Security Developed E Health Records Key

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Abstract- *This project deals with E-health web application framework, cloud platform and provide the security to the upcoming health data. This work presents the whole development process of the self-care management web-app framework which provides instructive supports for future other E-health field application. The report consists of the following main parts: analysis, design and implementation, and evaluation. Literature review and internet search are main methods for making an investigation on existing systems and related works. A prototype is developed by using Java, Java script, CSS, and HTML technologies. We will create one encrypted key and it will access patient, doctor, and nurse. We will get authority to detect fraud related to electronic health record (Lu & song, 2013)*

Keywords- Cloud, Electronic Health Records, Framework, Patient, Service Oriented Architecture, Encryption

I. INTRODUCTION

This project deals with the Corporate Medicare Management. This project is very helpful to both Medicare staff as well as to the public. It is having mainly Administration and Client module.The growing quality demand in the hospital sector makes it necessary to exploit the whole potential of stored data efficiently, not only the clinical data, in order to improve diagnoses and treatments, but also on management, in order to minimize costs and improve the care given to the patients. In this sense, Data Mining (DM) can contribute with important benefits to the health sector, as a fundamental tool to analyze the data gathered by hospital information systems (HIS) and obtain models and patterns which can improve patient assistance and a better use of resources and pharmaceutical expense. Data Mining is the fundamental stage inside the process of extraction of useful and comprehensible knowledge, previously unknown, from large quantities of data stored in different formats, with the objective of improving the decisions of companies, organizations or institutions where the data have been gathered. However, data mining and the overall process, known as Knowledge Discovery from, is usually an expensive process, especially in the stages of business objectives elicitation, data mining objectives elicitation, and data preparation. This is especially the case each time data mining is applied to a hospital: many meetings have to been held with the direction of the hospital, area coordinators, computer scientists, etc., to establish the objectives, prepare the data, the mining views and for training the users to general DM tools.

II. LITERATURE REVIEW

The literature search was conducted from November 2014 through February 2015. STARLITE (sampling strategy, type of study, approaches, range of years, limits, inclusion and exclusions, terms used, electronic sources) search strategy with the terms documentation, electronic health record, implementation, benefits, and challenges was used10 (Fig 1). The study included narrative reviews, commentaries, case studies, case series, surveys, clinical case studies, randomized controlled studies, governmental reports, and insurance company reports. The study also included reports on the progress of implementation of EHRs, quality of documentation, or experience in teaching facilities. The search was limited to the English language, and the databases searched were PubMed, Current Index to Nursing and Allied Health Literature, and Index of Chiropractic Literature. The search was further limited to articles directly applicable to small chiropractic offices and teaching clinics. Reference tracking was used to identify additional citations. Large national network or hospital studies, radiology- or laboratory-related studies, and studies that involved specific conditions were excluded because the implementation problems were not likely to be applicable to individual chiropractic practice or teaching facilities. The final results eliminated duplicates and those citations that were not relevant to the topics of interest. RESULTS A total of 45 full-text articles from all databases were used. There were reports of implementation in small medical offices, 11 satisfaction with EHR systems, 12,13 and methods of importing the documentation content.14 All of these reports indicated consistent problems that affected the quality of the documentation. Commentaries revealed the use and misuse of the documentation information generated by EHR systems.14 One study looked at the sociological aspect of EHR systems and how it affected the quality of care. 15 This study provided insight into the doctor-computer-patient relationship, with the computer demanding more attention than the patient. The computer intervention resulted in the doctor missing nonverbal patient communication, resulting in

a negative effect on quality of care. There were 10 governmental and private insurance reports found and 8 used. These reports reviewed the overall EHR system utilization rate and provided an overview of the trend. Common themes noted throughout the articles reviewed were difficulties in utilization of all the features of the new software, intrusive change in workflow, financial constraints on small office budgets, and imposition in the doctor-patient relationship, which often led to dissatisfaction in practice. There was inconsistent reporting on the effects of EHRs on changes in quality of care but consensus on the other issues.

III. EXITING SYSTEM

- In existing system cant get authority key to record the data.
- It works usually as per proposed System.
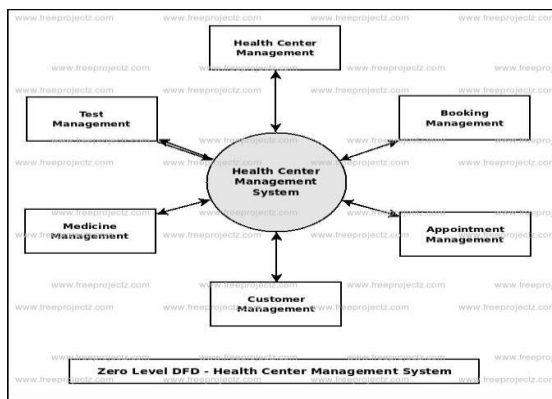
Disadvantages
- does not provide better accuracy.

