

# Trends and Dimensions in Hospital Architecture A Hospital Administrator's Perspective

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## Introduction

Wilson Churchill has once remarked "First we shape our buildings, thereafter they shape us". This is certainly true for hospital buildings. Hospitals first appeared at the start of the Christian era to shelter sick or weary travelers and persons too poor or ill to be treated at home, yet their dirty, crowded and dark environment were anything but hospitable. The change from this to the present day hospitals has been metamorphic. Advancements in medical sciences including those in molecular biology, pharmaceuticals, diagnostic and therapeutic modalities have changed management of diseases and influenced changes in healthcare provisioning including hospital architecture. Scope for expandability, flexibility, renovation, redesign and reengineering have to be inbuilt into the architectural design. In this advancement and transition, it is essential that the views and perspectives of hospital administrators are sought and incorporated into the planning and designing of hospitals since they play pivotal multifaceted role in the operative and functional role of hospitals.

The role of the hospital is in transformation. The main parameters, which have impacted changes in hospital architecture, are:

- \* Enhanced patients' expectations
- \* Increased emphasis on ambulatory care
- \* Enhanced standards of care
- \* Demographic and epidemiological changes
- \* Medical Insurance
- \* Public-private partnerships
- \* Effects of globalization on healthcare delivery

Essentials of hospital architecture from a hospital administrators point of view

The hospital administrator's vision of hospital architecture is to have buildings that are efficient in present operations and yet flexible enough to adopt for the perspectives of tomorrow. The main essentials are:

Design Development: Restoring a world that illness takes away

Architecture and interior design cannot restore the patient's command over the world inside the health care institution. Yet design can increasingly help counter the inevitable feeling of helplessness. A correct design can transform healthcare facilities into extraordinary places to get well and stay well.

The patient is to be kept as the focus

Healthcare buildings are to be designed as living spaces for patients rather than warehouses for the sick. It has to be remembered that a hospital is not a factory in which the assembly lines dictates all aspects of design but is a community in which the patient is fundamental to the successful working of the whole. Needs and expectations of the patients have to be visualized, analyzed and fulfilled. The hospital building should provide the patients a sense of safety, comfort, dignity and repose. It should also provide pleasing spaces for patients, families and visitors as well as imbibe the cultural concerns of the community. Lindheim (1) emphasized that the design of healthcare setting should welcome the patients family and friends, value human beings over technology and provide flexibility to personalize the care of each patient. The aim is to have a humanizing architecture that can positively contribute to the healing process. It should make the patient say that "I feel like I am at home here". Design must also satisfy professional requirements.

Create a Healing Environment

There is ample evidence that the primeval forces of nature i.e. the Sun, Wind, Earth and Water all have a mystifying positive effect on health. The physical environment of the healthcare facility should firstly do no harm and secondly facilitate healing process. Natural sounds including those created by running water have a calming and relaxing effect. This should be gainfully employed in the form of fountains, artificial springs/water

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falls or rivulets. Colour may also be used as a visual stimulator or volume enhancer. Landscaping should be appropriately planned to create a healing environment.

#### Design for flexibility and expandability

Functions in healthcare facilities change so rapidly that designers should no longer aim for an optimum between building and function. The real requirement is to design a building that will facilitate the golden architectural principle of indeterminacy to be followed i.e. "enabling buildings to grow with order and change with calm". Universal space modules/grids, modular design should be utilized to keep pace with changing needs of function and design.

#### Anticipate Change

In today's dynamic environment healthcare facilities are one of the fastest changing organizations. A hospital has to constantly adjust to variable work loads, uncertainty and critical situations. Demand will also change in hospitals due to increase in life expectancy, health becoming a norm and healthcare focusing on prevention and intervention rather than treatment (2).

#### Go for a green hospital

The healthcare facility should be eco friendly and designed to make use of renewable resources of energy such as solar and wind energy.

#### Emphasis on ambulatory/day care

Hospital stay is gradually being programmed only for high dependency inpatient care. The healthcare facilities must plan for day care/home care/ambulatory care facilities/wellness and fitness.

#### Focus on continuum of care

Acute, ambulatory and rehabilitative care must be planned and facilities coordinately designed accordingly in same/different healthcare facilities.

#### Optimize energy conservation

Use of natural light, high efficiency light sources, effective natural/artificial ventilation, water recycling, use of renewable sources of energy such as solar, wind and biogas are some of the measures which should be appropriating utilized in functioning of the hospital.

#### Do not ignore the aesthetics

Aesthetics should also be incorporated in the planning and designing of hospitals so as to provide a quality and pleasure experience from the surroundings.

#### Visualize the Hospital of the future

The hospital of the future will not just be a hospital as we recognize it today, it will be a hub in a decentralized network, serving patients not only in the hospital but also

in local hospitals and their homes. It may assume the form of a boundary less institution. A majority of the tertiary care hospitals of the future are likely to become organ based centers. It is also visualized that in the future the more common hospital functions will move closer to patients and only a few specific specialized function will be concentrated at other places. The concentration of specialized facilities and dispersal of other hospital functions will influence the building design and planning. A number of smaller facilities will be required at several locations to accommodate the dispersed functions and larger facilities at an early assessable location to accommodate the concentrated functions (2,3).

#### Conclusion

A number of existing hospitals do not have the architecture to effectively deliver patient care. They have been mainly designed when patients were considered more an object on the scene rather than focus of design and thus were delineated from the hospital architectural planning. In a major paradigm shift, sensitivity to peoples feelings and their need for sensory input have impacted the hospital facility planning and design. Hospital architecture must focus on improving the quality of environment for the care providers and recipients of health care. All aspects including technological interior designing, exteriors, patientcare areas, diagnostic and therapeutic areas, administrative and supportive service areas must be given due consideration. Hospital must evoke positive responses and design to support the processes. A hospital administrator can provide the harmonious convergence of the clinical administrative and hospitality dimensions. He can juxtapose technology and human sentiments/requirements to create an unrivalled architecture. The essence of architecture as regards to functions, structure integrity, patient and care givers focus, easy maintainability, integration with environment, in tune with the present and the future are some of the essential perspectives which need due consideration and translation in an appropriate form into a hospital building.

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