ABSTACT

Difference in Turnaround Time of Complete Blood Count Examination Before and After LIS–SIMRS Bridging Implementation

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Turnaround Time (TAT) is a key indicator of clinical laboratory service quality, as it influences diagnostic accuracy and clinical decision-making. RSUD Tabanan has implemented a Laboratory Information System (LIS) integrated (bridged) with the Hospital Management Information System (HMIS) to improve laboratory service efficiency. This study aimed to analyze differences in complete blood count (CBC) TAT before and after the implementation of LIS–HMIS bridging at the Clinical Laboratory Installation of RSUD Tabanan. This study employed a quantitative comparative design using secondary data obtained from LIS and HMIS logs. The sample consisted of 316 CBC examination records before bridging (January, February, and March 2025) and 316 records after bridging (May, June, and July 2025), selected using simple random sampling. Data were analyzed using the Mann–Whitney test with a significance level of 0.05. The results showed that the proportion of CBC TAT meeting the standard before bridging was 71.52%, which increased to 75.95% after bridging. Statistical analysis yielded a p-value of 0.259 ($p > 0.05$), indicating no significant difference in CBC TAT before and after the implementation of LIS–HMIS bridging. This finding may be attributed to the relatively small increase in standard-compliant TAT achievement, amounting to 4.43%. Nevertheless, the improvement in TAT achievement suggests enhanced laboratory service efficiency following the implementation of LIS–HMIS bridging.

Keywords: *Turnaround Time, Hospital Management Information System, Laboratory Information System*