

بسم الله الرحمن الرحيم

Sudan University for Science and Technology

College of Graduate Studies

**Designing of E- Medical Records and Health
Cards**

تصميم سجل طبي إلكتروني وبطاقة صحية

**A thesis Submitted in partial fulfillment of the Requirements of
MSc Degree in Biomedical Engineering**

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The Abstract

Computerized medical record is a digital version of a paper chart that contains all of a patient's medical history from one practice. This is mostly used by providers for diagnosis and treatment.

The idea of recording patient information electronically instead of on paper is to save about 25% of the time spent in documentation, and computerized records cause reduction of duplicate tests, reduction of medical errors, and improvement of care and cost management.

The main aims of this research is:

- To design a computer record system to manage patient record
- To design a magnetic card to save patient data.

The CMR system designed via databases designed by access 2007, Interfaces (physician order entry) designed by visual studio 2008,

Electronic communication systems as health card, the network that links these systems as LAN networks, and the clinical workstations.

The author designed specific medical record for Sudan which can be adapted to any hospital or clinic for its easy requirements, low cost and high benefits.

That will be:

- Easily used by all employees.
- Simple requirements.
- low cost.

The author recommended that:

The application of this system in the Sudanese hospital to reduce errors in primary source data, as it is entered immediately at the point of care by the health professional, or automatically by clinical monitoring tools to achieve:

- reduction of human errors in prescribing treatment
- reduction of errors by providing active decision support to clinicians
- Improved ability to respond to major incident/disaster needs in the community.

المستخلص

النظام الطبى الالكترونى هو برنامج حاسوبى يهدف الى التخلص من النظام الورقى وذلك للتخلص من مساوئ الأخير المتمثلة فى:

- أخطاء الكتابة
 - سوء التخزين
 - فقدان السجلات
- يقوم النظام الالكترونى بحفظ بيانات المريض وحالاته السابقة وتنسيق اعمال المستشفى الادارية والمالية.
- يتكون النظام من:
- 1- قاعدة بيانات
 - 2- واجهات للمستخدم
 - 3- شبكة لربط الحواسيب
 - 4- بطاقة المريض الصحية
 - 5- حواسيب
- ونتج عنه نظام سهل `visual studio` و `access` تم تصميم النظام باستخدام ال
الاستخدام وقليل التكلفة.
- ونوصى بتعميم استخدام النظام للرقى بمستوى الخدمات الطبية وتقليل التكلفة للمرضى.