- Emotional state
- Choice of mode of transport
- Sensory acuity, such as visual and hearing acuity
- Ability to understand the language used on signs and spoken by staff

- Mobility – both temporary and permanent limited mobility
- Ability to 'read' and comprehend site maps
- Ability to process and remember spoken directions
- Sense of direction and cognitive mapping skills.

Environmental factors

Factors related to the physical space include:

- Complexity of the site
- Availability of memorable elements of the site
- Ability to see and identify the site entrance from various directions of approach
- Potential to create a simple mental model of the layout of the environment
- Differentiation of architectural style, colour, size, etc. between buildings and areas on the site
- Ability to see and identify the building entrances
- Visibility of the information desk upon entry
- Number of directional changes along routes
- Level of visual clutter detracting from or obscuring entrances and signs
- Definition of public and private areas
- Definition of interior and exterior pathways
- Availability of interior and exterior landmarks
- Lighting of routes, signage and landmarks.

Information factors

These issues relate to:

- Clarity, accuracy and consistency of information and terminology including written and verbal pre-visit information, en-route information and on-site information
- Legibility of information, particularly in relation to distance from which it is intended to be read.
- Positioning and prominence of information
- Cohesive relationship between the information and what is perceived in the environment.

Generally, person factors are accommodated and 'designed for' by controlling and designing the environmental and information factors.

The environmental factor is controlled by the planning and interior design of the facility while the information factors are primarily controlled by signage.

2 Wayfinding Design Principles

Principles of wayfinding design include the following;

- Create a unique identity at each location
- Create regions of differing visual character
- Use sight lines to show what is ahead
- Don't overwhelm a user with options in navigations
- Provide signs at the decision points to assist in making wayfinding decisions
- Create well-structured paths
- Use landmarks to provide orientation and memorable points to orientate oneself to
- Provide a hospital site plan or a survey map either on a brochure distributed to visitors or mounted as a wall plaque inside the hospital in the main reception area.

2.1 Architectural and Interior Design Components

While many people think of signs and graphics when the idea of wayfinding is discussed, architectural and interior design components are just as important. Well-designed architecture will have cues inherent to the building's design which can subconsciously guide a consumer.

The main architectural wayfinding elements include:

- Zones: areas characterised by a particular feature or function and given a unique identity
- Paths/ circulation: distinct areas for movement to and from destinations
- Landmarks or markers: objects/ elements used to indicate a position / area along a route or at a destination
- Nodes: a point in a network/ system at which pathways intersect or branch; usually a point where a decision needs to be made
- Edges: how the perimeter of a path, zone or node is defined.

These elements are explored in the layout of spaces and circulation and the design of the physical spaces.

Spatial Planning

The planning and layout of a building forms the foundation for all other wayfinding elements.

Spatial planning involves identifying, grouping and linking spaces.

Planning a layout involves the identification of spatial units and understanding their purpose, function and relationships to other units. Based on these relationships and functions, units can be grouped into zones of common function/ identity.

Understanding the logical progression of, and relationships between spaces will determine the circulation system and is an important aspect in creating an effective wayfinding system. Directional signs can only do so much to assist users in illogical, complicated routes.

The goal is to keep circulation systems simple and legible to a user by reducing the number of decision points, maximising visual access and minimising any change in level and directions in between landmark and nodes.

Comprehending relationships between zones, including the physical and visual access required between them, allows the qualities required in the circulation paths that connect spaces to be explored. For example, clear lines of sight from car parks to entrances and from entrances to lift foyers or reception counters helps guide the consumer to their destination or to information that will further assist the consumer to navigate the health facility. These visual access requirements will therefore impact how these zones are laid out and connected, for example how open and direct the path is.

The greater the simplicity of the circulation system, the easier it will be to generate a mental model of routes around a site. This means a site would require fewer complex directional signage and makes wayfinding easier as consumers find it much easier to imagine and understand their route.

In an emergency many people do not notice signs, often attempting to return by the route they entered. However, a consumer with an accurate mental model is more likely to find alternative routes if their first choice is blocked making a simple, logical, legible circulation system desirable for safety reasons.

Entrances and Exits

It is important to ensure that the main entrance/s are legible to consumers from various angles of approach. Consider the main areas, such as bus stops, parking lots and footpaths, that consumers approach from and design for legibility from these angles. The legibility of an entrance can be enhanced by architectural elements including the projection or recessing of the entrance to give prominence, the inclusion of a gate to control the angle of approach, creating a marquee, canopy, portico or awning to draw attention to the entrance or using symmetry or asymmetry of the façade to communicate the entry.

In most cases the entrances of a hospital are also the exits of a hospital. Thoughts should be given in the architecture and planning to ensure the exit points are legible from the main circulations or decision points / nodes.

In larger facilities where there are multiple points of entrances and exits it is recommended for all the major point of egress to adopt a common architectural language. In an emergency, people are much more likely to exit the building by retracing their path than risk taking an unknown route. However, if the architectural form and features of an exit are similar to the one they came from, then a subconscious connection can be made between the common architectural elements.

The same principle also applies to entrances and exits for individual hospital departments. A different architectural language can be used to help differentiate the main entry/ exit doors from all the other doors especially if the main door is located along a corridor with many other doors.

Interior Design and Landmarks

In regard to wayfinding, the purpose of interior design is to create differentiation between zones and the spaces within them, create identities for destinations and curate the journey to ensure there are memorable landmarks in the circulation system without overloading the user with information.

Landmarks along a circulation system, particularly when associated with decision points/ nodes, act as mental anchor points in a person's cognitive map. Landmarks can be outstanding objects, architectural elements or a space that has a distinct identity. For example an unexpected sculpture or lounge with distinct décor could be placed at a point where users are presented with two directional options. If a user does happen to get lost they can re-orientate themselves by this landmark. Landmarks also help with verbal directions by relating the movements with physical objects, for example, a staff member may say "to get to that office, take the elevator to level 3, head to the left, and walk ahead to a drinking fountain and the office is just opposite that". In that example the landmark becomes the physical element that marks the destination. The more unusual and distinct the landmark, the more memorable it is; imagine telling someone to turn right at the giant apple.

