

“OPTIMIZING HEALTHCARE DELIVERY; THE TRANSFORMATIVE IMPACT OF DIAGNOSTICS ON EFFICIENCY, EFFECTIVENESS, ECONOMY AND EQUITY.”

DEPARTMENT OF LABORATORY MEDICINE

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INTRODUCTION

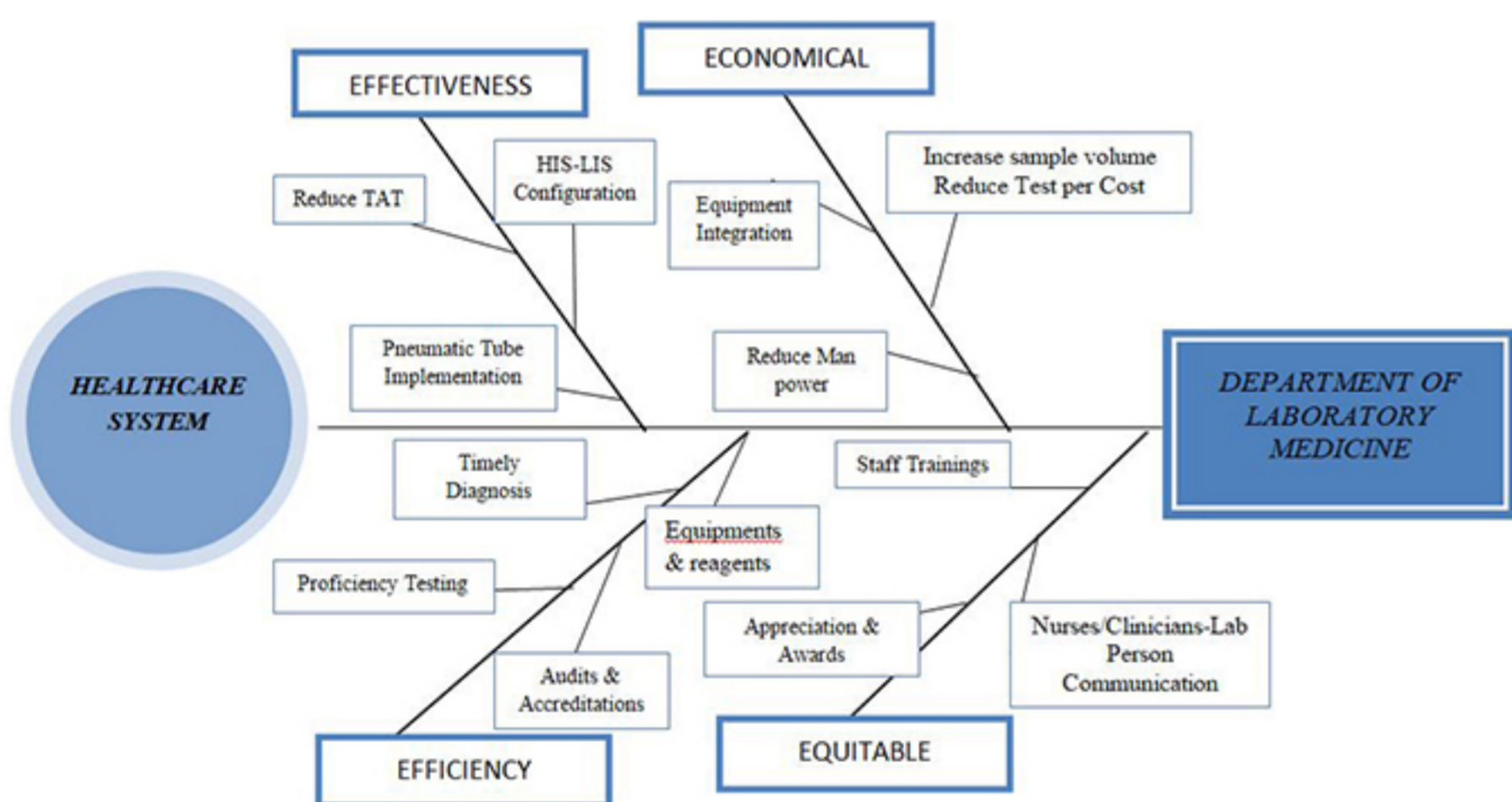
The 21st century challenge is to redesign healthcare systems to be safe, efficient, effective, timely, equitable and patient-centered. Although laboratory medicine is integral to many of these objectives involving prevention, diagnosis, treatment, and managing disease of patients, it suffers from poor visibility as a medical discipline and as a profession and fewer rewards for educational efforts when compared to other medical disciplines.

AIM AND OBJECTIVES

The objective of this study to identify the areas for improvement to enhance the efficiency, effectiveness, economy and equitability of Department Of Laboratory Medicine, Daya General Hospital, Thrissur. We need to go out of our laboratory and take a responsible role within total testing process. I.e.; Pre-analytical, Analytical and Post-analytical.

