IMPLEMENTATION OF ELECTRONIC MEDICAL RECORD IN CLINICAL EDUCATION OF STATE POLYTECHNIC OF JEMBER

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Abstract

Implementation manually of medical records in clinical education of state Polytechnic of Jember takes retrieval for long time because papers often difficult to find moreover missing. Consequently, it hindering the patients get service. Attempts to overcome these problems are implementation electronic medical record that is developed according to users need.

Focus group discussion with 5 doctors had been agreement to implementation electronic health records. Preparing infrastructure and system design to developed system. Efficiency: the median time of service with electronic medical record is 12 minutes, while the paper medical records is 10 minutes. Implementation electronic medical records can also reduce administrative cost. Effectiveness: The median completeness electronic medical records is 85,71%, while the paper medical records only 75% minutes. Clinical decision support system comes in the form of drugs allergy interaction. Users satisfied with the content, accuracy, format, relevance and ease of using electronic medical records. The key successful implementation of electronic medical records is socio-technical factors

Implementation electronic medical records has been proved in administrative costs efficiency, but adoption it in the beginning has not been efficient for time of service. Completeness of patient's records with electronic medical records is better. Clinical decision support systems such as drugs interaction are effectively support to health care and improve patient safety. Overall users are satisfied with implementation electronic medical records. Sosio-technical aspect's is the key successful implementation of electronic medical records

Keywords: Electronic medical records, Implementation, Action research

A. Introduction

Health care services with resources and activities are very complex. They seek to give consumer expectations about health care. The Greatest hope consumer to health care is get well after being treated. But no one is perfect including medical activities in health care. They are such as fault diagnosis, prescribing more standard or excessive doses that ensue serious or fatal result for patiens (Dublin, 2008).

According to House of Common Health Committee Patient Safety Sixth Report of Session 2008–09 Volume I stated that in London 10% patients were hospitalized had medical error but there can be avoided, tens of thousands of patients suffered huge losses every year [2]. The previous findings of the IOM report (Institute for Medicine's) in 1999, the death from Medical error reached 98,000, a loss of between $ 17-29 million and the highest Contributor was Medical error [(3).]

[(4)] said that Medical error was not a strange thing in the medical world. In the United States in one year at least 183 thousand cases of deaths due to medical errors, in Indonesia the figure may be better because there were no reports or studies about it.

Efforts to reduce medical errors are complete medical records, correctly and punctual. Paper-based is not enough. Medical record that is required is a simple of retrieved so it can be used as a tool to support clinical decisions in this case, enforcement of diagnosis and therapy, avoiding

the occurrence of allergic reactions, drug delivery and therapy duplication as opposed to the previous history of the patient. It is a challenge for physicians to use the technology as a solution, so it can help physicians manage clinical information for make optimal decisions that ultimately can be reduce medical errors [5].

B. Method

Design of this research had used action research in clinical education of state Polytechnic of Jember started from June to December 2014.

Subjects of focus group discussion on diagnosing action were users of electronic medical records in this case 5 doctors clinical education of state Polytechnic of Jember. While the Planning Action subject of study only involves 2 doctors. Polyclinic Polytechnic of Jember. Assessment of completeness of medical record file number of 68 files. Phase evaluating action focus group discussion II study subject were 2 doctors, a nurse and an assistant pharmacist. Evaluation of electronic medical records performed on 171 patient's record.

Efficiency and effectiveness of medical record before and after implementation electronic health records had been evaluated by statistic descriptive while user's satisfaction had been evaluated by qualitative study.

C. Result and discussion

Focus group discussion with 5 doctors had been agreement to implementation electronic health records. Preparing infrastructure and system design to developed system.

Efficiency: the median time of service with electronic medical record is 12 minutes, while the paper medical record is 10 minutes. Because users had not been accustomed to used the system. As previous research that had been conducted at five primary health care in America [6] that adopting electronic health records by physicians need more time to provide health care of patients than when using paper medical records. Implementation of electronic medical records has complicated process and took time for users to be familiar with the systems [7]. Implementation electronic medical records can also reduce administrative cost.

Effectiveness: Data more complete by electronic medical record than medical records manually, especially social data. The median completeness electronic medical records is 85,71%, while the paper medical records only 75% minutes. Clinical decision support system comes in the form of drugs allergy interaction. Users satisfied with the content, accuracy, format, relevance and ease of using electronic medical records. The key successful implementation of electronic medical records is socio-technical factors. That are clearly of business process, the doctors support the change towards electronic medical records, the full support of the management, good planning and strength skill [8].

The Benefits obtained after the migration to electronic medical records are integration of multiple sources of data, collecting data at the point of care and supporting physicians for decision-making. The expectation of migration to electronic medical records can improve patient safety in this case, the electronic medical records including clinical decision support systems, drugs allergy interaction. That can improve quality health services, the services that humane, quickly, responsive, empathetic and friendly [9]. When that are happen, so increase customer satisfaction.

D. Conclusion

Implementation electronic medical records have been proved in administrative costs efficiency, but adoption it in the beginning has not been efficient for the time of service. Completeness of patient's records with electronic medical records is better. Clinical decision support systems such as drugs interaction are effectively support to health care and improve patient safety. Overall users are satisfied with implementation electronic medical records. Socio-technical aspect is the key of successful implementation of electronic medical records.

The next evaluation is costs and benefits analysis (tangible and intangible) of the implementation of electronic medical records, so

it can always motivate staff, physicians and management to make electronic medical records.

Redesigning doctor's room need for ensures add hardware was not expected to interfere with the service.

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