

Application of medical informatics in online medical database system and international medical card using Single Windows Information Service System IMC-SWISS

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Abstract- The medical informatics is a combination of information technology and health care. It deals with the resources, devices, and methods to optimize the acquisition, storage, retrieval and use of information in medical science. It is also known as health informatics. The online medical database system is such a database where all type of health activities will be stored in online database and this can be access by card. In this paper it proposes the how this card uses for access medical related activities. It is just like ATM card but it deals only health issue. The name of the card is International Medical Card (IMC). It is a example of medical informatics in which all detail of health are stored in the online database and can access by International Medical Card (IMC)

Key words- International medical card, Online database, Patients, Doctors, Pathology laboratory,

I Introduction

In this paper it proposed application of medical informatics in online medical database and how International Medical Card (IMC) can access all medical facility using Single Windows Information Service System (SWISS). We also can say IMC- SWISS

There are major parts of this

- (1) IMC
- (2) Online Medical Database
- (3) SWISS
- (4) IMC Machine

The International Medical Card (IMC) is one of the most important cards for health issue.

In this all information are store in Online Medical Database (OMD) of every person, regarding health activities. This card has electromagnetic strip like ATM card of bank. And can access all information regarding the health related issue.

This Online Medical Database (OMD) is connecting by a interface. This combine know as Single Windows Information Service System (SWISS).

The International Medical Card (IMC) machine is like ATM card of bank and it connected from online medical database where database of all Patients, Doctors, Diagnostic laboratories, Pharmist, Government, and Insurance companies store.

It integrates all components of health industry like patients, doctors, diagnostic laboratories, pharmists, and government, insurance. It is big advantage that no any information needs to use the paper. Entire work will be done card and every activities will be store in the online database. Any person can access all information about his or her health any time around the world. This information can access by International medical card. Each person has individual card. Every person has health account and it will assign a unique numbers. This number is called as International medical number. It is application of medical informatics.

The are main components of health field.

- (1) Patients
- (2) Doctors
- (3) Pharmist
- (4) Pathology laboratory
- (5) Government
- (6) Insurance

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Online Medical Database

Every person must register only in once a time in his or her life in this health database. As well as he or she registered from the database within some time new health account no



will issue for him it is just like online form. It does not matter person has age sex and locality.

There is name, number, and date of issue is mention on the card of every person. There is one common health data base. Each patient has own unique numbers. Those will be unique. It is called International Medical Numbers (IMN).

The every person has is login and Password so no any person can see his or her personal details.

When patient go any hospital he or she only tell International Medical Number or sweep card on terminal just like ATM machine which is every time connect from online medical database.

When he or she is registered from the medical database first he or she must fill his or her basic information which almost fix.

When he or she going to register his or him self only need to fill a online form. It is only in once a time in entire life in this the details of person are dividing in two segments.

(1) Basics detail like name, date of birth, address, education, etc.

(2) Health detail like blood group, Rh factors any desired etc.

in any case any person change name, address or incorrect entry the he or she can change detail.

It is database in which all type of health information stored.

It stores all type of information about patients, doctors, diagnostic laboratories, pharmists, insurance companies and government.

All data are online store.

There are five tables in this database

- Patients
- Doctors
- Diagnostics lab
- Pharmist
- Insurance

The detail of any one of them stored in the re concerning table.

Table

There five table in the database
All information are saved in this table

Patients

International Medical Numbers (IMN).

Name
Address

DOB
Sex
Age
Blood group
Rh factors
Date
E.mail

Disease
Prescribe
Medicine
Test
Comments

In this table all information will be display on terminal as patient swipe the card only doctor write give prescribe. Doctors need not write only

select from touch screen which will be already registered. Doctors can select test or medicine according to patients condition.

In any case doctors want write something can write in comment section.

Doctors

Doctors no.
Name of Doctor
Name of hospital
Specialization
Address
E.mail
Comments

This table store the basic detail of doctor will store.