By creating identities for zones and the spaces within them, interior design allows zones to be distinct from each other and from the circulation areas and, equally, it allows spaces within zones to have common characteristics that makes it clear that they are grouped. For example, each unit within a hospital could have a distinct theme and colour palette; the spaces within each unit conform to the theme and palette of the unit and are read together as a zone.

Interior design can also contribute to the definition and legibility of paths and the circulation system. A path is perceived by markings or structures on the ground, sides or ceiling or by a combination of these elements. Path-defining elements can be continuous, such as a long wall, or repetitive, such as bollards or columns. Direction guidance can be achieved by lighting and light fittings as well as differentiating the texture and /or tone of the floor material. Proper articulation of paths can indicate the direction of movement and can facilitate an understanding of the circulation system.

Landscape Architecture

When looking at a project from a whole-site scale, landscape architecture can contribute much to the form and configuration of the site through connections between buildings and the relationship of the site with the surrounding community. At a single building scale landscape architecture can make the building visually accessible and can emphasise entry/ exit points. For example, the approach to the entrance can be emphasised by paths and gardens and the placement of paths can influence the angle of approach. Also, distinct landscape features that are strategically placed to be visible from inside a building allow for vistas that can be seen as memorable landmarks.

2.2 Graphic and Information Design Components

Graphic and information design elements must be carefully designed to clearly communicate information to the consumer. A consumer needs information to make decisions, such as general information about the setting and its organization, where they are in it and where their destination is. The consumer also needs information to execute their decisions; that is directional information – arrows, directories or coloured lines on walls, ceilings or floors leading to destinations. Finally, the consumer needs information to conclude their wayfinding process; the information that identifies their destination upon arrival. This process is not linear and the decision making and executing information is ongoing throughout a journey.

Sign Types

Signs Classified by Function

Considering the information consumers require, as stated above, wayfinding signs, both interior and exterior, can be classified according to the type of information they serve to convey.

- Orientation – signs that give the user an overview of what shape the building or site looks like, where they are within it and where their destination lies. They also provide other relevant information about the general setting. Examples of this type of sign include maps, directories, floor plans and exploded views
- Directional – this category of sign provides defined paths, routes or directions needed to guide consumers to specific destinations. Message content should be in accordance with accepted terminology, include clear directional arrows, and match the corresponding destination sign. This category includes directory panels and individual directional signs.
- Identification – these signs confirm the identity, name or function of individual buildings, departments, rooms or locations. Some of these will be the destinations referred to by directional signs, but the majority will exist independently of any wayfinding system. This category includes building, floor/level, department and room identification, door signage, and numbering
- Statutory – this category includes all mandatory signs required by regulation and statute. They include fire safety, occupational health and safety and building code requirements; as well as those of services such as telecommunications, electricity, post and security
- Traffic and Parking – this category covers all vehicular traffic flow and parking control signs; both on-site and off-site. It includes signage in loading and service areas
- Miscellaneous – these signs generally provide information regarding procedures, relate to operational matters, and are usually intended to be read by staff

Signs Classified by Physical Characteristics

Signs can be classified by the way they are mounted:

- **Self-supporting** – a sign mounted on a post, slab or plinth, or constructed in such a way that it can hold its own weight.
- **Wall mounted** – a sign that is fixed so that it is either flat against or protruding from a vertical surface.
- **Suspended** – a sign that is hung or fixed so that it is attached to a soffit or ceiling. In addition to the classifications above, the following features can assist to describe signs:
- **Single or double faced** – self-supporting and suspended signs may be single faced, meaning they only display information on one side, or double faced, displaying information on both sides.

Double faced signs can show the same information on both sides (used more often for identification signage) or different information (used for directional signage).

- **Internally illuminated, externally illuminated or unilluminated** – all signs require lighting of some kind buy either natural or artificial light sources. The strength, direction, temperature and type of light need to be considered as they impact the legibility of a sign.

- **Dynamic or static** – static signs will display the same information and graphics until physically replaced while dynamic signs are generally electronic and may or may not be interactive, such as an electronic directory. Dynamic signs are useful in highly fluid settings where information is changing often, for example information for staff regarding patient room allocations would be considered dynamic information.

Sign Location and Placement

Decision Points

In executing a wayfinding plan consumers are expected to make decisions along the way. The fewer decisions demanded of the consumer, the more efficient the route. Decision points can be external, found en-route to the site, and internal, found mainly in lobbies and at corridor intersections.

Directional information is most useful at these decision points. Additional directional information placed along a route can be used to reassure consumers that they are still on the right track if the route seems long and there is a risk of a user feeling uncertain about their direction. It is recommended that the amount of information, and therefore the number of signs, placed at intersections should be sufficient to provide information that could be required by a consumer approaching from any direction.

Progressive Disclosure

Health facilities are sometimes over-signposted. This is often a result of size and complexity of function and from attempting to provide too much information at too many points along a wayfinding path. The possibility of over-signage can be minimised by developing a hierarchy of messages and releasing general information first, providing specific information as it becomes critical to the decision making process.

This gradual and careful release of information is known as progressive disclosure and is used frequently in airports and interactive product design. The key to progressive disclosure is to provide only enough information necessary to get the visitor to the next decision-making point, ultimately reducing visual clutter and breaking the information into consumable pieces so users are not overwhelmed.

Hierarchy of Signage

There is a hierarchy of signage which is based on the journey for the consumer which can be summarised below:

1. Consumer travels to health facility via vehicular, public transport or other mode of transportation
2. Enters the site or campus ground and if a driver, makes a decision as to their vehicular destination such as drop off and location of the car park
3. Upon disembarking from transportation the consumer makes their way to the entry point of the facility
4. Enters the facility and orientates to plan their journey to a destination department
5. Travels along horizontal circulation and/ or vertical circulation in the form of lifts or stairs, to the target department
6. Arrives at the target department and finds the path to the final destination
7. Exits the building via retracing their path or an alternative path.

Specific signage needs to be designed to cater for every stage of the consumer's journey.

The following is a list of the different signage types that would be employed for a typical health facility.

