

Perancangan Clinical Decision Support System (CDSS) untuk Drug Drug Interaction (DDI) pada Fitur e-Prescription

*Clinical Decision Support System (CDSS) Design
for Drug Drug Interaction (DDI) on the e-Prescription Feature*

ABSTRAK

Tidak semua efek samping obat yang terjadi dapat dihindari, namun yang disebabkan karena interaksi antar obat/Drug-Drug Interaction (DDI) termasuk yang paling mungkin dicegah dan dikelola karena prediktabilitasnya. Meningkatnya jumlah obat yang diresepkan bersamaan, mempengaruhi potensi interaksi obat secara eksponensial. Clinical Decision Support System (CDSS) adalah strategi yang menjanjikan untuk mencegah risiko keselamatan pasien yang disebabkan oleh interaksi obat. Penelitian ini bertujuan untuk Merancang CDSS untuk DDI pada fitur *e-prescription*. Jenis penelitian adalah kualitatif dengan desain *action research* yang dilakukan dalam 4 tahap, yaitu *diagnosing*, *planning*, *action*, dan *evaluation*. Penelitian dilaksanakan di *Digital Health Innovation Studio* (DHIS) Universitas Gadjah Mada, dengan waktu pelaksanaan November 2021 – April 2022. Implementasi dan Evaluasi CDSS dilaksanakan di Rumah Sakit mitra pengguna SIMRS, yaitu RSUD Budi Rahayu Magelang. Berdasarkan hasil analisis kebutuhan pengguna, CDSS yang dikembangkan dapat diakses oleh dokter dan unit farmasi. Tampilan peringatan interaksi obat langsung muncul pada satu layar di menu *e-prescription* berupa *pop up* dengan deskripsi interaksi obat dalam bahasa Indonesia. Data interaksi obat mengacu pada Pusat Informasi Obat Nasional (PIONas) yang dikelola oleh Badan POM. Pembangunan fitur CDSS untuk DDI dilakukan berkolaborasi dengan programmer DHIS UGM, selanjutnya diimplementasikan di RS setelah melalui sosialisasi. Berdasarkan hasil evaluasi, CDSS untuk DDI dinilai berhasil dikembangkan memenuhi kebutuhan pengguna dengan prinsip *user centered design* serta berdaya guna secara optimal untuk membantu meningkatkan mutu layanan RS.

Kata Kunci: *Clinical Decision Support System (CDSS); Drug Drug Interaction (DDI); User Centered Design*

ABSTRACT

Not all drug side effects that occur can be avoided, but cases that caused by Drug-Drug Interactions (DDI) are among the most likely to be prevented because of their predictability. The increasing number of drugs which co-prescribed, affects the potential for drug interactions exponentially. Clinical Decision Support System (CDSS) is a promising strategy to prevent patient safety risks caused by DDI. This study aims to design a CDSS for DDI on e-prescription. This research is qualitative study with action research design which is executed in 4 stages, namely diagnosing, planning, action, and evaluation. The research was carried out at the Digital Health Innovation Studio (DHIS) of Gadjah Mada University, with an implementation time of November 2021 – April 2022. The implementation and evaluation of CDSS was performed at HIS partner hospitals issued by DHIS FKMK UGM, namely Budi Rahayu Hospital Magelang. Result from identification of user needs assert that the CDSS can be accessed by doctors and pharmacists. The drug interaction warning display pop-up appears on one screen in the e-prescription menu with a description of drug interactions in Bahasa. Drug interaction data refers to the National Drug Information Center (PIONas) managed by the Food and Drug Supervisory Agency (BPOM). The development of the CDSS feature for DDI was carried out in collaboration with DHIS UGM programmers, then implemented in hospitals after going through socialization. Based on the evaluation results, the CDSS for DDI is considered successful in being developed to meet user needs with the principle of user centered design and optimal use to help improve the quality of hospital services.

Keywords: *Clinical Decision Support System (CDSS); Drug Drug Interaction (DDI); User Centered Design*