

THE REVAMPING OF LAHORE GENERAL HOSPITAL

Tayiba Ashraf, Superior University Lahore
Muhammad Rafiq, Superior University Lahore

Rafaqat the project executive Engineer, the project head of Revamping of Lahore General Hospital by CNW¹ observed that Lahore General hospital building had surpassed its design life and with the passage of time haphazard constructions were obstructing the flow of patients. Secondly the earlier constructions were not in good condition which were damaged from time to time. Sometimes hospital was deprived of one facility and sometimes it was deprived of another facility. Work wasn't doing the proper planning.

Provision of quality secondary healthcare services to all sections of society across Punjab has been among the top priorities of provincial governments. The government not only took several measures to improve the condition and environment but also improved the medical services provided by these hospitals. Among these initiatives, the revamping program can be cited as the representative initiative of the government to reform the health care sector in Punjab. The revamping project for Lahore General Hospital was initiated by CNW, Government of Punjab.

BACKGORUND

A beggar home was suggested for a plot of land of 256 Kanals, on Firozpur Road in Lahore, which is around 17 kilometers from Lahore (Annexure 1, Figure 1). On February 27, 1958, Her Excellency Begum Naheed Sikandar Mirza, W/O, Governor General of Pakistan, lay the foundation. The building's initial section was finished in late 1958. On September 30, 1958, Her Excellency Begum Naheed Sikandar Mirza presided over an inauguration ceremony. The intended Beggar House Plan was abandoned for many reasons, and the government at the time chose to offer health services to everyone. Thus, in the early months of 1959, Lahore General Hospital was established.

On January 29, 1959, His Excellency MR. AKHTAR HUSSAIN, the Governor of West Pakistan, performed the Lahore General Hospital inauguration ceremony. LGH² began operations in the intended Beggar House's existing facility. At the time, Lahore General Hospital lacked enough treatment and diagnostic capabilities, hence the hospital was utilized as a convalescent home for Mayo Hospital, Lahore overflow patients.

In 1966, Lahore General Hospital became the home of King Edward Medical College's Neurosurgery department. Up until 1981, this department was briefly situated in an ancient structure. Subsequently, in July 1975, Lahore General Hospital Lahore became a part of Postgraduate Medical Institute Lahore following its establishment in 1974.

With the exception of the neurosurgery, T.B³, and chest departments, which were still affiliated with the K.E.M.C.⁴ in Lahore. New physiotherapy and neurosurgery departments were finished in April 1984, and it was moved into a new structure called the neurosurgery block. When Allama Iqbal Medical College moved to a new site in 1995, PGMI⁵ was moved to Services Hospital in Lahore and the Jinnah Hospital complex became a part of AIMC⁶.

¹ Communication and work

² Lahore General Hospital

³ Tuberculosis

⁴ King Edward Medical University

⁵ Post graduate Medical Institute

⁶ Allama Iqbal Medical College

AIMC was connected to the main hospital located in Lahore. This persisted until May 31, 1997. Subsequently, on May 31, 1997, LGH was once more connected to PGMI. All of these departments, including the neurosurgery department, are currently a part of PGMI Lahore. LGH was designated as an autonomous hospital on July 1st, 1998. The hospital's first chief executive officer was selected to be Dr. Sabiha Khurshid Ahmad. Following autonomy, the tremendous weight of SOT⁷ was reduced by the opening of additional, well-equipped urology and orthopaedic operating theatres. Additionally, SOT underwent renovations and a new recovery room was constructed. Additionally, a washing plant was set there. Apart from the eighteen rooms in the Neurosurgery Department, seven rooms have been designated for private patients on the general side.

A STRATEGIC DECISION TO REVAMP

The Government of Punjab observed the condition of the hospital and Govt. approved a plan to improve the treatment and other facilities at the Lahore General Hospital of the province to provide better health facilities to the people. In September 2023, the Revamping Project of LGH was initiated by the Rafaqat Ali executive engineer of 3rd building division Lahore from CNW Department of the Government of the Punjab as a project head. The Health Department was funding the project. IDAP⁸ was responsible for planning and designing the project (Annexure 2, Figure 2). The main aim of the project was to address a plethora of shortcomings of the healthcare in the province and dire need of complete revamping and re-planning. Prior to this project, healthcare service delivery was marred with 4 essential problems, which was directly affecting the efficacy and operational efficiency of LGH. These problems included the following:

Infrastructural Problems

Considering that LGH was constructed in varying degrees over the years, most of the buildings were in a dilapidated condition. Over the years, weathering has reduced the overall strength and safety of the buildings. Leakage and drainage problems and the general dilapidation of the buildings created a very uncomfortable environment for patients, and in addition, made for poor hygiene and infection control.