External Signposting

Road Traffic Signposting

Cities permit exterior directional signs to be located within a certain radius of a healthcare facility and these signs should be placed at decision points with enough time required for the appropriate change in direction to be made. It is very important to consider the external signposting to the health care facilities. Consideration should be given to the following circumstances:

- Along a freeway during the approach to, and at an exit to the city/ suburb in which a hospital is located
- On a classified road in advance of, and at the entry to, a hospital providing emergency treatment, which fronts that classified road
- On a classified road in advance of, and at a turn-off leading to, a hospital providing emergency treatment.

A local road traffic authority may provide funding to supply, erect and maintain external signage and provide consistent sign posting within and at the entries to the hospital grounds. The local traffic authority will also have standards defining design, colour, shape and size of signage to be erected on public roads. The same format of signage should be used on roads internal to the facility to ensure a continuity of understanding with consumers.

Figure 1: Examples of different styles of external road traffic signs

Figure 2: Hospital sign replicated on the building exterior

Site Entry/ Vehicular Directional Signage

An external signposting identifying site location with directional guidance to main external area of interest such as main entry, carpark and drop off zones is essential at different points of approach. In much the same way that it was necessary to have identified the entrance to the grounds of the facility before reviewing community signposting, it is essential to decide which building entrance is to be used by those attending the Emergency Department, the admissions office, outpatient clinics, community health services, or visiting inpatient units. These destinations represent the bulk of attendance to the facility.

In an ideal situation, for the ease of both external and internal signposting, these categories of consumers would all use the same entrance. In many cases, however, this is not the case. Whatever the circumstances, decide on desired traffic flows, both vehicular and pedestrian, and signpost the

route leading to specific points. Clearly indicate after-hours access points if these differ from those normally used.

Figure 2: Examples of site entry signage

The purpose of vehicular directional signposting is to:

- Direct motor vehicles to parking areas from the designated entrance. Such parking may be short-term for emergency cases or prescribed parking for service users and visitors
- Direct pedestrian traffic from designated car parks, public transport set-downs, or main site entrance to the main building entrance
- Identify buildings
- Direct pedestrian traffic from primary egress points to the service users/ visitors car park and public transport pick up areas
- Direct vehicular traffic out of the grounds.

It is advisable to keep external signposting as uncomplicated as possible due to distances involved, as well as the many directions of approach which are possible in an external situation. To this end the following comments are made:

- Use terms such as Visitor Parking, Main Entrance, Enquiries, Emergency Department, and Inpatient Units. If followed in order, these messages will direct consumers from the facility's entrance to the relevant service or location
- Include a specific unit or department on an external directional sign only when it cannot be reached from the main entrance or wherever general directional information is given
- Attempt to make external signs double-sided and place them for reading by traffic in both directions
- Position signs with consideration of environmental factors; tress, the path of the sun and shadows/ glare it may cause, other build elements such as telegraph poles, etc. which can obscure the line of sight
- For vehicular traffic signs within the facility grounds, such as Give Way, One Way, Speed Limit and Stop signs, use the relevant main roads authority's sign format. A driver's familiarity with such signs will greatly reduce the potential for confusion.

The primary emphasis of external signposting is in relation to patients and visitors. However, appropriate signage should also indicate staff parking, where provided, and for site deliveries. It is, however, expected that staff orientation and operational policies will be put in place to assist in the direction of customers other than service users.

Site Maps

Where the facility comprises a number of buildings spread over a large area or where there is more than one entrance it may be necessary to install a map of the site at certain locations such as bus stops and parking lot where consumers began their journey on the site as a pedestrian.

Care should be taken that the details depicted are not unnecessarily complex. Wherever possible, group the destinations, such as all Inpatient Units, Outpatients Clinics, Emergency Department, Enquiries, and Administration. More detailed information can be found upon arriving at the designated building or entrance.

In exterior settings users favour simplified maps from an aerial perspective, either directly above at 90 degrees or an oblique view from 60 degrees (the isometric/ oblique view is generally preferred). Extraneous information, such as shadows from trees or buildings or equipment on roof tops, is removed and a system of graphic information is superimposed. The benefit of a site map will be enhanced if both its orientation and perspective match that encountered by the user as they read it and if the external signposting matches, in terminology, the building names as shown on the map. The depiction of the facility should also be recognisable to the user and confirm that the correct path is being taken.

External Directional Signage

Directional signage may be required along major external routes to provide guidance to the major external points of interest such as car park, main entry and public transport hub. Pending the length of travel required to reach these points of interest a number of signs may be required along the path to assure consumers that they are on the correct path to their destination.

Figure 3: External directional signage located at nodes / decision points

Entrance Signage

An external sign may be required outside a major entrance and exit point to identify the name of the entrance, if multiple major entrance points are present, or the name of the building, if there are multiple buildings within the campus.

This type of signage is also required outside a dedicated emergency unit entrance to differentiate it from the main entry. This sign can be located internally provided it is legible to external traffic

Figure 4: An example of entrance signage

Internal signposting

Having established the primary entry point for visitors to the facility it is necessary to determine internal traffic flow. The different consumer groups should be identified and their routes traced to their various destinations. As each route is traced attention should be given to the existence of decision points and the duplication of signs to be visible from different angles of approach.

The following principles apply to internal signposting:

- Where possible, move from providing general information to more specific information along a route to avoid overloading the consumer
- Give special consideration to the needs of people during an emergency
- Keep signposting as uncomplicated as possible
- Keep terminology used on signage and by staff consistent
- Consider security and out of hours usage of the building
- Confirm routes at decision points.

Main Directory board

Building directories and maps are often the main point of orientation information upon entering a building. The following principles apply to directory and map design:

- A higher degree of stylisation is acceptable and even helpful on interior building maps than in exterior site maps
- Do not place information too high for it to be used. 1600mm above floor level is generally acceptable as the maximum height for information to be placed (depending on the size of the text) but this will exclude use by people who use wheelchairs and people of short stature
- Organise the directory by consumer needs not by bureaucratic hierarchy
- Keep terminology simple. If a service or unit is known by the general public by a certain term, use that term. For example, using the name ‘labour and delivery’ or even ‘pregnancy and birth’ would be easier for most people to recognise than the term ‘obstetrics’
- The signage should be sized to ensure its visibility to all pedestrian traffic entering the building
- Signs should be located with sufficient space to allow viewing by a number of people around the signage without clogging up the main circulation
- Where medical tenancy suites are present, a separate medical suite tenancy directory board may be required either in the vicinity of the main directory board or, if a separate lobby exists for the medical tenancy suite, located at the relevant lobby with adequate directions from the main directory board to this lobby.

