CHAPTER: 04

STUDY ON INFRASTRUCTURE UP-GRADATION PLANNING WITH FOCUS ON DENTAL WING EXPANSION OF PATALIA HOSPITAL AND RESEARCH CENTRE, JAGATPURA, JAIPUR

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INTRODUCTION

Ensuring the right to health, a fundamental human entitlement emphasized in our constitution for over six decades, continues to pose challenges in its widespread delivery [1]. Despite governmental efforts, addressing the health needs of the population remains a formidable task due to factors such as population growth and rapid urbanization [2]. The current focus of the country's health policies revolves around making healthcare affordable and accessible to all citizens. The development of health infrastructure, particularly through fruitful medical research and thoughtful health facility planning, is crucial in achieving this challenging dual objective [3,4].

The planning of a hospital involves a meticulous process aimed at guaranteeing the proper installation and performance of all building systems, including sustainable building technologies. The goal is to ensure that the design aligns with the owner's project requirements and that operations and maintenance staff are adequately trained to manage the facility effectively. Recognizing the urgent need, a well-located site in Jagatpura, Jaipur, has been identified for the establishment of a medical facility, addressing the demand for moderate to excellent healthcare services in the area. A proposed hospital with a capacity of 75 beds can be strategically situated, well-connected by road and rail [5].

RESEARCH OBJECTIVE

1. To develop a blueprint for enhancing the infrastructure of the 75-bed Patalia Hospital and Research Centre.
2. To strategize and formulate the facility management framework for the Dental wing within PHRC.

RESEARCH METHODOLOGY

The methodology employed for this research involved a descriptive study conducted at Patalia Hospital and Research Centre in Jaipur. The study spanned a duration of three months, from February 2018 to April 2018. The process of gathering data involved the utilization of pre-existing information obtained from the hospital. In the context of a

descriptive study, the research sought to present a thorough summary of pertinent variables within the specified timeframe at Patalia Hospital and Research Centre. This methodology enabled the examination and understanding of the data to acquire insights into the specified areas of focus during the assigned study period.

RESULTS & DISCUSSION

The planning considerations involved various aspects, including operational workflow, occupational safety and health, infection control, ergonomics, barrier-free access, comfort, professional image, and aesthetics. Emphasis was particularly placed on infection control during the design phase. The design of the dental wing took into account features like open operatories, effective venting systems, adaptable layouts, and future expansion possibilities. Key planning considerations encompassed zoning, operational flow, and the seamless design of facilities. Thorough planning was undertaken for building services, including heating, ventilation, air conditioning, fire services, water supply, drainage, electrical supply, and compressed air and suction systems.

Quality requirements for the dental department included a cleanable, smooth, and anti-fungal environment, non-VOC emulsion paint for walls, and a false ceiling with acoustic features. The dental operatory featured simplified cabinets, clear zoning, and consideration for minimizing contacts. The sterilization room was carefully designed with distinct sections for various processing stages. Additionally, considerations for layout, flooring, cabinets, handwashing basins, doors, and function rooms were integral to the overall planning. The hospital aimed to provide sophisticated equipment for diagnostic and treatment purposes, emphasizing support services, public health initiatives, and hospital economics. Overall, the planning and construction of this healthcare facility aimed to balance functionality, efficiency, and patient care quality.

CONCLUSION

The report addresses the improvement of infrastructure, comprehending the infrastructure-related needs from both the patient's and provider's perspectives. Through a thorough assessment of the facility, a gap in infrastructure planning was identified. Following this, conceptual plans were drafted, aligning with the recommended plan and space program. The design plans would integrate healthcare facility design best practices, emphasizing patient-friendly infrastructure and nationally recognized safety protocols.

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