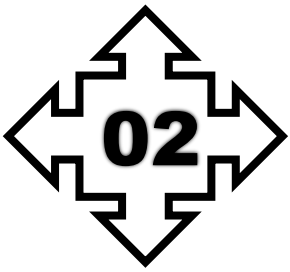


# TRAINING OF THE EMPLOYEES AS A PART OF IMPLEMENTATION OF LABORATORY INFORMATION SYSTEM IN A HOSPITAL

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## INTRODUCTION

Over the last 30 years, the Laboratory Information System has undergone significant development, progressing from a simple system designed for accurate report generation to a comprehensive system capable of seamlessly connecting laboratory data throughout the entire "total testing process," encompassing clinical pre- and post-analytical activities. The integration of health information technology and web-based applications has brought about substantial enhancements in how laboratories communicate, deliver services, educate their workforce and clients, market themselves to clients, and track clinical data and information. Healthcare organizations have played a pivotal role in advancing this communication by integrating the LIS with hospital information systems, pharmacy databases, and more [2]. As a strategic tool, the LIS is expected to improve the quality and efficiency of healthcare professionals, enabling them to provide high-quality, cost-effective services. This module facilitates the streamlining of various investigation processes within the laboratory department, from test ordering and specimen registration to result reporting, abnormal result review, display of result trends, and quality control monitoring [3].

Monitoring laboratory processes is a crucial element in the functioning of any high-throughput operation. As throughput rises, the potential for risk and the associated costs of failure also increases. The growing throughput underscores the necessity to monitor every aspect of the workflow that could influence either success or failure. Elements such as personnel training, instrument validation, reagent expiration, and instrument performance are among the numerous parameters that must be monitored to ensure success in a high throughput setting. A well-designed Laboratory Information Management System (LIMS) stands as an effective means of mitigating these risks. When selecting a commercially available LIMS product, factors like cost, flexibility, ease of use, and ease of implementation should all be taken into consideration [1].

## RESEARCH OBJECTIVES

1. To understand the laboratory workflow for the purpose of training users during the training sessions.
2. To provide users with sufficient training to enable them to effectively utilize the new system.

## RESEARCH METHODOLOGY

The study was conducted at MGM Hospital in Vashi, focusing on the pathology department, with a duration spanning two months. It adopted an analytical approach, aiming to assess and analyse the functioning of the laboratory within this timeframe. The research comprised a sample of 30 laboratory personnel, encompassing both key and end users such as laboratory technicians and doctors. Primary data collection involved conducting face-to-face interviews with five key users and observing laboratory processes throughout the study duration. The selection of key users was based on their engagement in the project from its initiation to the current stage. Additionally, focus group discussions were conducted, which included participants like the laboratory head, IT support staff, lab technicians, and doctors, leading to the generation of valuable insights. Secondary data sources included books, journals, internet searches, and review literature. The data collection tools and techniques utilized for the study primarily involved questionnaires. Through these methods, the research aimed to comprehensively understand the dynamics and operations within the pathology department at MGM Hospital.

## RESULTS & DISCUSSION

Most of the staff actively engaged in the design and development of the new system, contributing suggestions for improvements. However, a few staff members were less involved, particularly in hands-on training. Staff exhibited a high level of acceptance for the new system, and there was no apparent resistance to the change. Users demonstrated a lack of knowledge and skills, indicating lower confidence in using the system. While most key users and IT staff effectively trained end users, a

few faced challenges in doing so. The implementation plans experienced delays, mainly attributed to insufficient time allocated for user learning. Proper solution mapping was not conducted, resulting in challenges during application design.

## CONCLUSION

Merely implementing an LIS may not enable a hospital to attain its essential goals. The effectiveness of such a system hinge on providing adequate training to the individuals who will be utilizing it. It was imperative to offer on-site technical support and training to users, ensuring their comfort in successfully using the system. Before deploying the LIS, it was essential to ensure that the new system aligns with the users' requirements. Successful completion of the implementation of the new LIS necessitates proper training to minimize the failure rate. Additionally, the critical role of workflow design in the laboratory cannot be overstated, as it significantly influenced effectiveness and efficiency throughout and played a crucial role in preventing future bottlenecks. This underscores the definition of the role of LIS within the organization.

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