The use of maps is less useful for multi-level situations due to the added conceptual complexity. In addition complex or overly detailed maps have a tendency to require more frequent updating. For these reasons the use of maps is, in most circumstances, not recommended as the central or key component of a signage installation. Their role is generally supplementary and for orientation.

Do not present too much information or too many maps in one location as users assume that it is too confusing. Users feel that they are required to sift through and take in a lot of information and will tend to ignore it. A good practice is to provide an alphabetical directory of services/ user needs and their corresponding level upon entry to a multi-level building. The aim is to assist the user to reach the correct level first and then provide a map of that level. Ensure this map is properly aligned with the floor as perceived by the user when reading the map.

Electronic directories can solve the issue of containing large amounts of information while displaying only as much as a viewer needs and can absorb at any given time. Generally users may search or scroll through the directory to find their destination and may even be provided with a map with directions. Only one user can make use of this directory at a time, so for busy facilities it may be sensible to install multiple directories. Ensure the display is at a suitable height for interacting and reading and ensure the contrast of text on the display is adequate.

Figure 5: examples of an electronic Directory Board and Lift Lobby Directory Board with multiple lifts serving different destinations

Lift Lobby Directory Board

This is generally a scaled down directory board located at the lift lobby on every level to assist consumer in deciding their destination floor prior to entering the lift. It should highlight the current floor number with a summary of relevant departments and points of interest on all the other floors. A further scaled down version should also be present within the lift car to allow consumers to make further decision and affirmation of their journey.

Inter-departmental Directional Signage

These are the internal signposting that direct consumers to their destination departments or points of interest and should be located at every node or in the middle of exceptionally long corridors.

Directional signage does not need to be restricted to a traditional layout. Departments and points of interest can be colour coded on the signage and the same colour could form part of the interior design scheme for a combined wayfinding design approach.

Figure 7: examples of Inter-departmental Directional Signage

Department Entry Signage

There should be signage to announce the entry point to a department. The design of the signage may adopt the colour and language of the interior scheme and may also be integrated with additional graphics or information related to condition of entry into the department where required.

Intra-departmental Directional Signage

This signage is similar to the inter-departmental directional signage in principle but directs consumers to points of interest within the department such as bedroom location, staff station, toilets and lift lobby location. Directional signage should be located at every node, corridor intersection or distributed along exceptionally long corridors. Contrasting colours could be used to ensure signage is legible for suitable distances.

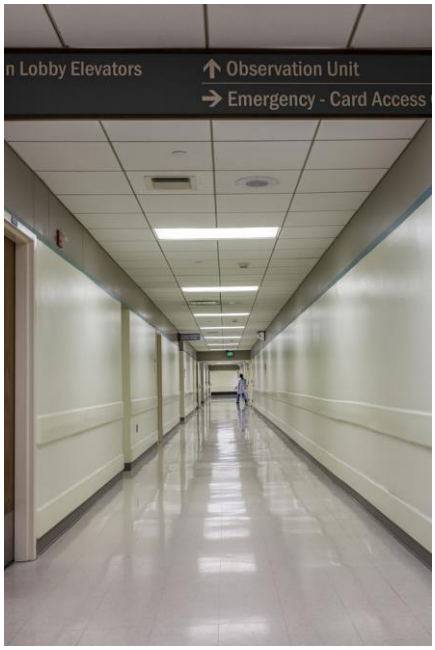

Figure 8: Example of Intra-departmental Directional signage

Identification Signage

This signage announces the identity of the room/ bay and signifies the destination point of the consumers. Signs are usually, but not limited to door signs. The font type, set-out and design should be consistent to maximise their legibility.

Not all rooms require an identification sign. It is good wayfinding strategy to limit the number of doors/ rooms that would require identification signage to minimise cluttering and avoid information overload for consumers. This is particularly true in staff restricted areas.

Figure 9: examples of Room Signage

Notices

A notice is a brief, important message that is often, but not exclusively, intended for staff.

Examples include: ‘do not block door’, ‘these doors must be kept closed’, ‘this area is protected by video surveillance’ and ‘put tools back in their place’. They remind staff of operational procedures/ actions and inform visitors of important information.

A notice can be hand written or computer generated but command more authority when prepared professionally and consistently with all notice signs within the building.

The following points will assist in the preparation of notices:

- Write messages in the most concise way possible.
- Break the message into word groups to fit lines.
- Check the longest line does not exceed 250mm when letters and words are correctly spaced.

Figure10: example of a Notice sign

Layout and Design

General Information Signs

General information about the setting assists in the decision making process. Users need to know what can and cannot be done on the site, what should be done in certain areas and what areas can be accessed at what times. Some general information signage may be mandatory for workplace health and safety, general user safety and emergency safety.

Clear signage communicating prohibited activities, such as smoking, walking on the grass, bike riding, taking photos or using mobile phones, and those communicating prohibited access, such as high voltage areas, staff only areas and sterile areas, should be placed in key visible points around the perimeter of the area in which the activity/ access is prohibited. Often these prohibited activities and areas are communicated by a pictograph but the communication should be reinforced with words. Actions that must be taken prior to entering an area, such as putting on protective clothing or washing hands, should also be placed in key points around the area in which the action is required.

Information regarding hours of service is required if certain areas of a facility have differing opening hours from the rest of the building. The hours of operation of a health facility may be limited to standard office hours or may extend to 24 hour coverage. Any signposting, or other initiatives put in place, must be considered from the perspective of out-of-office hours use. Certain access points may be locked out-of-office hours or after visiting hours. Directions indicated through signposting should, therefore, be evaluated in this context. Illuminated signposting should be considered for usage out of daylight hours; particularly for an Emergency Department.

