PUBLIC HEALTH RECORD AS A WEB APPLICATION

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Abstract:-Many patients face inconvenience due to negligence of officials. It is also very tedious job to maintain all the records in book or papers for Person, Doctor or even Government. Doctor written prescription can be sometimes hard for shopkeeper or Chemist to understand and ends up giving wrong medicine that cause more harm than help. Therefore, it is important to maintain the personal health record to reduce the doctor's task and help the person to understand his/her health status. In this project, we propose a cloud based application which works as SaaS, that will hold every registered person's lifetime of health records that can be retrievable anytime, anywhere. Person can choose to share the health information with doctors, hospitals and other healthcare providers. This application will be mostly used by the doctors ,where they will be able to access patient's medical history by his Unique ID and diagnose the current sickness accordingly .They can enter new patients, select symptoms and prescription will be automatically generated which will eliminate the chances of miscommunications with the chemists. This application also helps to generate family tree. If a family member comes he will be added to the tree. Family Tree will use to detect diseases which are Genetic or hereditary and will give solution if any.

Keywords: PHP, Electronic Health Record, Web Application, SaaS, etc.

I. INTRODUCTION

An Electronic Health Record (EHR) is a digital version of a patient's paper chart. EHRs are real-time, patient-centered records that make information available instantly and securely to authorized users instantly. While an EHR does contain the medical and treatment histories of patients, an EHR system is built to go beyond standard clinical data collected in a provider's office and can be inclusive of a broader view of a patient's care .[1]

EHRs can:

- Contain a patient's medical history, diagnoses, medications, treatment plans, immunization dates, allergies, radiology images, and laboratory and test results.
- Access to evidence-based tools that providers can use to make decisions about a patient's care.
- Automate and streamline provider workflow.

II. EXISTING SYSTEM

1) Electronic Medical Record (EMR): An electronic record of health-related information on an individual that can be created, gathered, managed, and consulted by authorized clinicians and staff within one healthcare organization.

Ambulance services in Australia have introduced the use of EMR systems. The benefits of EMR in ambulances include: better training for paramedics, review of clinical standards, better research options for pre-hospital care and design of future treatment options.

An EMR is more beneficial than paper records because it allows providers to:

- Track data over time.
- Identify patients who are due for preventive visits and screenings.
- Monitor how patients measure up to certain parameters, such as vaccinations and blood pressure readings.
- Improve overall quality of care in a practice.

2)**Electronic Health Record (EHR):** An electronic record of health-related information on an individual that conforms to nationally recognized interoperability standards and that can be created, managed, and consulted by authorized clinicians and staff across more than one healthcare organization.

3)**Personal Health Record (PHR):** An electronic record of health-related information on an individual that conforms to nationally recognized interoperability standards and that can be drawn from multiple sources while being managed, shared, and controlled by the individual. The PHR is a tool that you can use to collect, track and share past and current

information about your health or the health of someone in your care. Sometimes this information can save you the money and inconvenience of repeating routine medical tests. Even when routine procedures do need to be repeated, your PHR can give medical care providers more insight into your personal health story.

Comparison of existing Public Health Record System

Parameters	Electronic Medical Record (EMR):	Electronic Health Record (EHR):	Personal Health Record (PHR):
Functions	An electronic record of an episode of medical care	health-related information on an individual that conforms to nationally recognized interoperability standards.	An electronic record of health-related information on an individual that conforms to nationally recognized interoperability standards
2. Tasks	It can be created, gathered, managed, and consulted by authorized clinicians and staff within one healthcare organization.	It can be created, managed, and consulted by authorized clinicians and staff across more than one healthcare organization..	It can be drawn from multiple sources while being managed, shared, and controlled by the individual.
3. Advantages .	Cost savings and fewer workplace inefficiencies	Securely sharing electronic information with patients and other clinicians	Improve Patient Engagement
4. Disadvantages	Confidentiality and security issues	Data loss	Data accuracy

III. ARCHITECTURE DIAGRAM OF PROPOSED SYSTEM

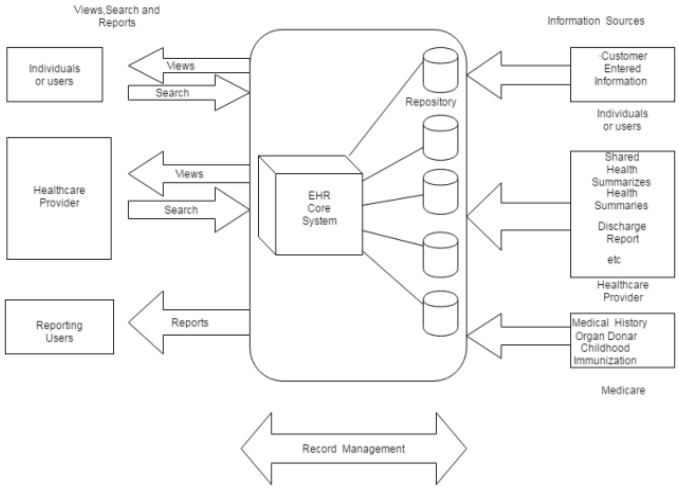


Fig. 1 System Architecture

Architecture of PHR-

i. Individuals or users:
This is patients or users who are going to use the system. They can be anyone who has knowledge of what PHR is.

ii. Healthcare Provider
This could be mainly hospitals or clinics that can provide help to the system by sharing their experience. A health care provider also is any provider from whom the University or the employee's group health plan will accept medical certification to substantiate a claim for benefits.

iii. Reporting User:
The report generated after diagnosis will be made available to the patient or user.

iv. Medicare:
Medicare consists of all medical record of the patients such as medical history, organ donation records, and childhood immunizations.