Unavailability of Bio medical gasses

It is an indisputable topic how important oxygen is for patients in hospitals. Not only oxygen but also many other biomedical gases required in hospital should be available in adequate quantity. And it was not available in adequate quantity in LGH. Nor was it available at every patient's bedside.

Poor Allied Services of OT

While clinical services are key in any hospitals “*functioning*”, it’s the Allied Services that ensure smooth operations. Good hygiene practice is essential in hospitals and operating theatres. But at the LGH operation, the theaters were in poor condition and were not being hygienically controlled.

Poor Hospital Processes

Critical to the functioning of any hospital, the hospital's ability to employ and maintain critical standardized clinical processes that help streamline patient records, ensure IT solutions

⁷ Sacro-occipital Technique

⁸ Infrastructure Development Authority of the Punjab

for proper data management and implements a quality assurance system whereby a high level of service delivery is maintained. which was not working effectively in LGH.

Based on these observations and after a deep-dive into each problem, it was decided that a 4-point agenda of revamping would be designed that would deal with each of the problematic areas and create an overall effective healthcare service delivery regime, that would be standardized across any hospital that would come under the “*Revamping*” project. This package was designed as follows:

Infrastructural Development

Under this agenda, renovation of existing hospital buildings, establishment of new special care units, provision of electricity and other necessary utilities, and an overall improvement of the hospitals environment through soft interventions was carried out.

Availability of Bio Medical gasses

To ensure the quality of healthcare services was standardized, it was necessary to provide good quality equipment to LGH. Uniformity of IDAP across the board ensured that medical bio gasses services would be available to every patient. This included equipments such as oxygen, nitrogen other necessary biomedical and non-biomedical equipment.

Modernization of Operation theater

To ensure that all services can be delivered quickly, and consider the scale of impact of reaching as many people as possible. Modernization of 17 operation theatres including antibacterial/antistatic flooring, PVC⁹ wall cladding, automatic hermetic sliding sealed hinged door, peripheral lights LED, dimpa ceiling, surgeon control Operation theater etc. A constructive and functional and personal hygiene survey was conducted in all the operating theatres of the hospitals.

IT Interventions

These included establishment of QMS¹⁰ that would ease a patient’s journey through the hospitals and record documentation necessary for medical histories. Team CNW worked on Supply and erection of PVC pipe for wiring, Installation of gang plates, 3-pin switch and plug, MCB¹¹ and MCCB¹² breakers etc.

As the Project timeline fixed by govt. of Punjab was 22 Oct 2023 to 22 Feb 2024 as per their scope of work (Annexure 3, Table 1). And Govt. allocated a budget of a Rs 1 billion¹³ for the hospital upgradation/revamping. After 4 months the budget collapse due to the interim government which caused delays in payments to contractors and delays in work. And reauthorization took 20 to 25 days, due to which their development was affected.

OPERATIONAL DISCUSSION & ITS CHALLENGES

After this stage their main function was bidding/pre-qualification. A bid is an offer made by a contractor to a client in order to win a construction project. A bid includes an estimate of the cost of labor and materials necessary to complete the project, as well as a proposed timeline for completion. To ensure better selection of contractors, Project Head invited the vendor/contractor for Bid/pre-qualification through newspapers from 22-9-2023 to 27-9-2023. The project was divided into three groups; (Annexure 4, Figure 3)

⁹ Polyvinyl Chloride

¹⁰ Que Management Systems

¹¹ Miniature Circuit Breakers

¹² Molded Case Circuit Breakers

¹³ \$3499868.71

OPD block Phase I & OPD block III

In the first group, were selected for revamping which included civil Roof Top Treatment, Dismantling of Tiles, Removing of Ceiling, Dismantling of Tiles, Scraping Work, Removing of Doors and Windows. Total funds of Rs. 241.760 Million¹⁴ were provided to where work was at different stages of its completion.

Old Surgical Wards & OPD block Phase II

In the second part, were selected for revamping which included civil Roof Top Treatment, Dismantling of Tiles, Removing of Ceiling, Dismantling of Tiles, Scraping Work, Removing of Doors and Windows. Total funds of Rs. 241.760 Million¹⁵ were provided to group 2.