Sign Heights

Wall mounted and free-standing signs should be placed between 1200mm and 1600mm above floor level. This band should be exclusively used for the placement of wayfinding information, free from light switches, thermostats and other distractions. The only exception is fire alarms as this band is highly visible and placing fire alarms within this zone increases their visibility. This 400mm band fits fairly comfortably within the field of view of most consumers including children and people in wheelchairs. Keeping information consistently within this band also ensures consumers will know where to find it.

Suspended signage should be located between 2100mm and 3000mm above floor level. This 900mm deep band is for the display of large directional and identification signage that can be viewed from a distance. Signs in this band are useful to most consumers; however, they are illegible to users

with low vision. Therefore, it is best practice to duplicate the information shown in this high band in a lower band. This may seem like providing too much information but repetition of information will be useful as a reinforcement.

In some situations, compliance with the desired location will not be possible. For exceptional situations the sign should be positioned to best advantage.

In general signage should be located within the within the 1200mm – 1600mm band and the 2100 – 3000mm band as indicated below:

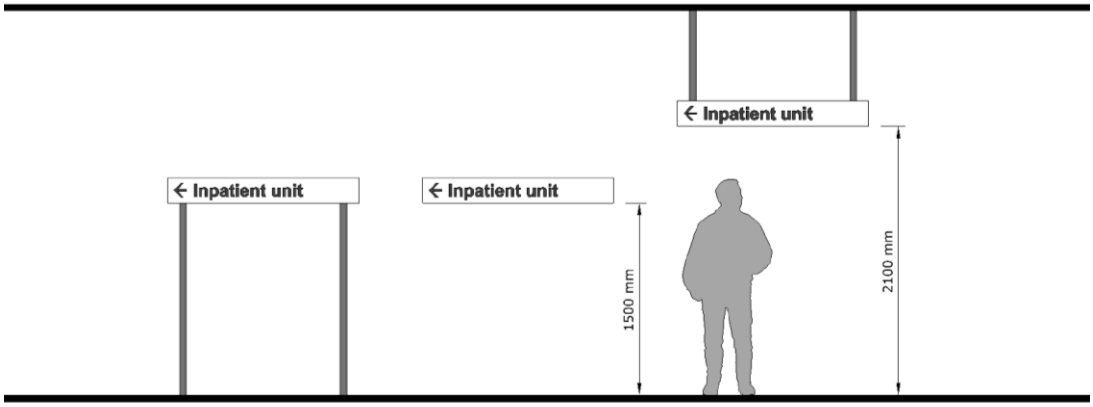

Figure11: Recommended heights for wall mounted and suspended signs

There should be consideration on the placement of signs on the door to ensure a consistency of layout for legibility as depicted in the diagram below.

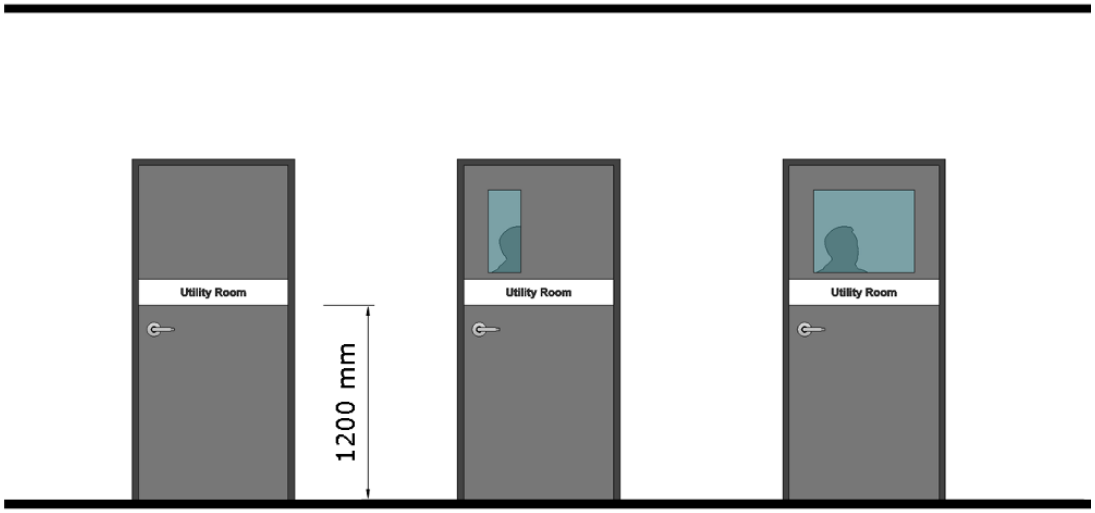

Figure 12: Recommended door sign height

Typography

Letterforms

Letterforms should be legible and efficient. Strokes should not be so wide that they impinge on the spaces between them. When the space between strokes becomes reduced, legibility suffers. The consistency of stroke thickness in most sans serif typefaces, for example, Helvetica, Frutiger and Eras, is considered to be more legible than the variation of thick and thin strokes found in many serif type faces. Serif font should not be discounted completely as other characteristics such as size, legibility distance and inter-letter spacing should all be considered when evaluating the legibility of a typeface.

The typeface chosen for signage should have letterforms with an x-height to capital height ratio of approximately 3:4. This ratio provides adequate differentiation to give words their distinct shapes.

Capital and Lowercase Letters

People do not read signs in a structured manner like they read a book or newspaper. People read signs by scanning them in unstructured glances. It has been argued that using a combination of lowercase and capital letters is easier to read, however this has only been validated for the way books are read and not for how people scan signs.

The difference in legibility between all capitals, all lowercase and a combination of the two in signage is negligible. However, one of the main differences in legibility comes from the fact that many lowercase letters can be confused with one another, particularly by people with reading difficulties. There is less confusion between the same capital letters. It may be for this reason that capital letters are favoured for emergency signage. Building directories, however, are read more systematically than other signs and should therefore not be written in all capitals.

Legibility Distance

Legibility distance dictates the size that letters in a sign must be if they are to be perceived and recognised from a given distance. This, in turn, dictates how large the sign itself must be. The recommended standard is that a 25mm letter in an efficient typeface is generally legible from 15 metres away. This standard is applicable for ideal circumstances, with good lighting, no angular distortion, no glare and a user with 20/20 vision.

