

TAHIR HEART INSITUTE (THI)

A Health Care Facility

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Overview

Hospitals are complex organisations. Ideally it should promote skill, economy, convenience and comfort. Each hospital is comprised of a wide range of services and functional units. These include diagnostic, treatment functions such as laboratories, chest pain centre, surgery, hospitality functions such as food service and housekeeping, and the fundamental inpatient care. Each of the wide ranging and constantly evolving functions of a hospital including highly complicated mechanical electrical and telecommunication systems need specialized knowledge and expertise. No one person can reasonably have complete knowledge.

In 2003, during the planning phase of THI wide range of services were accommodated. The design process incorporated direct input from the senior management and key technical and professional staff early in the process. The committee also had to be an advocate for the patients, visitors, support staff, volunteers and suppliers.



We realised that good hospital design integrates functional requirement with human needs of its varied users.

THI's basic form was based on its function

- Bed related inpatient function.
- Outpatient related function.
- Diagnostic & treatment function.
- Administrative functions
- Service functions (food, support)
- Research and teaching functions.

Physical relationship between these functions determined the configuration of the hospital. The flow diagrams show the movement and communication of people, material and waste. Thus the

physical configuration of THI and its transportation and its logistic systems are inextricably intertwined. New alternatives are generated by new medical needs and new technology.

In THI Nursing units tend to be of more compact shape than elongated rectangles of the past. Modified triangles have been used in an attempt to shorten the distance between the nurse station and the patient's bed.

Building Attributes

Efficiency & Cost Effectiveness

THI layout aims at:

- Promoting staff efficiency and minimising distance of necessary travel between frequently used space.
- Allowing easy visual supervision of patient by limited staff.
- Including all needed spaces but no redundant ones.
- Providing an efficient logistic system which includes lifts, manual carts, dumb lifts for the efficient handling of food and clean supplies and the removal of waste, recyclable and soiled material.
- Making efficient use of space by locating support spaces so that they may be shared by adjacent functional areas and by making prudent use of multi-purpose spaces.
- Consolidating outpatient functions for more efficient operation – on first floor, for direct access by outpatients.
- Grouping and combining functional areas with similar system requirements.
- Providing optimal functional adjacencies such as locating the Surgical ICU adjacent to the operating suits and cardiac interventional laboratory.

Flexibility and Expandability

Since medical needs and modes of treatment continue to change, THI has followed:

- Modular concepts of space planning and layout.
- Using generic room sites and plan as much as possible, rather than highly specific one.
- Being served by easily accessed and easily modified mechanical and electrical systems.
- THI also allows vertical expansion without disruption to floors below.
- Being open-ended, with well placed direction for future expansion.

Therapeutic Environment

Cardiac patients (particularly from rural areas) are often fearful and confused and these feelings impede recovery. Every effort has been made in THI to make hospital stay as unthreatening, comfortable and stress free as possible. The hospital's interior design is based on comprehensive understanding of the facility's mission and its patient profile. This addresses patient's age, loss of visual acuity, other physical and mental abilities.



Some important aspects of creating a therapeutic interior are:

- Using familiar and culturally relevant material wherever consistent with sanitation and functional needs (e.g. hand shower)
- Using cheerful and varied colours and textures of walls, bed sheets and bed curtains.
- Admitting ample natural light wherever possible in all clinical areas of hospital.
- Providing views of the outdoors, wherever possible.
- Designing a “Way-Finding” process into every area by artwork signage's (both in Urdu and English) and employing patient liaison team for help to the unfamiliar. We feel patient's sense of competence is encouraged by making spaces easy to find, identify and use without asking for help.

Cleanliness and Sanitation

THI has been constructed in a way that it is easy to clean and maintain. This is facilitated by:

- Appropriate, durable finishing for each functional space.
- Careful detailing of such feature as doorframes, finish transitions to avoid dirt catching and hard to clean crevices and joints.
- Adequate and appropriate located housekeeping spaces.