Fig. exiting system

IV. PRPPOSED SYSTEM AND METHODOLOGY

EHR systems are designed to store data accurately and to capture the state of a patient across time. It eliminates the need to track down a patient's previous paper medical records and assists in ensuring data is up-to-date,[6] accurate and legible. It also allows open communication between the patient and the provider, while providing "privacy and security."[7] It can reduce risk of data replication as there is only one modifiable file, which means the file is more likely up to date and decreases risk of lost paperwork and is cost efficient.[8] Due to the digital information being searchable and in a single file, EMRs (electronic medical records) are more effective when extracting medical data for the examination of possible trends and long term changes in a patient.
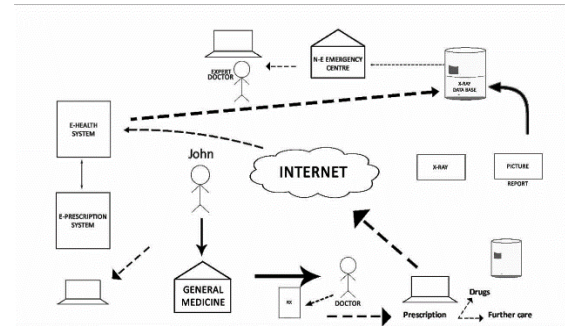

Fig. Proposed system

V. METHODOLOGY

A survey was conducted to collect data to validate the research model and test hypotheses. The survey questionnaire items were based on existing literature. If there is a scale for the construct in the literature, it was adapted to the context of this study, and if there is none, new scale was then developed based on the related literature. First the preliminary survey questionnaire was pretested to a small group of academics and practitioners, including doctoral students, health organization management program faculty, and a few physicians. They were asked to examine the degree to which the preliminary questionnaire captured the constructs and how easy or difficult the preliminary questionnaire was to understand and complete. Based upon results from the preliminary questionnaire, questionnaire was revised and then the survey was conducted over the Health Organization Management (HOM) students who have registered the course of "Healthcare Network, System and Organizational Operations" at a University in Southwestern US in February of 2012. The surveys were administered in two classes, and the total number of participants is 57. There were 6 surveys that have missing responses and were removed. The final valid sample size is 51.
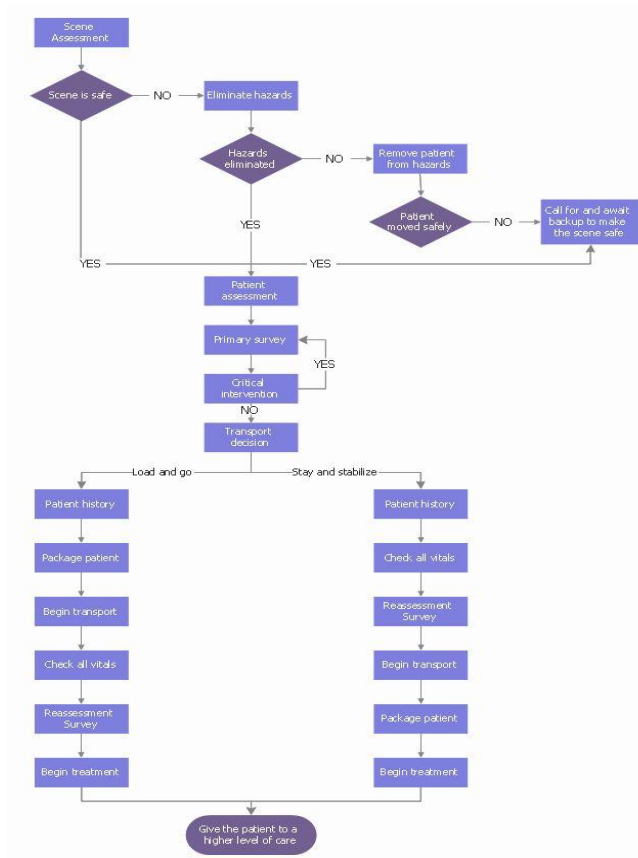
Fig. flowchart of the system

VI. SYSTEM ARCHITECTURE

System design is the process, which involves conceiving planning and carrying out the plan by generating the necessary reports and inputs. In other words design phase acts as bridge between the software requirement specification and implementation phase, which satisfies those requirements. System design is the transformation of the analysis model into a system design model.