Whenever a sign is not viewed directly from the front, angular distortion occurs. A successful letterform with appropriate spacing will retain at least 75% legibility when distorted 45 degrees. This means that the 25mm letter will only be legible from a distance of 10 metres. Poor lighting conditions reduce this legibility further. When the circumstances cannot be guaranteed to be ideal, allowances should be made to ensure legibility. Letter height of 45-50mm is therefore recommended as the minimum size to be read over a 15 metre distance.

Pictography

While written language is the most used means of communication, its use is based on the assumption that the viewer is literate and can see and comprehend the message. This is sometimes not the case, therefore it is best practice to combine pictograph and typographic messages.

Pictographs also referred to as pictograms are symbols or icons that represent a facility, object or service. Through the combination of colour and shape, pictographs can communicate a large amount of information in a small amount of space if designed well.

Often, pictographs can communicate prohibited or obligatory actions, warn people of potential hazards and identify facilities. These symbols are common – the red circle with a red line through it, the triangle with an exclamation point in the middle, and male and female symbols for restrooms – and are generally accepted and recognised. However, not every pictograph is immediately understood and recognised. Pictographs are a language that has to be learnt from exposure to them. Some are easier to learn and interpret than others.

There are three categories of pictographs or symbols:

- **Object related** – represent certain objects, for example, a phone or a cigarette are commonly recognised. These symbols on their own are not always enough and can be restricted in how much information they convey. For example, the symbol of a head wearing a respirator means “breathing protection must be worn” but it fails to convey the type of breathing protection which means words will need to be added for the different types. There will be a learning process for many of these object related symbols.
- **Concept related** – an arrow does not represent an arrow in the same way a telephone handset represents a payphone. It attempts to convey the idea of movement in a certain direction. This is a rule or convention that must be learned.
- **Abstract** – an abstract symbol has little or no apparent relationship with what it refers to. The circle with the diagonal slash has come to be generally understood as the symbol for prohibition, the up-right triangle with an exclamation point has come to be read as “warning” and a red circle with a white horizontal block through the centre is recognised by many as meaning “no entry”. Abstract pictographs generally have the highest learning curve and often require high use over a long period to become integrated into a society’s visual vocabulary.

Figure 13: use of pictograms along with wording and braille on signage

Braille

In many countries and jurisdictions it is required for braille to be present in certain signs for accessibility reasons, particularly amenities identification and within the lift car.

Considering that health facilities are visited by the sick and potentially physically disadvantage it may be worthwhile to expand the usage of braille to other signage types, particularly the main directory board and directional signage within reach. Braille can be integrated into the signage or be separated as standalone signage. Adequate tactile ground surface indicators would be required to guide the visually disadvantage towards the latter.

Colour

Colour for the creation of uniformity and branding of wayfinding information is restricted by the need for contrast. Any colour may be used on a sign provided there is adequate contrast between the background colour and any colours used for messages and pictographs.

Colours have a light reflectance reading (often reported on paint or ink samples). By subtracting the darker reading from the lighter reading and multiplying by 100 we can calculate the brightness differential between colours. When the brightness differential is 70% or more, clear differentiation between the message in one colour and the background in the other is possible. The legibility of a sign is always greater when the background is a darker colour however the brightness differential will be the same regardless of whether the lighter or darker colour is used for the background.

Colour Coding

Colour coding is often difficult for large complex spaces due to the requirement for a large number of colours. Nine basic colours plus black, white and grey are the only colours commonly used for colour coding. This is because colour coding requires colours that have agreed upon names such as ‘red’, ‘blue’, ‘yellow’, ‘green’ etc. Use of more than one tint/ shade of a single colour increases the likelihood of confusion. There are not enough colours to code every unit of a health facility because most often the number of departments exceeds the available colours. Furthermore, most first time users of a facility would not remember all the colours used.

Colour coding can work on a geographic basis, adding to the identity of a zone. For example, different buildings on a health facility campus could have different colours in their wayfinding systems. This is particularly useful when connections have been created between buildings over time. This reinforces the concept of transitioning from one zone to another.

Sites should not rely entirely on colour coding to support the wayfinding information. Rather than attempting to colour code different units in an entire facility, colour coding can be used to communicate some important room types, for example, all doors to amenities rooms could be a single colour and all doors for staff only areas could be another. Combinations of written signage and symbols would reinforce recognition of these areas.

Graphic Layout

Messages can be arranged so that they are aligned left, centred or aligned right. The most effective alignment (for use in countries where the official language is read left to right) is left aligned text. While it is possible to read centred text, particularly if all the lines are part of the one message, the human eye prefers organisation and when multiple pieces of information are being presented, a consistent starting point for each new piece of information makes reading easier.

Information should be broken up into usable pieces that can be scanned quickly by the user. The glancing/ scanning and recognition process used by consumers requires information to be grouped

into three or four lines each when large amounts of information need to be displayed. Groups can be laid out vertically or horizontally depending on the space available. Examples are provided below.