Diagnostic lab

Diagnostics lab no
Address
Name of Doctor
Name of test
Test code
Test name
Patients
Name
Age
Sex
Date
Time
Lab code no
Address
E.mail

In this table the detail of the diagnostic laboratory are store

Pharmist

Pharmist No
Address
Sex
Date
Time
Pharmist
Pharmist code no
Pharmist name
Address
E.mail

Drug
Drug name
Chemical composition
Target disease

In this table detail of the chemist and drug will be store.

Insurance

Insurance no.
Agent code
Name of Agent
Name of insurance Company
Name of Plane
Disease
Time period
Fund total amount
Address

Date
Time
E.mail

In this table the detail of insurance store.

In tables the p.no is unique no so all tables were attached from the p.code.

Single Windows Information Service System (SWISS)-

The Single Windows Information Service System (SWISS) this is the name of online medical

database and the interface. The is the software in which all work is by a single window for patients, doctors, diagnostic laboratories, pharmacists and insurance companies according to their category.

Design of card-

The card is like ATM card. There is one magnetic strip on the back side of the card

In which detail of patients detail mention in secret code. There is also mention the date of issue and date of expire of the card

There on the front side the card Number Name of person and Name of country mention.

The card number will be twenty digits. It is water proof card it size is same as ATM card

International Medical Card (IMC) machine –

The International Medical Card (IMC) machine is like machine of ATM card machine of bank it connected from online medical database and there is Single Windows Information Service System (SWISS) interface will display on the screen.

This machine is always online and it is working same as ATM machine in which swipe card and it Show the detail.

Working

The card will work in following steps

First step

Patients

Whenever any patient goes to hospital this step will follow.

- (1) First swipe IMC card
- (2) Enter login and password.
- (3) Enter login and password of doctors.

NOTE- (Like bank locker first customer open his or her key and then manager open)

- (4) Main information display on screen left hand side of patients like Name, Address, DOB, Blood group, Rh factor
- (5) Doctors check patients.
- (6) Select tests or medicine according to situation of patients from listed left side of terminals.
- (7) In any case test or medicine is not listed doctor has authority add any new test or medicine.
- (8) Print slip with time and date.
- (9) This slip can also get on e.mail of patients by enter e.mail of patients.

The terminal are all time connect from online medical database so all information will be store

All detail as mention in the table of patients will print on slip.

So it is easy to find whom particular doctors check particular patients. Each doctor has one terminal in which detail of doctors. Every terminal has unique number.

Second step

(2) Doctors

All doctors are registered from the data base and they have there unique registration number this number called in doctor no and they has doctors code no.

(2) After login patients the doctors login detail of doctors will appear on right hand side like code name qualification specialization and department which are already in database.

(3) The time and date mention in prescribe of every patients. The terminal are all time connect from online medical database so all information will be store

(4) Each doctors has own login ID and password this id different from International Medical Card number. So it is easy to find whom particular doctors check particular patients.

Steps third

(3) Diagnostic laboratories

(1) When doctors write any test to patients first step patient go to any diagnostics laboratory login from International Medical Card (IMC) machine and after pathologist of diagnostic laboratory login.

(2) All test display in terminals which available in that particular laboratory.

(3) After pathologist select test for patient as prescribe by doctors take fee and prints bill.

(4) In any case patients can also show prescribes in his or her e.mail.

(5) In any case any test not available then Patients go in another lab and follow same process.

The terminal are all time connect from online medical database so all information will be store. There is one necessary that pathology laboratory must registered in online medical database.

This bill can also get on e.mail by enter e.mail e.mail of patients.

Each path laboratory has own login ID and password this id different from International Medical Card number.