The design of the system is correct if a system built precisely according to the requirements of that system. Design should be clearly verifiable, complete and traceable. The goal is to divide the problem into manageably small modules that can be solving separately. The different modules have to cooperate and communicate together to solve the problem. The complete project is broken down into different identifiable modules. Each module can be understood separately. All the modules at last are combined to get the solution of the complete system.
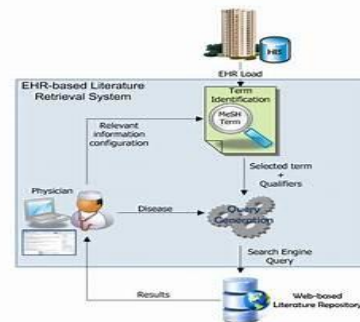

Fig . system architecture

VII. ALGORITHM USED

1. FOURIER TRANSFORM: ENHANCING OUR SENSES

The fourier transform has been dubbed one of most important algorithms of our time. It's a mathematical technique for breaking complex signals into basic components. It allows technicians, for example, to see voltage fluctuations in a wire connecting a microphone to a loud speaker. Because it reduces a signal to a short list of numbers, it's also used to squeeze audio and image files into portable packages (MP3's and JPEG's). Without it, medical imaging wouldn't exist. Magnetic resonance and ultrasound machines couldn't turn raw data into pictures that enable doctors to see inside our bodies to diagnose and treat bleeds and broken bones, tears, tumors and more.

2. RSA: THE ENCRYPTION ALGORITHM

If it weren't for RSA, an acronym based on the names of its three inventors, health care records might still be locked in filing cabinets, mailed and faxed. Developed in the 1970s by the military to defend against hackers, this algorithm allows for the secure transmission of digital data. It was one of the first practicable encryption algorithms—and encryption is key to the secure sharing of electronic health records.
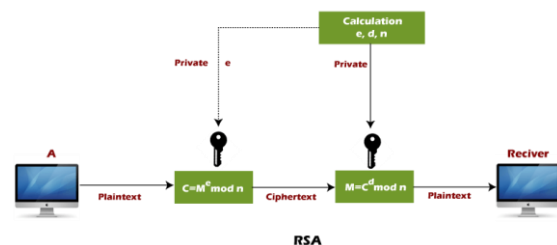
4. MUMPS: HEALTH CARE'S OPERATING SYSTEM

The Massachusetts General Hospital Utility Multi-Programming System–or M– was developed in an animal lab in the late 1960s. It's a computer programming language made

for the health care industry, and still used today by many hospitals and banks. It was one of the first languages to enable computers to run multiple programs simultaneously. Today it powers the entire Veterans Health Administration's clinical records management system and Epic, America' largest electronic health record software company.

5.PROBABILISTIC DATA MATCHING: THE CLINICIAN-SCIENTIST'S BEST FRIEND

If you're a doctor treating John Silver, of what use to you are the electronic medical records of Jon Silver? Many computer searches are deterministic, a byte-to-byte comparison with zero tolerance for typographical or data entry errors. Probabilistic algorithms look for various bits of information in medical records, and then rank them according to their likelihood of belonging to John. They're used to retrieve clinical data and aid in research

VIII. RESULT AND CONCLUSION

Reliability, validity, and common method bias analyses were conducted to validate the measurement model. SmartPLS [40] was the major tool to evaluate the statistical significance and relative salience of the model. In this paper I can do it is security for patient monitoring system. We can access one key for security both sides like Patient, doctor nurs ()e or medical. If anyone gets fraud related to patients record we can getting authority to disable this person.

IX. CITATION

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- D. K. Vawdrey, T. L. Sundelin, K. E. Seamons and C. D. Knutson, "Trust negotiation for authentication and authorization in healthcare information systems," Proceedings of the 25th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (IEEE Cat. No.03CH37439), 2003, pp. 1406-1409 Vol.2, doi: 10.1109/IEMBS.2003.1279579.Abstract: The expanding availability of health information in an electronic format is strategic for industry-wide efforts to improve the quality and reduce the cost of health care. The implementation of electronic medical record systems has been hindered by inadequate security provisions. This paper describes the use of trust negotiation as a framework for providing authentication and access control services in healthcare information systems. Trust negotiation enables two parties with no preexisting relationship to establish the trust necessary to perform sensitive transactions via the mutual disclosure of attributes contained within digital credentials. An extension of this system, surrogate trust negotiation is introduced as a way to meet the security requirements of healthcare delivery systems based on mobile computing devices and wireless communication technologies. These innovative technologies have enormous potential to improve the current state of security in healthcare information systems.URL: https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=1279579&isnumber=28599

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