

HOSPITALS : UNIVERSAL DESIGN AND ACCESSIBILITY FOR ALL

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1. Observations

Among the various institutions and buildings in a town or agglomeration that receive members of the public, hospitals welcome the most number of people with disabilities. These disabled people, due to their health problems, are vulnerable, weak, sometimes have reduced mobility and are often psychologically distressed. The primary purpose of hospitals is to welcome these people and to help them to get well. In order to fulfil this role effectively, a role accomplished by the various doctors and the care teams, it must be possible to conduct it in a specially adapted environment. This is why the reception, the care, the stay at the hospital must take place under the best conditions possible in terms of quality and hygiene as well as in terms of safety and ease of use. It is in this context that the design, fitting-out and construction of the hospital and its equipment play such a crucial role.

In spite of the significant scientific and technical progress that our society has been through and in spite of the undeniable advances that have occurred in the hospital setting these last few decades, there are still people who, due to their disability, cannot be cared for in the hospital of their choice. A similar problem exists for those who find it hard to access care services and equipment due to their health problems, as well as those who complain of the poor quality of use of certain equipment in the hospital services. The difficulties encountered in this way are essentially linked to the design and organisation of these premises. How is it possible to design for all when each person is different and unique?

Accessibility and universal design are prerequisites for all construction projects in order to ensure that people's needs are properly taken into consideration, regardless of the nature of their disability and their specific needs. It makes it possible to improve the lives of all patients in the hospital sector who find themselves in a situation of disability while staying at or visiting the hospital. The adaptation of the environment to the needs of users must take into account all cases of disability, in order to offer them an accessible and completely safe service.

2. The environment as a source of disability

Changes in the thinking of the World Health Organisation with regard to the definition of disability have led, in particular since 1993, to disability no longer being thought of purely in terms of the state of health of a person, but in a larger overall context, with an important role given to environmental factors. The approach to disability, which for a long time was restricted to the three ideas of: impairment, incapacity and disadvantage, which refer to a medical context, has now been modified by the new definition given by the WHO and adopted in 2001 by the International Classification of Functioning, Disability and Health (CIF). This definition, developed on a scientific basis, makes it clear that the disability stems on the one hand from the individual aspect, and on the other hand from the contextual aspect, which can limit the participation of the individual in an activity. According to this definition, three factors contribute to the production of disabilities:

- the individual situation of the person;
- the layout of the environment surrounding that person;
- the way society is organised.

The hospital is the quintessential location where one finds the practical application of these three factors. Patients, even if they do not have an impairment, can find themselves in a situation of disability if the environment of the hospital does not offer the conditions necessary for suitable accessibility. There is also the case of patients who, irrespective of their health problems, also have physical, mental, sensory or psychological impairments. The process of adapting the hospital setting to the needs of all users must, of course, cater for those cases where there is a difficulty in moving around, but it must also cater for those who have difficulties communicating, hearing, seeing, finding their bearings or knowing where they are heading within the hospital space. It involves applying the principle of accessibility to the needs of everyone, without exception and without discrimination. Accessibility is a universal right, even a societal obligation.

3. The accessibility of the hospital setting

Hospital architecture has seen significant changes over the centuries that have occurred at different times and for a range of reasons. For example, at the end of the 19th century, hospital construction was particularly influenced by the ideas of hygiene and contamination. At the beginning of the 20th century, other needs influenced architects, such as the need to make the movement of patients within the hospital more fluid, especially between the emergency services, the patient wards and rooms, and the operating rooms. Since then, hospital architecture has changed continuously, on the one hand in order to take into account the requirements relating to medical progress, and on the other hand in order to adapt to technological advances in the construction process. At the end of the 20th century we saw, in all European countries, a new concern emerging for better integration of the hospital into the urban space surrounding it, by ensuring for example the existence and the quality of public transport serving the said hospital. More recently, in the last few decades, it is the use of new technologies that has transformed the way that hospitals are organised. Now, the architect must give significant consideration from the design stage to modern methods of communication and information, in order to make the building intelligent, as well as to concerns relating to the quality of the environment and energy conservation.

These changes and these advances all have the same objective: making the care of patients easier, improving the working conditions of staff, making the hospital setting safer and more humane, making its functionality more modern and optimising its functions. For these objectives to be fully achieved, the architectural design of the hospital must not only rest on three key requirements: functionality, comfort and safety. It must also take into account the principles of quality of use and accessibility of the 'travel chain'. The idea of quality of use can be understood in terms of the use of the building and its equipment, and of the organisation of its spaces. For example it relates to the distances that need to be travelled to get from one point to another and the methods chosen to facilitate this journey, as well as the materials used, the level of lighting, the quality of the signage, the ease of use of the services and their accessibility, etc.

