

The Effect of Hospital Layout on Caregiver-Patient Communication Patterns

Keywords: evidence-based design, hospital layout, communication patterns, Space Syntax

Evidence-based design (EBD) takes into account information from credible research and case evaluations for design-related decisions (Hamilton, 2006). Environmental factors are of great interest for EBD in healthcare buildings (Ulrich, R et al. 2004). However, previous research also indicates that building layout can influence the way people interact in hospital wards (Lu, Y et al. 2009; Cai, H & Zimring, C, 2012).

The main research question focuses on types of interface (Hanson, J & Hillier, B, 1984) created between hospital users in outpatient clinics, i.e.: 1) among different categories of caregivers, and 2) between caregivers and patients. This is important, since the spatial layout and the interface between users have implications for communication patterns, and communication is crucial for good healthcare provision (Donchin, Y et al. 1995; Baggs, JD et al. 1999).

Two hospitals with major differences in the spatial layout were analysed. While in Hospital A back- and front-of-house are strictly separated resulting in a clearly defined large and shared area for professionals, in Hospital B caregivers and patients use a common corridor system leading directly to exam rooms and small common areas for staff. Therefore, in Hospital A caregivers are brought together and are separated from patients, while in Hospital B caregivers are separated, but brought together with patients (fig. 1). Five clinics in each of the two hospitals were chosen for analysis.

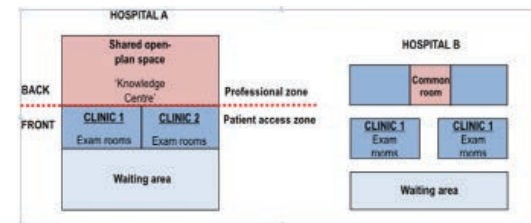


Figure 1: Diagrammatic layout of clinics with open-plan space and front- and back-of-house separated (Hospital A) versus clinics with no clear separation between front- and back-of-house (Hospital B).

The two spatial layouts were compared using 'Space Syntax' as a methodology; this was brought together with findings from a staff survey identifying communication networks and direct observations on everyday activities of caregivers. Results indicated strong differences between the two settings.

The paper provides insights for architects into the impact of hospital layouts and therefore inspires them to improve the design of healthcare buildings in order to support communication. Reflections on the practice of EBD were made based on findings.

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