

Electronic Health Record

An electronic health record (EHR) is an information system that stores medical data for a person. The data is structured on medical encounters with doctors and on health issues which can be chronic or acute diseases. A medical encounter can relate to one or more issues. At each medical encounter health services are performed, which can be referrals to other doctors, prescriptions or measurements (eg. blood pressure).

The data in the system can be viewed by the patient or by specified doctors. Each doctor can view only the services related to the health issues that he is allowed to. The access list that determines what doctor is allowed to see what health issue is specified by the patient.

Each time a patient makes a visit to a doctor a new medical encounter is added in the EHR. After the consultation the services are added to the medical encounter. All the modifications in the EHR must be digitally signed using the individual digital signature of the doctor. It is possible to mark past services as incorrect (wrong prescriptions or measurements). In this case they are not deleted (for future record) but only archived.

When a prescription is added to the patient, the system automatically checks for contradictions between the new and existing medication, as well as contradictions with other health issues of the patient.

In the case of a legal investigation, the attorney investigating the case can get read access on demand to the EHR.

The EHR system is interoperable with the information systems of the pharmacies. If a patient has a new prescription added in the EHR, he can go to a pharmacy, identify himself with his ID card and the pharmacist can view the prescription. If the patient takes the medicine, the pharmacist can mark the prescription as complete in the EHR.

For the documentation use the project deliverables table of contents on the site.

Propose to the professor what parts of the system should be automatized and, following his input, implement the computer system