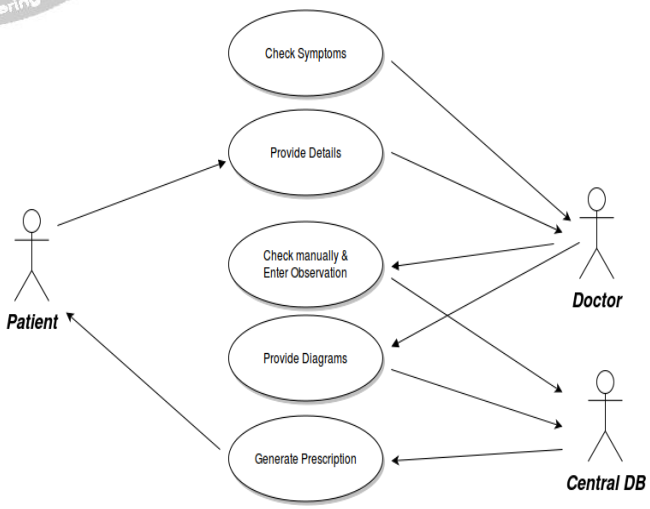
v. Record Management:
All the data is stored and managed in this section .It consists of :

a. EHR Core System:
It is a central database which consists all the data which is stored in different repositories. This is helpful is in the case of data crash. All the data from different repositories are integrated in a single core system known as HER core system.

b. Repositories:
It consist of data which is divided and stored in different location.

Our PHR system has 3 Modules:

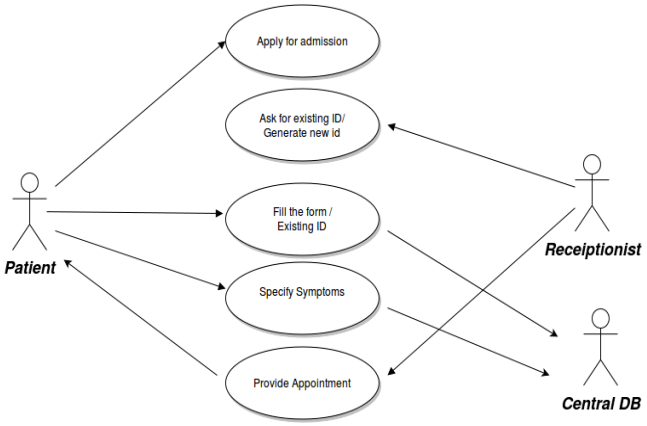
1) Patient Diagnosis:



In above diagram the 'Doctor's' class provide details about his health, then Doctor will check symptoms entered by the class 'patient'. The doctor then will check manually and enter his/her observation and the system will provide diagrams to Central DB. The class 'Central DB' will

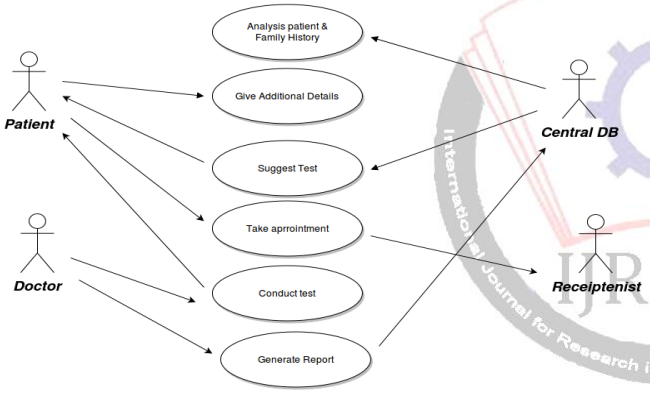
automatically generate prescription based on the symptoms.

2) Admitting Patient:



In above diagram the 'Patient' class will apply for admission for admitting purpose, then class 'Receptionist' will ask for existing id or generate new id. The class 'patient' will fill the form or provide existing id and will specify the symptoms. The symptoms will be provided to 'Central DB'. The Receptionist will the provide appointment based on the result from the system.

3)Report Generation



In above diagram the 'Central DB' class will analyze the patient's health and family history. The class 'patient' will provide any additional details if required. Based on this the system will suggest some test to the Patient. Patient will then take appointment from the receptionist. The doctors will the conduct test and generate report.

IV. CONCLUSION

Public Health Record is a modern system which will have an efficient use of technology for the betterment of people. It is use to reduce the paperwork and keep track of person's past, present and future health. This System will overcome the drawbacks of traditional approach in health.

The Proposed System will be more efficient than the existing systems. Since we are using the system in a cloud environment, therefore security issues and storage issues will not affect the system. There is not great management of health or hospital in India, so this system will help to maintain records, quality for betterment of person's health.

V. REFERENCE

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