Step four

(4) Pharmacy

- (1) The first step patients go any pharmacy shop and as login from International Medical Card (IMC) machine then Chemist also login.
- (2) All medicines display in terminal select medicine for patient as doctors prescribe and prints slip.
- (3) In any case any medicine not available then patient goes in another shop and follows same process.
- (4) Each chemist has own login ID and password this id different from International Medical Card number.
- (5) So it is easy to find whom particular chemist sell medicine particular patients. The detail of chemist like name of chemist, address etc.

The terminal are all time connect from online medical database so all information will be store. There is one necessary that chemist shop must register in online medical database.

This slip can also get on e.mail of patients by enter e.mail of patients.

Step five

(5) Insurance

- (1) In this step the patients can get better insurance for his or her medical treatment.
- (2) All detail about the insurance company and there offer are available on the International Medical Card (IMC) machine agent of registered insurance company

(3) It is depending on the patients that they take any health policy or not.

(4) There are two type of the detail will appear One about agents second about insurance company their offer as mention in the table.

Step six

(6) Government

(1) Every information of patients, doctors, pathology laboratories and pharmists and insurance store in online medical database from online connectivity of terminals.

(2) Main information display on screen of terminal.

The main detail of patient will be display on the screen

Patient details

P.No
Name
Address
DOB
Sex
Age
E.mail

Basic health

Blood group
Rh factors

Detail of treatment

Last visit
Disease
Medicine
Test
Result

Comments

Implementation

In will implemented as pilot project. In some hundred of people and after it success in run on higher number of people.

The IMC SWISS is the first step towards the paperless medical science in which one IMC card using SWISS software and do all works of patients, doctors, pathologists, pharmists, insurances and government computerized. There is no need for paper work. It will not only save time, money but also give accurate results.

The Entity Relation Diagram of Doctors and Patients-

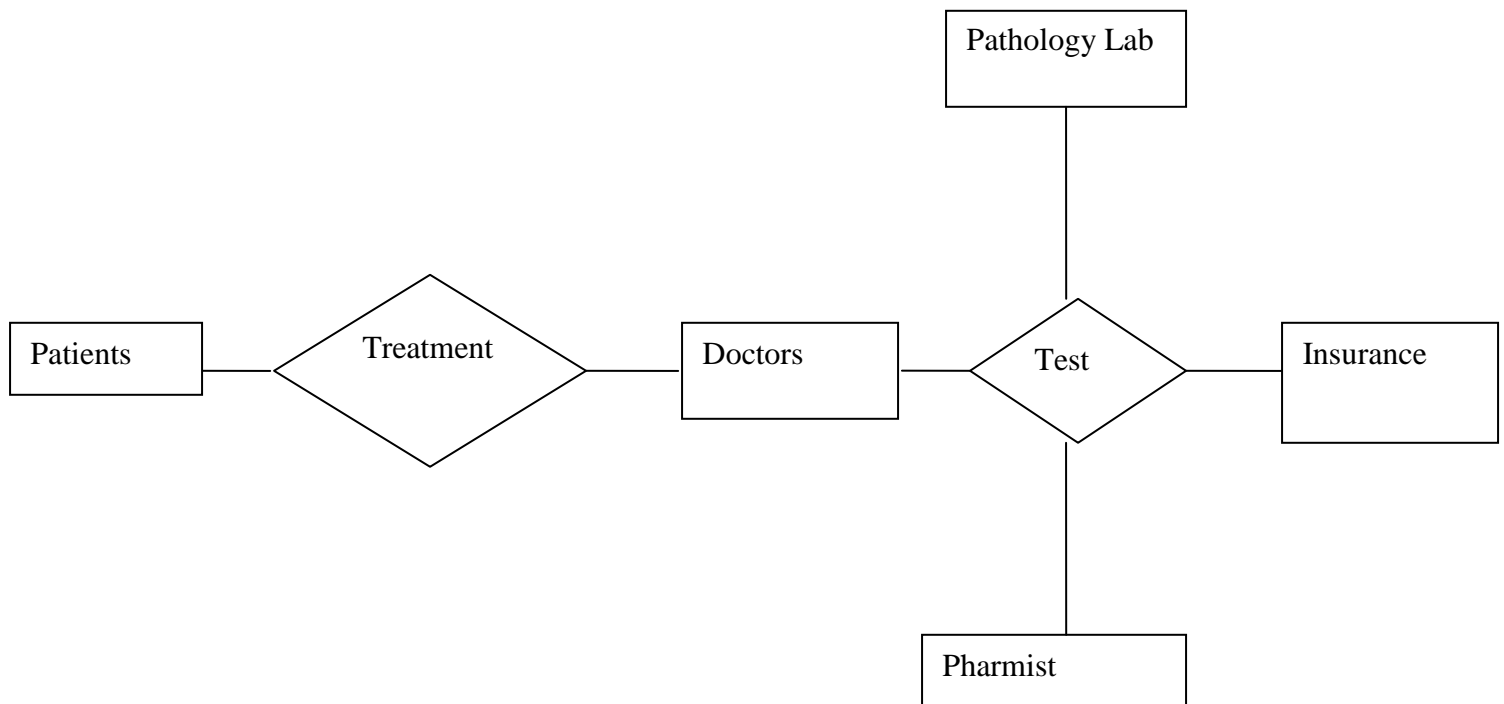
(1)This diagram show how doctors and patients are related from each other.

