Design and Development of a Web-Based Elektronic System for Medical Record Retention and Destruction (E-Retna) at Waluyo Jati Regional Hospital Kraksaan Probolinggo

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ABSTRACT

RSUD Waluyo Jati Kraksaan Probolinggo still conducts the medical record retention process manually, despite utilizing the Avesina Hospital Management Information System (SIMRS). The most recent retention activity was carried out in 2017 for records from 2012 to 2016, due to the system's lack of support for electronic features related to medical record retention and destruction. As a result, files had to be sorted manually, which carries the risk of errors and file accumulation. The main issue lies in the slow sorting process, which may lead to the accidental inclusion of active medical records in the archive intended for destruction. This poses a risk of losing important patient data. This study aims to design and develop a web-based Electronic Medical Record Retention and Destruction System (E-Retna) at RSUD Waluyo Jati Kraksaan Probolinggo. The research method used is the Waterfall model, consisting of requirement analysis, system design, coding, and testing stages. Requirement analysis was conducted through interviews, observation, and documentation. The design phase involved the use of flowcharts, entity relationship diagrams, interface designs, and data flow diagrams. The system was developed using the PHP programming language with the CodeIgniter framework, Bootstrap templates, and a MySQL database. Testing was carried out using black-box testing with the equivalence partitioning technique, showing that all functionalities were successfully tested according to the expected features. The resulting system includes features such as uploading scanned utility value forms, automatic classification of patient status (active, inactive in retention period, or over two years in retention), report generation, and one-by-one archiving based on form types, such as medical resumes in the medical resume section. Additionally, a user manual for the E-Retna system was also produced.

Keywords: *Destruction, retention, electronic system, waterfall*