

ABSTRACT

Hospital Information Systems (HIS) play a critical role in enhancing the efficiency, accuracy, and quality of healthcare services. This study presents the development of an integrated HIS that supports both BPJS and non-BPJS patient workflows. The system includes key features such as patient registration, appointment scheduling based on doctor availability, ICD-10 diagnosis recording, and prescription management with pharmacist verification. It also incorporates role-based authentication and ICD-10 code prediction using a BioBERT model, evaluated against traditional machine learning methods. Implementation results demonstrate that the system effectively reduces documentation errors, particularly in BPJS medication records, which are a common cause of hospital financial losses due to human error. Therefore, the proposed solution offers a reliable and efficient digital approach to streamline clinical and administrative processes in healthcare institutions.

Keywords: BioBERT, BPJS Claims, BPJS Services, Doctor Scheduling, Hospital Information System, Human Error, ICD-10, Machine Learning, Medication Documentation