

User Satisfaction with an Implementation Electronic Medical Record

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ABSTRACT

The RME application is expected to be integrated between health services and has a function as a clinical decision support system the existing medical record is still in the form of the paper medical record so that it is easily lost, damaged, and It does not support to clinical decision making. RME is included CDSS, and prediction of diagnosis has never existed especially in Indonesia. The purpose of this study implemented the RME application in the educational clinic, and evaluated the user's satisfaction with the RME application has been implemented. The method used for RME implementation was parallel implementation and evaluation of user satisfaction by the end-user computing satisfaction method. The Implementation of the RME application was carried out for 2 months in the educational clinic from September to October 2019. The study involved 2 doctors, 1 registration officer, 2 nurses, and 1 pharmacy officer. The results of RME application research could be implemented in the educational clinic RME applications with a clinical decision support system in the form of blood pressure, risk of Diabetes Mellitus, risk of stroke, the interaction of drug content with a history of allergies, as well as abnormal warnings of laboratory and radiological examination results.

Keywords: User Satisfaction, Implementation, electronic medical record

I. INTRODUCTION

People have the right to obtain quality and affordable health services [1]. The quality of health services is a step towards improving health services for individuals as well as for the population in accordance with the health outcomes expected for current professional knowledge. The provision of health care should

reflect the accuracy of the use of knowledge [2] so that the service provided is really precise and can ensure the safety of the patient. The use of resources and activities that are very complex in hospitals or clinics. They have the potential to cause errors such as misdiagnosis, prescription more than standard or excessive doses that have serious or fatal consequences for patients [3]. According to the House of Commons Health Committee Patient Safety Sixth Report of Session 2008-09 Volume I mentioned that in London 10% of patients treated in the hospital suffered enormous damages could be avoided, tens of patients suffered losses very large every year [4]. Previous findings of the IOM (Institute of Medicine's) report that deaths due to 'Medical Error' reached 98.000 people losses between \$17-29 million and most contributors were 'medical error' [5] one effort to realize quality health services manage patient data by implementing information technology [6]. Function information technology is expected to filter out errors while inputting patient data as well as clinical decision support systems that are very helpful doctors, give the medical decision to their patients. The urgency of this research is not only for input medical and social data patients, but also it can predicting risk factor stroke diseases.

II. METHODS

Implementation of RME used parallel implementation. The research was located in clinical education in Jember. The study was conducted for 2 months from in September until



October 2019. Respondent were two doctors, one admission, two nurses, and one pharmacy officer

III. RESULT AND DISCUSSION

1. Setting up hardware and network.
 Admission, patient examination room, pharmacy, laboratory, and radiology had been completed with a computer that has been included RME application and printer. RME was integrated from Admission to other computers, networks, and LAN were prepared.
2. Training user of RME All Users were given training so that all users familiar to use RME.
3. Implementation of RME with CDSS. RME has Implemented for two months, but the paper medical record is still used by them.
4. Evaluation implementation RME by end-user computing satisfaction. Aspects that are evaluated include content, accuracy, format, easy of use dan timelines [11].

Results of evaluation there were 6 respondent they said: all respondent agree RME Application have the content, format, ease of use can provide data on time. *interface* Desain of RME Application with CDSS:

1. Admission

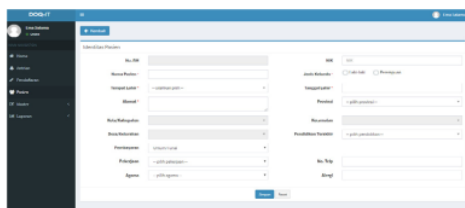


Fig 1. Admission

on the registration menu, the patient's social data will be input, allergy history data

and the patient's medical record number will be automatically entered.

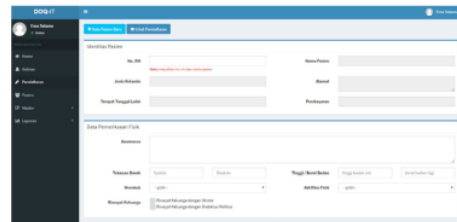


Fig 2. Admission for patient who have visited

Registration of patients who have visited the clinic, just enter the patient's medical record number, then the social data will appear automatically. registration officers can directly input the patient's health problems, smoking habits, and identify a family history of stroke.

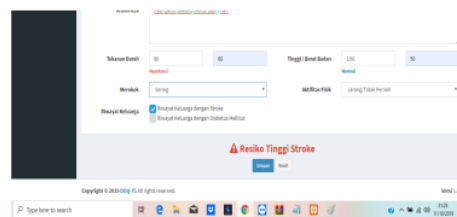


Fig 3. CDSS

Based on stroke risk factors, namely hypertension, family history of stroke, smoking habits, obesity, and physical activity habits, the system will automatically determine the risk of stroke to be no risk, moderate risk and high risk according to the algorithm determined by the agreement of experts, namely neurologists

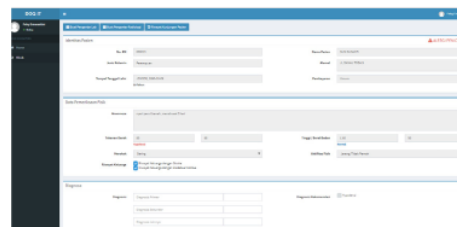


Fig 4. Examination menu by doctor

In figure 4 contains the examination menu by a doctor. the doctor enters the diagnosis in accordance with clinical examination, supporting examinations and previous medical history, as well as recommendations for further treatment and examination.

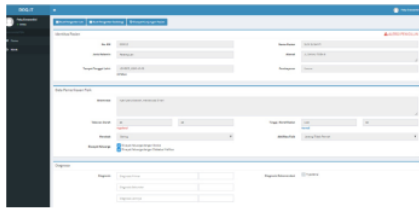


Fig 5. CDSS for drug Allergent

When the doctor inputs drugs into the system and it turns out that one of the drug contents can cause allergies to the patient, the drug cannot be inputted. this greatly supports efforts for patient safety.

The users evaluated the system based on content, format, relevance, accuracy and easy to use [13]. All respondents are satisfied with the system that had been built.

IV. CONCLUSION

RME with CDSS had been implemented at clinical education for two months, and they still used a paper-based medical record. All respondent agree RME Application have the content, format, relevance, accuracy and easy to use can provide data on time and RME application with CDSS can predict risk factor or stroke diseases.

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