

Track title: Topic 1 Integration of needs – inclusive, integrated design enabling health, care and well-being

## *Staff retention – the hidden issue in design and organizing of healthcare facilities*

Type of the Paper: Peer-reviewed Conference Paper / short Paper

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### Research highlights

- The aim of the short paper is to set the problem and define the possible drivers for future research in exploring the relationship between healthcare built environment and staff retention
- Today the physical environment, the architecture, of healthcare facilities is considered having various effects on patients and staff
- Especially in the western world healthcare staff shrinking and ageing will have a significant impact
- Hospital organizations are defining strategies for staff retention improvement
- Usually, this issue concerns management of risk, leadership and motivational aspects but the built environment might as well play a role in this process
- In the recent COVID-19 pandemic these issues have been raised considering staff burn out and stress
- Future research will need to deepen the relationship between staff retention and physical space of healthcare settings starting from the proposed framework

**Keywords:** staff retention; burnout; healthcare facilities; management; healthcare staff; workforce ageing

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## 1. Problem setting: healthcare facilities and healthcare staff

### *Healthcare facilities and healthcare workers*

Healthcare facilities are complex infrastructures that host a multitude of diverse users. It might be seen as a “city in the city” where different environmental settings host different type of users. Patients of course, but also visitors, doctors, nurses, nurses aid, technicians, maintenance staff, salesman, employees, and managers inhabit every day the different healthcare settings.

Some users are temporary while others, such as healthcare staff use the healthcare setting as their everyday workplace expecting that it shall provide safety, functionality, comfort etc. This is, however, not always the case and the spaces for healthcare staff is often excluded from attention in healthcare facilities planning, design and evaluation processes which mainly are focused on patients rather than staff (Han et al., 2018).

With regards to work-related stress healthcare staff are no exception, rather the opposite. Workload in healthcare concerns people’s health and often under pressure, a situation that can eventually lead to relational problems, anxiety, burnout, substance abuse, to develop depression syndrome and use of antidepressant drugs, or even suicide (Liu et al., 2014; Wallace et al., 2009; Zamani, 2019). It is also known that burnout and depressive syndrome have an indirect negative influence on healthcare systems and on patient’s care. (Fishbein et.al., 2020)

The physical environment and the design of the healthcare facilities is being studied from several perspectives and various effects on patients and staff are being investigated. (See e.g.: Sadatsafavi et.al., 2015) A main focus in research has however concerned effects on patients. With challenges to recruitment, to competence and capabilities there is a need to also develop healthcare facilities that support staff in both clinical and non-clinical work situations. There is a need for space for work life rather than just work.

### *Healthcare workers ageing*

In the last years, the phenomenon known as “workforce aging”, not least due to changes in demography, has become a recurring term. This is particularly relevant in the healthcare sector where the time needed to have an autonomous healthcare worker is consistent and linked to university operations, internship in hospitals, ratio between experienced and new staff. The supply of health care workers may decrease as they age, and large numbers retire and/or reduce their working hours. Older adults also consume a disproportionately large share of health care services, so demand for these services will grow. The aging of the population will also affect the nature of the skills and services the health care workforce must be equipped to provide and the settings in which it is provided (Ilmarinen, 2006; Rechel et al., 2013). So, with an ageing population, we also face an ageing workforce. The fact of having a huge number of older adults responsible for clinical, occupational, and social task retrospect to patients suggest questioning the role of physical space: if it should be adequate for older patients, it surely need to be adapted as well to the needs of older staff.

### *Healthcare Staff retention*

The shortage of healthcare professionals is considered as one of the most critical issues facing hospitals and other healthcare providers. An example from the U.S. illustrates this, the U.S. Department of Health and Human Services estimates that nationally, in 2020, hospitals face a shortage of almost 800,000 nurses—a 29% vacancy rate up from 8% in 2005. The nursing workforce is “aging out” of its profession, shrinking the healthcare workforce; meanwhile, patient volume continues to grow as baby boomers demand more services and healthcare real estate investments are required to deliver more (Spence Laschinger & Finegan, 2005). Usually, this issue concerns management of risk, leadership and motivational aspects and in the recent COVID-19 pandemic these issues have been

raised considering staff burn out and stress (Blake et al., 2020). Underscoring the aforementioned it has been noted that stress, lack of coordination and management, exclusion are some of the specific challenges that healthcare staff had to face during the pandemic (Razu et al., 2021).

## 2. Aim of the short paper and framework definition for future studies

This short paper contributes to the research by setting up the problem framework from which to define future investigation lines to deepen the relationship between staff retention and physical space of healthcare settings.