Emergency Block

In the first part, were selected for revamping which included Dismantling of Tiles, Ceiling, Removing of Doors & Windows and Scraping Work, Brickwork, Plastering. Total funds of Rs. 237.341 Million¹⁶ were provided to group 3. He made certain criteria for pre-qualification based on their company registration, their financial soundness, relevant experience, personnel skills and equipment & machinery capacity etc. Those who matched the criteria were eligible and those who were disqualified went to litigation which was a challenge to them. His legal department explained to court all pre-qualification processes where the participant did not meet their criteria and completed all court proceedings. He settled this court case before the project. On 21st October 2023 he selected 3 best contractors and allotted them work order for 5 lakhs ft. (Annexure 5, Table 2).

He discussed the Hospital administration that the pre-qualification plan already been completed and tenders have been called on 21 OCT 2023. The contractors will be immediately mobilized keep in you the timeline if the project. However, the hospital is still functional and no building has been evacuated so far, project might suffer delay if buildings are not evacuated at earliest. The administration of LGH raised their concern over complete vacation of the buildings, administration pointed out that current influx of public in the hospital is about one hundred fifty thousand (150,000) person per day. It's not possible in practical for us to evacuate the whole hospital at a time then Administration of the hospital discuss about the alternative plan that administration will evacuate the emergency department completely and will excavate the rest of the department by phases/floors. He agreed on it because their main target was the emergency. He evacuated 100% of the basement of the emergency block and 30% to 50% of the rest of the building and started their work from October 22, 2023 as per the schedule keeping in mind the patient flow (Annexure 6, Figure 4).

Project Leader Rafaqat divided the work into two shifts. One from 8AM to 4PM, the other from 4PM to 12PM. IDAP created and distributed drawings of revamping areas to clients and took periodic updates with all departments regarding the scope of work. Scope of work floors of all the buildings Project head team intend to renovate team was working, team faced more damage in it. After considering several approaches, he decided to issue a challenge to the hospital's administration, IDAP and with his team to identify ways to achieve RS. 7 million improvements in the hospital's bottom line.

After that he went for procurement of all buildings material then Project head faced another challenge that there is no bulk material in the market because at the same time this concept of Punjab Govt. started in other hospitals so demand was increased due to shortage of

¹⁴ \$858689.03

¹⁵ \$858689.03

¹⁶ \$844436.93

supply. So, Project head chose a different vendor to improve their supply chain. Who used to supply them with special materials and due to this most of the factories got work and started production in high volume which created employment opportunities for various people. After that, he realized that many things like bumper rail he couldn't get manufactured here as it is not manufactured in our local industries. So, he decided to import it from Europe but in that case he faced another challenge that in December, there is usually holidays in Europe due to Christmas, so he had to order the material before that and ensured that all their shipments moved there so that vendor could be delivered in January 2024. Then Project head will be able to implement it in January when project is close to completion. The operation team will monitor the progress of the project and will hold regular weekly meeting to review the progress under the supervision of Rafaqat Ali.

OUTCOME

This revamping is a good initiative that will bring some tangible improvements in hospital operations and service delivery. In particular, the non-medical functions of the hospital (administration, human resource management, procurement and audit, stock and logistics, etc.) and services (laboratory, bio medical gasses, sanitation, hospital waste management, infection control, etc.) and the patient flow will be significantly improved. And the public hospital will be more attractive like the private hospital.

CONCLUSION

Revamping in the LGH will improve the overall quality of healthcare service in hospital. It appears that the facilities provided to the public at secondary level have increased the trust of general public towards public health facilities. This assertion will substantiate with the rise in the number of OPD patients in LGH of revamping project in a year. It could be anticipated that this intervention may contribute to further increase patient load at secondary level and lesser patient turnover at tertiary level healthcare facilities. This trend is encouraging and gives the resource constraints at the tertiary level, it is of paramount importance that patients are homogeneously distributed across the three health tiers.