(2) In any case doctor need not any test can write medicine

(3) In any case if doctors need any test doctors write test for patients and after coming report of the patients doctors can wire medicine to patients

(4) Insurance is depend on the patients he or she can take insurance according to his or her choice or not

The Entity Relation Diagram of Doctors and Patients



Advantages

The International Medical Card can able to access of medical history of patients ,treatment given by doctors, tests and medicines are online save in online medical data base so any person can access any time this information like medical statement.

Patients

- (1) No need to carry details every previous visit of doctors
no need to carry details test report
- (2) Time saving
- (3) Money Saving
- (4) No need to keep manual data

Doctors

- (1) Patients history available every time
diseases test and medicine on line
- (2) Time saving
- (3) No need to keep manual data

Diagnostic Laboratory

- (1) All test report of patient is available in online health
database
- (2) Pathologist can interact with patients and doctors if any
guidance.
- (3) No need to keep manual data

Pharmist

- (1) Reduce the fake medicine shop and medicine
- (2) Only registered medicine are listed in the database or
registered doctors can prescribe new medicine.

Insurance

- (1) Reduce the fake insurance.
- (2) Patient can get refund treatment in short time

Government

- (1) Only registered patients, doctors, pathology laboratory,
pharmist, insurance allocated a
number. It reduce the fake Patients, Doctors, Diagnostic lab,
pharmists, Health Insurance Company
- (2) Help to findout total number of patients, doctors,
Diagnostic lab, and pharmist, insurance.
- (3) Number of disease
- (4) Type of disease
- (5) Reduce the Survey time
- (6) Reduce money
- (7) Survey time, men power.
- (8) Increase accuracy, speed data

Scope

It use for further medical research. When all store in single
database then it is very easy to study about research in
medical science.

in this there are no or very manual work so because all
information are store in database and so information about
any doctors, patients , tests and medicine are store in the
database so it easy access, fast and accurate.

It saves time and money because all information is store in
online database.

It helps to doctors about information of new disease, tests
and medicines.

Summary

In this paper it proposed application of medical informatics

in online medical database and how International Medical Card can access all medical facility using Single Windows Information Service System (SWISS).

The online medical database and International Medical Card will give advantages to all patients, doctors, diagnostic laboratories, and pharmists, insurance companies. All data are store in database and it can be access any part of the Global any time. There is only aim behind this online medical database and International medical card to provide easy, fast and safe medical facilities. This is the paperless all activities can store in database and can If any Patients, Doctors, diagnostic laboratories, pharmacist, government, and insurance companies also can get print get in the print and e.mail.

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