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Healthcare Biometric Patient Information System

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Abstract: Accurate identification of patients remains not less than a headache in many countries in the sub-Saharan region. Still, correct patient identification remains a cornerstone of safe & high quality healthcare. A series of reasons explain the defective patient identification procedures in Sub-Saharan hospitals: a decentralized patient administration is often found in larger hospitals where the implementation of a certain level of financial and managerial autonomy of clinical departments has promoted the multiplication of duplicate administrative patient management systems (every department wanting to take care of it's own bookkeeping). As a result, patients end up with multiple department specific medical records and ID numbers. Added to this, the absence of a master patient index (MPI) is a general rule: no central patient identification systems are in place that refer to existing departmental patient records.

Key Words: patients, healthcare, master patient index (MPI)

I. INTRODUCTION

We encounter-centered instead of patient-centered filing systems are being found in many hospitals. Patient files are arranged in the archiving system based on the last encounter date. If a patient can't remember the time of this last encounter, it becomes very hard to retrieve his file. Often weak patient identifiers are in use: the most used identification elements are the names of the patient, the date of birth or an internal department-specific medical record number. Different problems exist with these kinds of identifiers:
1. Many patients do not know their exact date of birth. Even the year of birth can be an approximate.
2. Patient names are not stable: newborns often get a temporary name that changes at a later stage. Some patients do not even know the exact spelling of their name.
3. As explained above, one patient can have many medical record numbers within one and the same health facility.

It is often not feasible for the patient to memorize all of these record numbers or even to keep track of them. National person identification instruments could surely significantly improve unique patient identification practices in Sub-Saharan health facilities. Unfortunately, very few countries have been able to implement accurate and comprehensive person-identification procedures guaranteeing the unambiguous identification of their citizens from the day they are born. In many places still, fragmentary identification systems enabling the coverage of at least part of the population can be found: a. At the age of 16, Rwandans receive a national ID card [1] integrating machine readable identification codes that could easily be used for health record identification purposes. Nevertheless, children under 16 years old, who are not being covered by this procedure, still make up a very important portion of the patient population. b. A similar situation exists in the Democratic Republic of Congo [2] where all adults that are eligible to participate in political voting, get a unique identification number in the form of a 'voting card'. Here again, children and other non-eligible citizens such as immigrants, displaced people, military and mentally handicapped persons are being left out.

II. LITERATURE SURVEY

1.Title: Design and implementation of doctor-patient interaction system based

Author name: Ran Wei ; Zhimin Yang

Description: It is only doctor and patient interaction. Patient has to tell about the medical history by his own. He can take online appointment and can get query answered by doctor.

2.Title: A Fast Interactive Search System for Healthcare Services

Author name: Maria Daltayanni ; Chunye Wang ; Ram Akella
Description: System is made which will store info user login and get all info. If doctor wants to access info still patient has to login. Patient have to remember his credential. It will be difficult for patient to remember credential if he is in critical situation.

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3.Title: Identity privacy preserving biometric based authentication scheme for Naked healthcare environment

Author name: Tanesh Kumar ; An Braeken ; Madhusanka Liyanage ; Mika Ylianttila.

Description: Patients would have direct interaction with the environment and get identified through it. In this paper they are presenting concept of the Naked environment where patients can get health services from smart and intelligent surroundings of hospital without using explicit gadgets. This uses Eye retina that will be highly costly

4.Title: Realization of a Universal Patient Identifier for Electronic Medical Records Through Biometric Technology

Author name: D. C. Leonard ; Alexander P. Pons ; Shihab S. Asfour.

Description: This paper propose the use of biometric technology within our fingerprint, iris, retina scan, and DNA (FIRD) framework, which is a multiphase system whose primary phase is a multilayer consisting of these four types of biometric identifiers: 1) fingerprint; 2) iris; 3) retina scan; and 4) DNA. This paper is not implemented iy have explain advantages of different type of biometric.

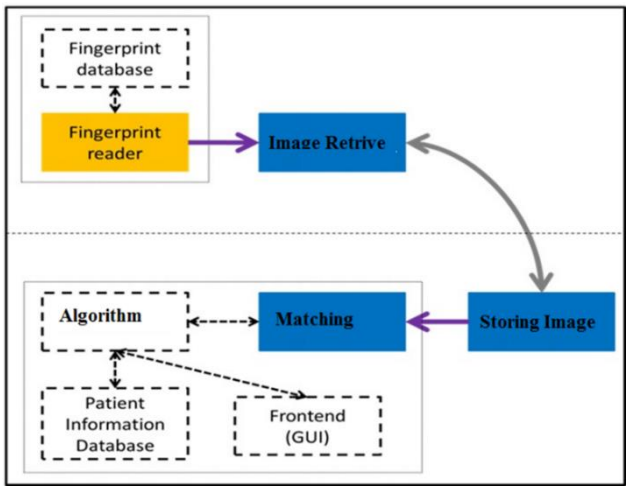
5.Title: Authentication Protocol for Real-Time Wearable Medical Sensor Networks Using Biometrics and Continuous Monitoring

Author Name: A. Jesudoss, Muthuram .B.O, Lourdson Emmanuel

Description: It allows the doctor/nurse to login to the system using his/her fingerprint and verifies patient identity by means of continuous monitoring of physiological data (e.g., ECG signals) in which verification of the patient identity is carried out automatically and at set intervals to detect physical theft of the sensor which may be hooked on to a different patient.

III. PROPOSED SYSTEM

SYSTEM ARCHITECTURE



We develop biometric identification to access a central health record database featured by fingerprint device. Fingerprint Based Medical System will be the efficient way to store patient's clinical records. It will be used to determine the patient's past health record quickly and easily by using the fingerprint recognition technology.

IV. CONCLUSION

In our project, fingerprint verification is considered to protect the medical information transmitted and to guarantee both the integrity and the confidentiality of the data. Patient data can be stored and retrieved by connecting to the hospital database, and thus it can be accessed globally.

V. REFERENCES

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2. Changrui Xia, Arthur Yu, 2006, Medical smart card system for patient record management, Science new magazine.
3. Daesung,Moon,Yong Wha,Chung,Sung,Bum Pan , Jin Won Park, 2006, Integrating fingerprint verification into the smart card based health care information system, Computer Methods & programs in medicine, 81(1), pp.66-78.