Designing Inclusive Spaces

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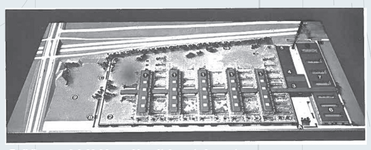
Publication date:
2012

Document Version:
Early version, also known as pre-print

Citation for pulished version (APA):
Colfelt, S. (2012). *Designing Inclusive Spaces: Wayfinding in Hospital Complexes*. Poster session presented at Cambridge Workshop on Universal Access and Assistive Technology, Cambridge, United Kingdom.

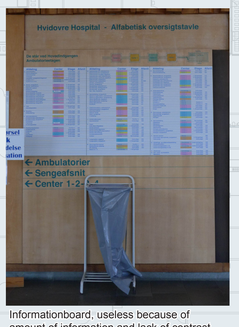
Designing inclusive Spaces : Wayfinding in hospitalcomplex : Case Hvidovre Hospital, suburbs of Copenhagen - Denmark


Meant to be main corridor - visual access to the outside

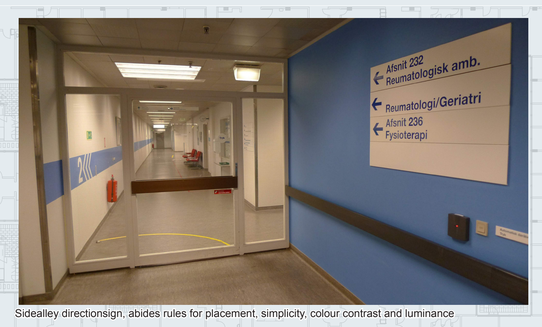

Building model, Hvidovre Hospital - note lay out


Hospitalfacade towards Kettegaard Allé reveals nothing of the simple lay out of the structure


Walldecoration in Arrivalhall - ambient athmosphere but empty because of change in logisitics

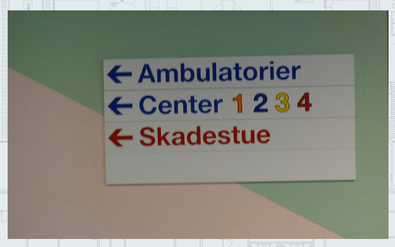


Informationboard, useless because of amount of information and lack of contrast

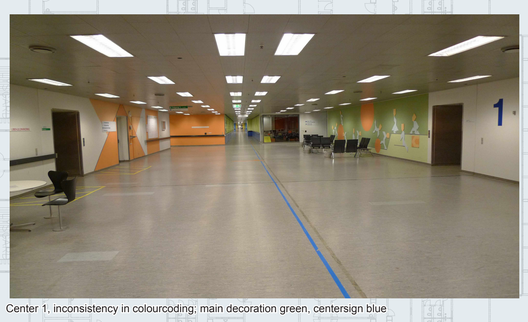


Sidealley directionsign, abides rules for placement, simplicity, colour contrast and luminance

Pylonsign + wallsign and waitingarea, center 3. Yet two more types of signs



Wallsign, red text is emergency department according to usual code



Center 1, inconsistency in colourcoding; main decoration green, centersign blue


Main corridor - decorated with specific figure

Colourcode floorsign inconsistent with colour on wallsign

Main entrance, glaced facade towards south, curtains drawn most of the year to avoid blinding

Purpose of Project:

The object of the project is concerned with establishing which elements of the design of the built environment - hospital complexes, has an effect on wayfinding behaviour. Theres is a lack of research emphasizing the relation between architectural design and wayfinding. The phd-project investigates til fragmentary beginning of architectural wayfinding research, the theories developped and test it against casestudies of three danish hospitalcomplexes differentiated by typology approach.

Background:

In many parts of the western world communities intend to make large investments in healthcare. This development will create hospital complexes the size of small cities. Wayfinding in medium size hospitals, between 200-400 beds, is often already a big problem. A Lancet research article[1] shows that an investigated American hospital of 300 beds has a yearly loss of 4500 staff-hours due to staff being disturbed in their primary functions by patients and visitors who have lost their way within the compound. Based on the average level of Danish wages this equals a sum of DKK 1.3 million.