METHOD

FISH-BONE ANALYSIS AND DATA COLLECTION

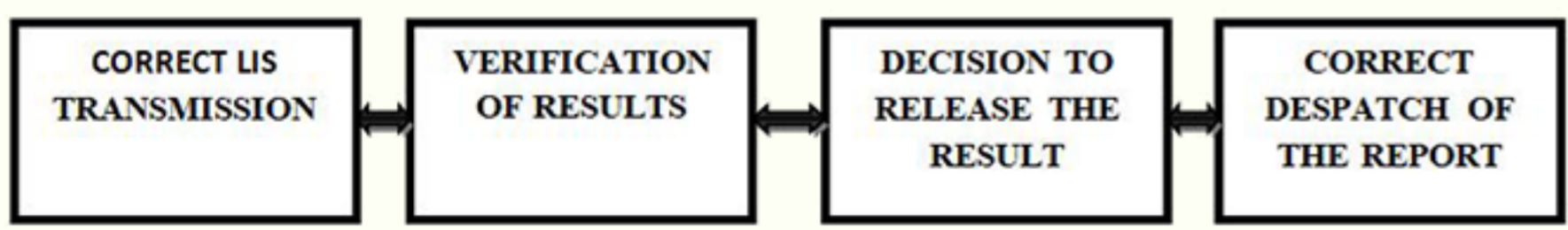


RESULT

Pre-analytical Phase: HIS-LIS Configuration starting while sending the correct investigation through EMR. Billing, Sampling and Sample transport is through pneumatic tube system. The TAT of the investigation sent to billing is monitoring from HIS-LIS configuration. If any TAT outliers are here, CAPA will do for the same. The efficiency building is done with the help of pneumatic tube system and HIS-LIS configuration. It leads to zero test identification errors as well as the patient satisfaction.

Analytical Phase: While decrease the TAT of pre-analytical phase, the patient volume increased. Also the Total Equipment integration leads to zero transcriptional error reduce the TAT that from sample collection to result finalization, reduce the man power and test per cost. The quality assurance programmes and proficiency testing of the laboratory improved the accuracy of the test results; leads to the timely diagnosis and it will leads to the stakeholder’s satisfaction. The equipment and reagent quality ensures, preventive maintenance scheduled as per manufactures protocol.

Post-analytical Phase: Correct LIS transmission, verification of values with proper data checks and critical alerts, correct dispatch of report to the right patient at the right time.



The internal audits and accreditations (ISO 15189:2012) improved the efficiency and equitability of laboratory by enhancing the continual improvement programmes.

Awarded the best laboratory technicians and done around 38 internal trainings conducted in the year 2023. The clinical meetings conducted every month to improve the communication between lab persons and clinicians.

The total process Quality Indicator capturing and reviewing in every month increased the possibilities to improvement and efficiency of the laboratory.