Accessibility

- All areas both inside and outside have been designed so as to be easy to use by the many patients with temporary and permanent handicap.



- Ensuring ground is flat enough to allow easy movement (ramp) and corridors are wide enough for two wheel chair to pass easily.
- Ensuring entrance areas are designed to accommodate patients with slower adaptation to dark and light, marking glass doors to make their presence obvious.

Controlled Circulation

THI is a complex system of interrelated functions requiring constant movement of people and goods. Much of this circulation is controlled.

- Outpatient visiting diagnostic and treatment areas do not travel through inpatient functional areas nor encounter severely ill patients.
- Outpatient routes are simple and clearly defined.
- Visitors have a simple and direct route to each patient nursing unit without penetrating other functional areas.
- Outflow of trash, recyclable, and soiled materials are separated from movement of food, and both are separated from routes of patients and visitors.
- Transfer of cadavers (and occasional funeral services) to and from the morgue are out of sight of patients and visitors.
- Dedicated service lift for delivering food and building maintenance services.



Aesthetics

In THI, aesthetics is closely related to creating a therapeutic environment (homelike, attractive), It is important in enhancing the hospital's public image. We believe, a better environment also contributes to better staff morale and patient care. Aesthetic considerations adopted are:

- Increased use of natural light.
- Use of paintings.
- Bright, open, generously scaled public spaces.
- Homelike and intimate scale in wards, consultation rooms and offices.

Security and Safety

In addition to general safety concern of all buildings (a security gate, CCTV's) THI has several particular security concerns:

- Protection of hospital property and assets including drugs.
- Protection of patients, including critically ill and staff.

- Safe control of violent and end stage patients.
- Vulnerability to damage from terrorism because of proximity to high vulnerability targets or because they may be highly visible building with an important role in public health system.

Sustainability

Hospitals are large buildings that have significant impact on the environment and economy of the area. THI is a heavy user of energy and water and produces large amounts of waste. Then, this has been constructed with a sustainable design.

Emerging Issues

Many new developments and trends have taken place since, 2007. Fortunately these trends have influenced THI as well:

- Increasing use of emergency facilities (CPC)
- The increasing introduction of highly sophisticated diagnostic and treatment technology (hemodialysis, CT Scan, Hybrid Cath Lab etc)
- Requirements to remain operational during and after disasters (Emergency Hospital).
- Prevention care versus sickness care.
- Emergence of palliative care as a specialty in many major medical centers.



Personnel Attributes

- **Giving Back to Community**

In THI, the core mission is to serve the humanity, though, alas, many hospitals now see themselves as working for a constituency not the whole population.



- **Optimism**

In THI employees feel good about its and their own future. Outside the constant pressure to cut costs and its serious concerns about the physical and psychological harm that medical professional are experiencing.



- **Quality Services**

THI aims at first rate service. In neighboring hospitals one sees dissatisfaction, inconsistent priorities and lamentation.

- **Employees Involvement in Decision Making.**

In THI, administration including doctors and nurses are fluid in their abilities to provide structure and empower staff and promote collaboration, follow command and control elements are the key.



- **Respect for Employees**

The management in THI listens to people and inculcate trust in one another. When employees are listened to administration will be learning to listen to patients.

- **Employee Development**

Continuous learning as new technologies and new mandate are implemented. In THI, employee development has been called “A Prescription For Better Health Care”. We ensure that ongoing training is interesting, engaging, and meaningful to staff.



- **Cost Control**

How can it be done without sacrificing quality of care is the number one question in THI. Employees are made to believe that quality is not being sacrificed.



- **Personal Accomplishments**

The key to good patient centered care is the employee engagement, which requires sense of accomplishment. Employees are engaged in a way that they must know about their performance and purpose.

- **Transparency**

THI is clear about its goals, patient benefits, infection incidence, morbidity, mortality and financial matters.

- **Benefit Programme**

THI provides its employees with benefits that they provide to their patients. It takes care of staff in supporting their work as part of any safe and cost effective