Starting from the considerations emerged in terms of hospital space impact on healthcare staff, healthcare workers ageing and staff retention a framework for future research is proposed below in order to provide a systematic overview of possible research lines. This scheme can support future research addressing the general research question: has the built environment a role in the process of healthcare staff retention?

The framework is a sequence of Systematic Literature Reviews linked between each other and is reported below:

- 1) Definition / collection of strategies and characteristics for Staff retention
- 2) Systematization of Built Environment characteristics that have an impact on healthcare staff
- 3) Staff outcome improving due to built environment characteristics

Each domain of the framework will need to be explored from a different perspective such as:

- a) medical staff
- b) nurse and nurse aid staff
- c) technical and administrative staff

The Systematic Literature Review will need to incorporate the three domains among the three perspectives highlighting relevant challenges that might either be “vertical” on specific topic or users or “horizontal” in a transversal way.

## 3. Possible challenges and area of discussion

Working conditions, scheduling, knowledge development and learning, collegial support, recuperation are surely important factors for improving wellbeing and health of healthcare staff. There are indeed few jobs where vulnerability, emotional stress, and people possibly dying, is part of everyday work.

Some studies highlight and provide data on impact that some features of the built environment such as access to gardens, canteens, colleagues, a professional space, spaces for recreation, supportive healthcare environments can bring to the overall quality of a workplace. Indeed, as studies in corporate settings highlight; that if the physical and organizational workplace design once was a hygiene factor it might now need to be viewed as a motivational factor instead. (See e.g. Gagliardi, 2011 and for an FM-perspective; Natalia, 2021) An aspect most likely also relevant for healthcare settings, environments often are even more symbolic. To support future studies on the topic, below are reported some challenges or lenses through which it will be possible to analyze the data that a systematic literature review will collect.

*The diversity setting challenge*

With the changing landscape in healthcare the healthcare staff will need to find themselves in many more diverse settings, from hospital to homes, from single rooms to activity-based environments. The diversity of settings and complexity of healthcare facilities add a new layer of specialization also in the training curricula of healthcare staff.

In addition, families, partners around patients will become important in future delivery models, which implies interaction not only with the patient but with the social and spatial context of the care processes requiring further rethinking of the optimal size, circulation and functions of hospital and clinic spaces. Indeed, diversity in space and context will increase.

#### *The educational challenge*

As World Health Organization (WHO) stated, health is not merely the absence of diseases but “state of complete physical, mental and social well-being” (World Health Organization, 2020).

An ongoing challenge is to develop training curricula for healthcare staff that enables a focus on clinical aspects combined with a multidisciplinary understanding of working and wellness conditions. It also is concerned with how design and management of healthcare facilities is addressed in the education and training of architects, engineers, economists, managers and several more professions (Azzopardi-Muscat et al., 2020; Cambra-Rufino et al., 2021; Gola et al., 2020).

#### *The service model challenge*

With new service delivery models’ new requirements are also put on healthcare staff and this must be understood in order to be implemented in education and development of practice. It might even be so that by addressing issues in teaching and change management, it will subsequently be possible also in service delivery not otherwise feasible at present.

All of the above concern the situation and context of staffing in healthcare, it concerns where the healthcare staff acts, governs and enables action. In addition to the new capabilities needed for person-centered care in multiple spatial settings there remains the challenge of staff availability. Quality of work life, work life balance, pay and other labor market issues coupled with the demographic challenge that there simply will not be enough staff to staff our healthcare system makes it of paramount importance to address the setting for healthcare work.

## **4. Research Outlooks**

Given the somewhat bleak situation concerning staffing noted above it is crucial that design of healthcare facilities and the workplaces in them is put higher on the agenda, therefore data and evidence supporting a focus on staff working related to the spatial context is needed. In fact, a belief that there is a relationship needs to be validated. Studies presented above surely point this way, but a structured approach and systematic research needs to address the issue to support decision making both regarding work design and workplace design. This will include, among other approaches, case studies of projects, ethnographic studies, action research and evaluations of current and planned facilities. This will define future research able to provide strategic guidelines, defining operational requirements toward the healthcare facilities of the future, that must be able to host an increasing number of older and demanding patients but, at the same time, to be able to create a comfortable and healthy environment for the healthcare staff that is facing extraordinary social and demographical challenges. Future systematic research will shed light on the impacts that characteristics of the physical built environments have on staff

retention, wellbeing and satisfaction in different healthcare settings. And, it is needed as fewer and older shall take care of large groups under conditions with new challenges, a lesson learnt not least during the COVID-19 pandemic.

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