Relation to accessibility issues:

The project takes part in a bigger attempt at the Architecture School of Aarhus, Denmark, to contribute through teaching and research in making the grounds for a public environment more accessible to all. Previous research at the school has primarily been concerned with design for disabilities. This project literally looks at accessibility for all and turns towards architectural typologies which to some degree are perceived to be inaccessible for all. Hospitalcomplexes have proven to be inaccessible to a lot of people regardless of age or disabilities though not unaffected by these factors. In most societies it is an accepted fact explained (or excused) by the complexity. By looking into the relation between the wayfindingproblem of hospitalcomplexes and design this project wants to question this acceptance.

Methods:

In order to investigate the relation between design and wayfinding in hospitalcomplexes three casestudies were conducted in three different large hospitalcomplex typologies. Multiple methods were used to explore wayfinding behaviour, the wayshowing intentions and the actual setting of Hvidovre Hospital in order to recognize the wayfinding parametres in use and possibly establish a hierarchi among them.

1. INTERVIEWS

Employees and the principal architect were interviewed with regard to their intentions and experiences with wayfinding in the complex.

2. PHOTO-REGISTRATION

The main corridors of the hospital were registered. For ethical reasons no photos of patients or visitors were taken.

3. OBSERVATION OF USER

Wayfinding problems are already recognized in the hospital and a new signage system is currently under construction. Two-day observations of patients and visitors intended to find the nature of the problem and the related behaviour rather than demonstrating the frequency of the problem. The reports from these consequently consist in examples of behaviour.

Wayfinding:

Wayfinding research is an object in many diverse sciences: psychology, neurology and navigation to name some. In design research the concept is introduced by Kevin Lynch. He proposes the following five parameters as constituting elements for finding your way within the urban landscape:

1)EDGE
2)NODE
3)PATH
4)DISTRICT
5)LANDMARK

His 50 years old book "The image of the city", remains the most thorough work which attempts to describe or examine in depth which design elements are engaged in human wayfinding. Jerry Weisman, on the basis of his own research combined with theoretical derivations suggests the following design parametres which are supposed to affect wayfinding in the interior of built environments:

1)PLANCONFIGURATION
2)SIGNAGE
3)VISUAL ACCESS
4)DIFFERENTIATION IN INTERIOR

Wayshowing:

Signage is considered as being inevitable as a guiding device in building complexes. Together with plan configuration they are, according to Gunnar Gundersen (2009), usually the two factors taken into consideration in architectonical praxis to secure accessibility and orientation in the design of building complexes. Research has been carried out in how signage works: This research investigates the required attributes of typography, contrast, size, positions according to eye-level and distances a.s.f. That is investigations in how signage works in direct relation to the viewer.

Mike O Neill (1991) found that the fastest travel-rate was achieved in smaller less complex buildings with no signs, compared to bigger complexes with signs. Signs reduce the relative travel speed. Textual signs represent a bigger reduction in travel speed than graphic signs, whereas textual signs reduce the amount of backtracking. As suggested by Mollerup (2005) a building ideally explains itself. This is supported by the findings of O´Neill (1991). Despite this knowledge signage is a going mayor designfactor in creation of buildings as stated by Gunnar Gundersen (2009.

Analysis and findings:

Reactions of stress and anxiety tending to panic combined with hasty movements were common observations of wayfinding behaviour in patients and visitors in the ground level main corridor.
A simple plan configuration, heavy signage and differentiation in interior lay-out is also observed. Thereby 3 off the design parametres put foreward by Jerry Weismann (1981) is fulfilled. Only one of the parametres is not in use; The design of visual access to landmarks in or outside the complex. Still observations show that feeling lost is a common feeling among the user. When it comes to signage the information board giving the broad overlook of the whole setting seem useless to the users. In general the observations point to signs rarely being used at Hvidovre Hospital and users seeking personal contact.

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