ANNEXURE 1

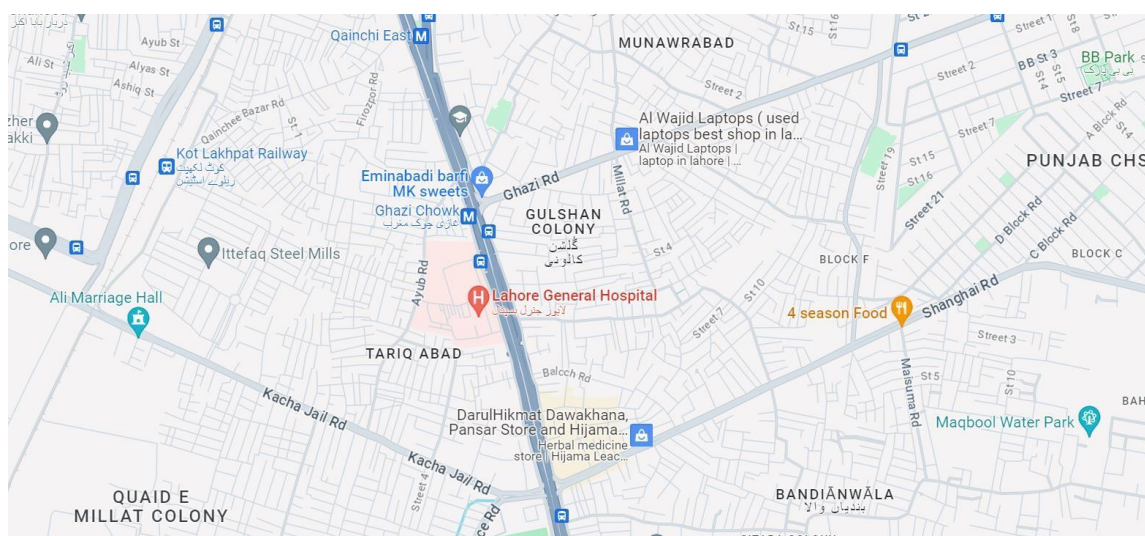


Figure 1
MAP

ANNEXURE 2



**Figure 2
DESIGN**

ANNEXURE 3

**Table 1
TIMELINE TABLE**

Month	October		November		December		January		February	
Days	1 to 21	22 to30	1 to15	16 to 30	1 to 15	16 to 30	1 to 15	16 to 30	1 to 15	16 to 22
Description of Item/ Activity										
Award of work										
Dismantling Activities										
Tile laying (floor, dado, ramp)										
Petty repair to rooms, verandah, washrooms										
Doors/Chowkat fixing										
Washroom UPVC and PPRC supplying										
False ceiling										
Electrical wiring										
Installation of Doors & Windows										
Paintwork										
Fitting of washroom accessories										
Fixing of plates, sockets, switches, lighting										
Roof insulation and treatment										

ANNEXURE 4

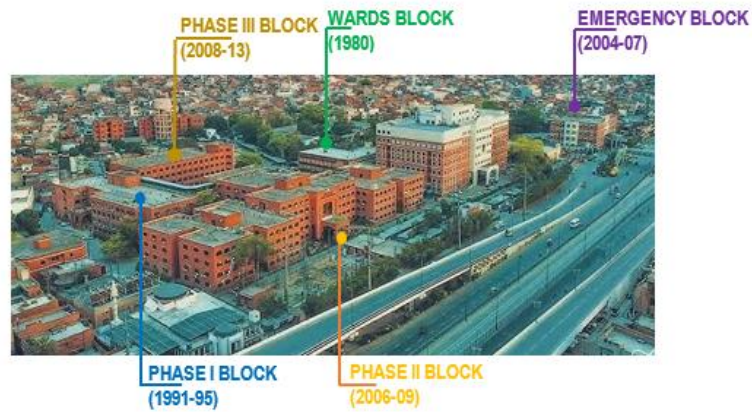


Figure 3
REVAMPING BLOCKS

ANNEXURE 5

Table 2 AREA							
Buildings	Basement	Ground Floor	First Floor	Second Floor	Third Floor	Fourth Floor	Total
Emergency	20,400	15,471	15,471	15,471	15,471		82,284
Surgical Wards		51,560	19,475	22,000			93,035
Phase 1		20,250	48,440	19,476	19,477		107,643
Phase 2		48,250	48,250	47,450	47,450	19,100	210,500
Phase 3		11,500	11,500	11,500	11,500		46,000

ANNEXURE 6

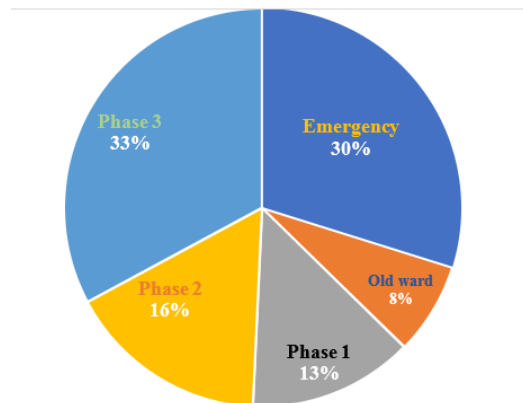


Figure 4
REVAMPING CHART

Received: 23-Jan-2024, Manuscript No. JIACS-24-14408; **Editor assigned:** 25-Jan-2024, Pre QC No. JIACS-24-14408 (PQ); **Reviewed:** 12-Feb-2024, QC No. JIACS-24-14408; **Revised:** 20-Feb-2024, Manuscript No. JIACS-24-14408 (R); **Published:** 01-May-2024