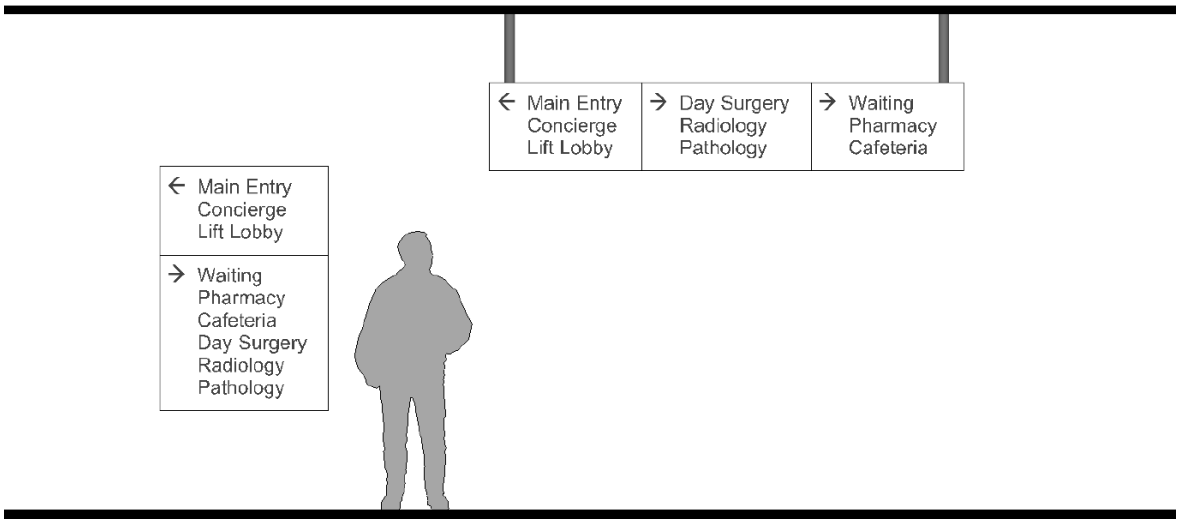

Figure 14: Group information on signage to enhance consumer recognition

Content and Language

Signs should be targeted at fulfilling the users' needs. The display of technical names on signage in healthcare facilities, such as 'Otorhinolaryngology' for 'Ear, Nose and Throat' is a major cause of wayfinding difficulties. Using simplified, everyday language for the content of signs is important as it should reflect the language the consumer uses to make decisions.

Multilingual signs

There is a limit to how much information can be put on signs and the duplication of information in another language can be confusing for users if not carefully designed.

Signs offering information in two languages should ensure both languages are consistent in legibility. Characters from other languages may be more complicated than English and therefore varying font sizes may be required to achieve consistency. This is demonstrated in the figure below, where the traditional Chinese characters require a larger font size to have the same legibility as the English counterpart.

Figure 15: Multilingual signage: font sizes to ensure legibility

There are various methods to providing bilingual signage some of the most common examples are shown below:

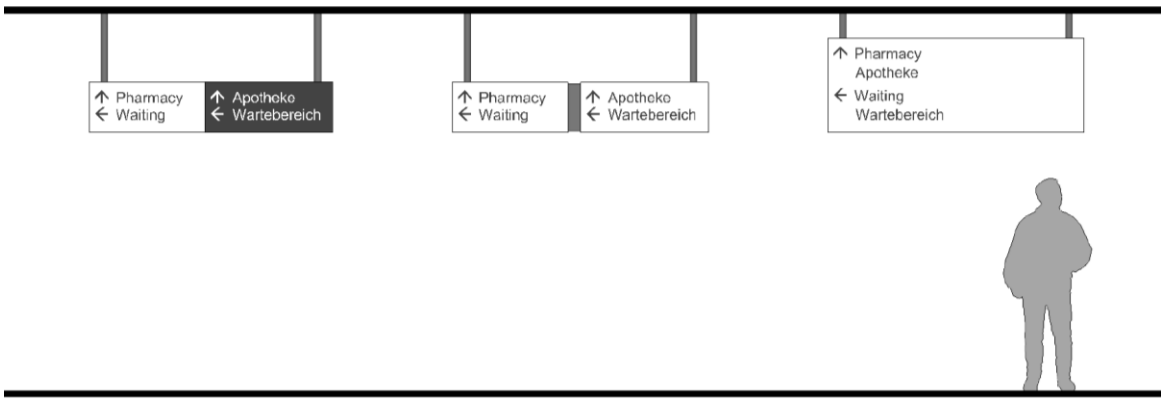

Figure 16: Multilingual Signage options

In other instances where wayfinding information needs to be displayed in multiple languages careful thoughts are required to ensure consumers can find their known language without much effort.

It may not be feasible to present the signage in every language side by side; instead the primary language should be decided upon with the other languages in smaller font located adjacent to the primary language to reduce the amount of visual space consumers would require to find information.

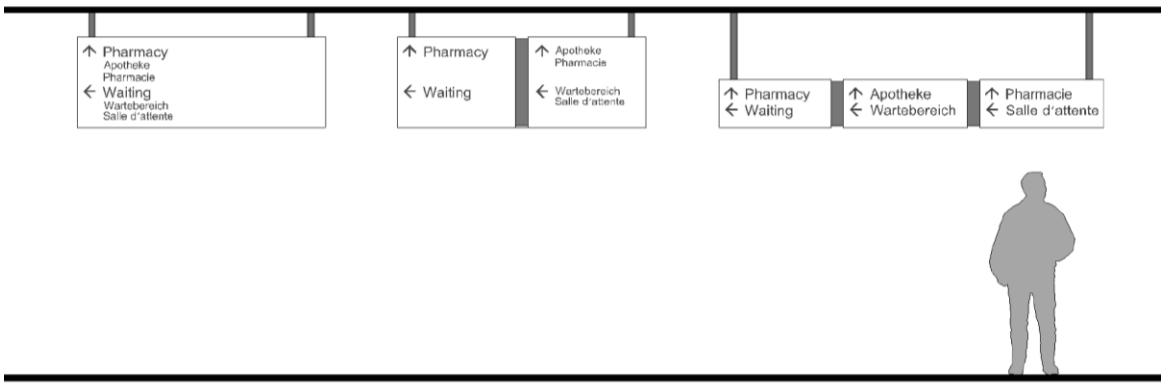

Figure 17: Multilingual Signage Options

Lighting

Sign illumination can be achieved by ambient lighting or artificial lighting.

Ambient Lighting

Ambient lighting is generally considered adequate in most circumstances inside a health facility. However, ambient lighting would not be adequate in large-scale spaces such as lobbies or concourses, in external settings where the spill from existing light sources is inadequate, or in some units where ambient lighting needs to be dimmed, such as at night, while the wayfinding information still needs to be read.

Artificial Lighting

There are two kinds of artificial illumination; internal and external illumination. The use of internally illuminated signs in health facilities is generally unnecessary. There are, however, specific areas where the use of an internally illuminated sign may be warranted. Examples include emergency exits, enquiry counters and emergency service areas.