As for the travel chain, this is the sequence of constituent parts that makes up the journey of the patient from their place of departure to their arrival at the hospital and right up to the point where they receive care in one of the services of the hospital. Each link in this travel chain is important. If one of the links does not comply with the principle of accessibility, the whole journey is affected and it will not be possible for the patient to be followed or cared for properly. How can a hospital be

accessed if the means of transport or the car parks that serve this hospital are not accessible? In the same way, what is the point of making the rooms of a hospital themselves accessible if the means of accessing these rooms within the hospital are unusable?

In practical terms, what does it mean to make a hospital, its equipment and services accessible? How can the hospital stay of a person with hearing or visual impairment be made easier? How can an elderly person be helped to find their bearings and to know where they are heading in an environment that they are not familiar with? How can one provide comfort-of-use to doctors, nurses and patients? These are all questions that the principle of accessibility of the chain of travel and of design for all attempts to answer.

4. Accessibility, a concept aimed at everyone

First of all, it is worth pointing out that on the one hand, disabled people visit hospitals more frequently than able-bodied people, and on the other hand that the majority of people who visit hospitals are in a situation of disability due to their state of health. For these reasons, the question of accessibility and of quality-of-use is of particular importance in the hospital sector, especially in view of European demographics. According to the Eurobarometer, disabled people represent 10% of the European population. More than 25% of Europeans claim to have a family member with a long-term illness, a form of impairment or a disability that limits their activities in one way or another. Furthermore, the increase in the number of elderly people in European countries and ever longer life expectancies are factors that need to be taken into account when fitting out and constructing hospital buildings. In 2015, more than 3.5% of the population of Europe will be 85 years of age or older and most of these people will require care. It is certainly the case that a proportion of this population will be cared for in retirement homes, but the majority of them will require sporadic or follow-up care in a hospital, with specific needs in terms of accessibility.

Disabled people, people who are temporarily in a situation of disability for health reasons, and elderly people are the first to require measures relating to the accessibility of the environment. However, it should be stressed that accessibility, especially in a setting such as a hospital, can also bring a great deal of comfort to all users, regardless of their age or state of health, including to those who work there. This is the principle of design for all.

5. The example of the method applied in France

In France, the measures relating to the accessibility of institutions and buildings that receive the public, such as hospitals, incorporate the idea of the travel chain and they apply from the surroundings of the buildings and the parking spaces, to the internal passageways, and the access to the floors and equipment and services at the disposal of the public. In order to cater for the various types of disability, these measures are structured around three principles, which are: *locating*, *reaching* and *using*. They set the technical characteristics relating to the volume and the structure of the building, such as the width of the corridor spaces and the requirements and standards that apply to the lifts. They define the nature of the materials and the products that are used, either in the fitting-out of the building space, such as the lighting, the floor- and wall-coverings, or in the communication systems and the directions, such as the induction loops and the signage, etc. The aim of these measures is that the principles of non-discrimination and 'access to everything, for all' should be taken into account. All of these measures must be included in the objectives set by the sustainable development plan and the low consumption building plan, and must be combined with the measures relating to fire safety.

6. The European and international approach to universal design

The international convention on the rights of persons with disabilities, 2006, which was ratified by the European countries, and the 2010-2020 European strategy relating to disabled persons, both emphasise the principle of universal design in bringing comfort-of-use into the lives of everyone. This principle is aimed at the design of products, equipment, programmes and services, so that they can be used by everyone, as much as possible, without requiring either adaptation or special design. All the European countries now apply the rules of accessibility to buildings and to infrastructure, especially for people with reduced mobility. The principle of universal design extends these rules to products and services and includes the idea of use by all, including people who have communication and cognitive difficulties.

Overall, this new approach means that general design and industrial design processes must change, in order to better incorporate the idea of use by all. Of course, the same principle is also to be applied to construction and to equipment. The added value of such an approach can be found, on the one hand in the quality of the services delivered, and on the other hand in the time-productivity achieved, which logically must lead to economic benefits. The advantage of the principle of universal design is that it avoids the clichés and the segmentation of

society via its categorisation into disabled people, elderly people, people who are ill, etc., instead aiming to provide for the needs of all without discrimination, but at the same time without ignoring the specific expectations of each category. This type of approach makes it possible to respond to the greatest number of needs possible while maintaining the quality-of-use for each person. When applied to a hospital structure, this approach makes complete sense to the extent that it is within hospitals that one finds a wide range of situations and a great variety of needs and expectations expressed by patients. The advantage of the universal design approach is that it is able to adapt to its context with the help of a common denominator, which makes it possible in the context of a hospital, for example, to bring quick, precise and multi-faceted responses to a large number of cases without discrimination and completely safely.

7. Bibliography

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