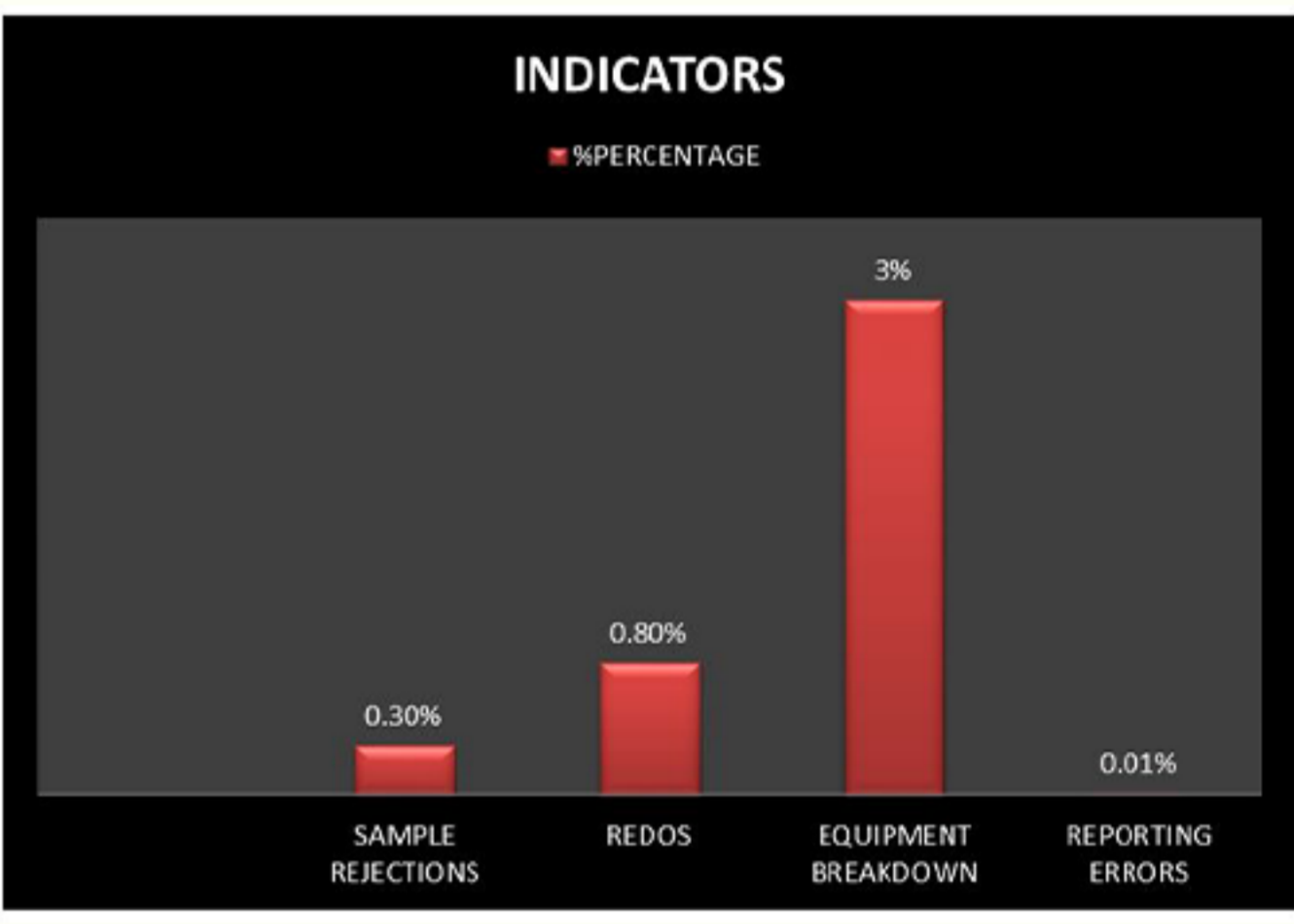
REDUCED THE TAT TO LESS THAN 2% BY IMPLEMENTING HIS-LIS CONFIGURATION AND PNEUMATIC TUBE, EQUIPMENT INTEGRATION

REDUCED THE TRASCRIPTIONAL ERRORS TO ZERO AND IMPROVED THE EFFICIENCY OF REPORTING. PT,IQC, EQA CONFIRMING THE RESULT ACCURACY

CONTINUOUS TRAININGS AND STAFF COMMUNICATION LEADS TO THE EQUITABILITY OF THE DEPARTMENT

PERCENTAGE OF VARIOUS ERRORS ENCOUNTERED

SL NO	INDICATOR	%PERCENTAGE
1	SAMPLE REJECTIONS	0.30%
2	REDOS	0.80%
3	EQUIPMENT BREAKDOWN	2%
4	REPORTING ERRORS	0.01%



- Total no of samples studied for a month= 11,166
- Total no of samples rejected=41
- The no of hours monitored for equipment performance= 720Hrs
- Reporting errors counted for a month

The root cause analysis was done and indentified, improved the processes.

DISCUSSION

Getting the right diagnosis is a key aspect of health care - it provides an explanation of a patient's health problem and informs subsequent health care decisions. The diagnostic process is a complex, collaborative activity that involves clinical reasoning and information gathering to determine a patient's health problem. According to Improving Diagnosis in Health Care, diagnostic errors-inaccurate or delayed diagnoses-persist throughout all settings of care and continue to harm an unacceptable number of patients. It is likely that most people will experience at least one diagnostic error in their lifetime, sometimes with devastating consequences. Diagnostic errors may cause harm to patients by preventing or delaying appropriate treatment, providing unnecessary or harmful treatment, or resulting in psychological or financial repercussions.

CONCLUSION

Laboratory persons are often perceived as managing machinery and equipment, but conversely they need to take a position of shared clinical leadership, showing the role of laboratory tests to guarantee optimal care for patients. This is however challenging because of some reluctance by laboratory professionals to involve themselves in test structuring and requesting and in the inspection of work as it arrives because it is assumed that all requests are clinically necessary; there is a poor communication and integration between clinical persons and laboratory; and, importantly, there is the need for an excellent cultural and scientific background of laboratory professionals for implementing outcome research and to act as knowledge managers and skilled clinical consultants. By combining the unique talent of performing quality laboratory assays laboratory professionals have the expertise to advise their clinical colleagues in regard to the appropriate test selection and interpretation of laboratory results, thereby creating opportunities to define “Laboratory staffs are really at the intersection of health, between the lab values and the clinicians.” Also they can work with clinicians and say, “let us use our data to help you help your patients,”