The intensity of the internal lighting and usage of translucent background material should be minimal to prevent loss of legibility due to halation, the spreading of light. Where signposting is to be integrated into the building interior as an inbuilt element, such as a continuous fascia panel above an enquiry counter, the correct letter height to background height ratio should be maintained. Expert advice on graphic layouts, illumination levels and light-box construction techniques should be sought for illuminated signs.

Lighting signs externally is more energy efficient and can display more accurate colours. Construction materials and the positions of the light sources should be considered carefully when lighting a sign externally to avoid reflected glare that could make the sign illegible. Consider the sign from all directions as it may seem well illuminated from one standpoint but obscured by reflected light from others. This is also true for signs with only ambient lighting, particularly opposite windows at different times of the day.

Floor Numbering Systems

Create a logical system for numbering floors by their relationship to the ground floor. For example, levels above the ground floor should go up consecutively while those levels below could be allocated basement 1, then basement 2 and so on.

While the numbering system should be logical, do not assume it is self-explanatory to a consumer. As it is possible to enter and exit at more than one level at many sites, some precautions need to be taken to ensure consumers know where they are and how to get where they need to go. Every elevator lobby and staircase should have the building level clearly identified. Avoid the confusion that results when someone enters on level 2 expecting it to be the ground floor and attempts to go up to get to level 1.

On certain sites where there are dramatic changes in levels there may potentially be multiple entries and exits on different level of the building. In these cases additional consideration should be taken in the wayfinding strategy to ensure consumers are aware of level changes and not be confused between one street level to another.

In other instances where two separate buildings with varied floor levels are connected by a new expansion, this may result in varied floor numbering systems with level 1 of a building becoming level 4 of the other building. This confusion should be minimised by either:

- Renumbering the floors to the combined facility if possible
- Limit the connection point between the two buildings to major arterial circulations and ensure adequate signposting to advise on the change in the numbering system between the two parts of the combined building.

Pre-Visit Information

People often receive information, including appointment letters and spoken and written directions, prior to their visit. They use this information to prepare for their journey. They plan how to get to the site, where they can be dropped off, which building and perhaps floor they need to get to and how much time they need to allow to get to their destination. This pre-visit information must remain consistent in terminology with wayfinding information on site. It is important to liaise with staff when developing a wayfinding strategy and inform them if any changes need to be made to their pre-visit information.

2.3 Wayfinding in the Design Process

The methodology for ensuring successful wayfinding strategy in a health facility varies between designers and the following is provided as a general guide.

Wayfinding in Planning

The foundation to a well-designed wayfinding strategy is the planning of the facility.

The first steps are to establish the brief along with a preliminary stacking diagram and agree on the function of each floor.

The entry point of the building is then decided upon with nodes and landmarks located relative to these entry points. Node point locations should be linked by straight corridors and be located based on the understanding of the consumer's journey relative to the function of the floor and the building as a whole.

Hospital departments/ zones should also be roughed in as a simple primitive footprint such as rectangles which would assist in simplifying the circulation to a system of straight corridors between nodes.

Decisions should also be made to separate the circulation system into service circulation from the public circulation to ensure the system of nodes, landmarks and circulation is functional at this stage for the different groups of consumers. Entry points into the zones/ departments are located accordingly and the above process is repeated in each individual department at a smaller scale. Part B of the international Health Facility Guidelines contains functional relationship diagrams for each hospital department and can be used as reference for planning.

Wayfinding in Design

Once the system of zones, nodes, landmark and circulation is confirmed and agreed, architectural and interior design elements are considered for each of the components to:

- Strengthen the identity of the entry
- Emphasise the definition of the zones and nodes
- Maintain the clarity of the circulation routes.

Discipline is to be exercised during this stage to control the occasional design impulses to create new nodes and circulation routes for the sake of architecture. Deviations to the circulation system in particular areas, if required, should be studied together with the system as whole and adjustment made to the other parts of the system where necessary.

Health facility buildings are naturally filled with signage due to the amount of information needing to be conveyed to all types of consumers. It is prudent to reduce the amount of unnecessary signage where possible so consumers can focus on the information that matters to them.

Architecture that synergises with the planning will reduce the dependence on signage and is an important key element for a successful wayfinding strategy.

Wayfinding in Signage Systems

Once the architecture and the planning is confirmed, the signage system needs to be considered as the final part of the building's wayfinding strategy.

Before proceeding it is vital that members of the design team are acquainted with the wayfinding requirements of the facility, scope of the individual elements of the project (architectural and interior design elements), and have a broad understanding of the vast palette of available signage types and systems. It is as advisable to work from the general to the specific, and in a directional system, to work from the external to the internal areas.

Signage Placement

In determining the signposting requirements, a consistent and logical approach is, of course, essential. The task can be most easily and effectively accomplished if we put ourselves in the place of someone visiting the health facility for the first time. This exercise should be conducted in a workshop environment with architects, interior designers, wayfinding specialist, users and stakeholders to ensure all possible angles are covered.

While considering identified categories of consumers individually, it is advisable to transition from the external to the internal. First, decide on the desired traffic flows, both vehicular and pedestrian, establish the hierarchy of signage based on the consumer journey and apply relevant signs along the routes to form the basis of a signage placement plan. Use such messages as Main Entrance, Visitor Parking, Enquiries, All Inpatient Units, and the like, which if followed in a logical sequence will lead each user group to their chosen destination.

Signage Design

A hierarchy of signage should be established with a unified design language which may be based on the corporate identity of the facility, a local feature of the site or generated from the architectural and interior design language. Refer also to Part 2.2 of this guideline - Graphic and Information Design Components.

This should be tested against the signage placement plan to ensure that the hierarchy captures all the possible signs required for wayfinding. Further opportunities may arise in this stage with signage previously deemed required that may be replaced with simple architecture and interior design elements.

As the path of each successive category of visitor is emulated, the primary traffic flow and major components of the signposting system will become apparent. Considering each category of visitor and chosen destination one by one may be time consuming. However, at the conclusion of the exercise a comprehensive schedule of signposting will result, with the location of all sign elements specified on the relevant site or floor plan and reflected on the hierarchy of signage.

Once the schedule is complete, it should be tested by emulating trips from entry to a destination and return. This should be confirmed with the users and stakeholders of the facility.

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