

Development of a Web-Based WhatsApp Reminder Application for HIV/AIDS Patients' Medication Adherence at Jember Kidul Public Health Center

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ABSTRACT

The adherence level of people living with HIV/AIDS (PLWHA) to antiretroviral (ARV) therapy at Jember Kidul Public Health Center remains low due to patients' negligence in regularly collecting and taking medication. This study aims to design and develop a web-based medication reminder application integrated with WhatsApp to provide automated reminders to patients. The research employed a Research and Development (R&D) approach using the waterfall model, covering the stages of needs analysis, system design, implementation, and black box testing. The application was developed using the Laravel framework and MySQL database, equipped with key features such as patient data management, visit scheduling, automated reminders via WhatsApp, and cohort reporting. System testing showed that the application's functionalities met user needs and effectively assisted healthcare workers in monitoring patient adherence. However, it was observed that the success of reminder delivery is highly dependent on the stability of the WhatsApp API connection, and that a stable internet connection is also essential for running the reminder application. Therefore, connection stability is a crucial external factor for optimal system operation. It is expected that this application will improve ARV therapy adherence among PLWHA and support HIV/AIDS control programs at Jember Kidul Public Health Center.

Keyword: *Medication Reminder, Medication Adherence, Laravel*