Modelling Medical E-Governance Service for a Smart City in India: Application and Swot Analysis

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Abstract

With emerging trends of electronic media and advances in IT sector, we have entered an era of no-standing-in queues which also is obviously known to every literate of country. With beginning of this era we all demand things on our palm, may it be paying bills or shop as per choice, from serious video conferences to important marriage fixings, it's ours and likewise we are a part of it. E-services have helped the nation in various ways, but to its contradiction as per expertise and citizen are still somewhere disappointed with the fact that processing of IT with governance is taking too much of time for implementation. It is obviously because of large population that it is challenging though have bright opportunities. Sectors like Medicine, RTO, Police, etc. are still untouched with this service in a big part of nation, though same for LPG have started very recently and taking a pace with very good results. The objective of the paper is to work on possible linkage of Aadhaar Card with medical sector for usage of Aadhaar Card as a potential mean for fast track and practical medium for medical e-governance. The paper contains a blue-print model of medical e-governance facility with help of several in-trend e-mediums and further a SWOT analysis of same.

Keywords: Smart Cities, ICT, E-Governance, E-Healthcare, Aadhaar Card, Android, GPS, GIS, Hospitals

Introduction

Problem and Need

Current scenario in medical and healthcare sector in country is disappointing and not up to the mark. Public health services that are run by Government are either overburdened or collapsing in different state and region. Varying geographical sizes, increased population, lack of mobility, illiteracy, poverty, poor nutritional status, inaccessibility, diversity in diet habits and variant life styles are some of the reasons behind this situation. Government policies for providing healthcare services are yet to be implemented. At this stage, low budget for healthcare services, lack of funds and coordination have triggered enormous downtrend in health services many areas. As the medical science is very fast developing and information technology resources are pouring in, there is a very urgent need for circulation of knowledge by linking primary, secondary and tertiary level health centres using E-Governance applications. This will boost expertise of healthcare and medical sector to deliver best and high quality services. IT experts are experimenting with various E-Governance applications in medical sector, both in private and Government hospitals.

Solution

Using e-supports, provoking participants and educating them about the functioning of a proper model of medical E-Governance facility.

E-Support

- Aadhaar Card/UID
- Android

37

Dogne N et al.
J. Adv. Res. Cloud Comp. Virtu. Web. Appl. 2018; 1(1)

- Medical Portal
- GPS
- GIS

Aadhaar Card

An identity which is unique, common for all and that is of every participant in the model like patient, doctor, hospital, ambulance driver and chemists.
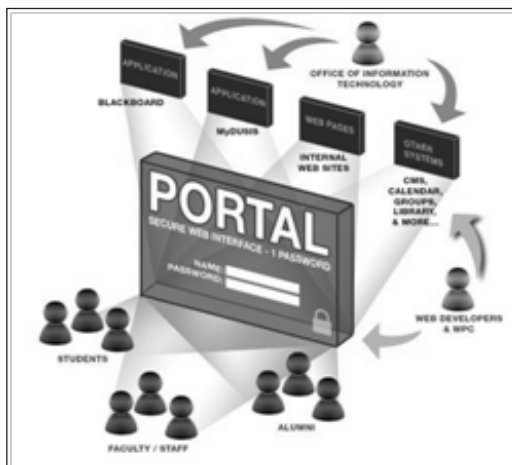

Android

Android or smart-phone is the medium that is frontier to every participant.

Medical Portal

A website that holds every data of patient, doctor, chemist ambulance driver etc.

GPS

For the information of People in motion like in case of labour or accident.
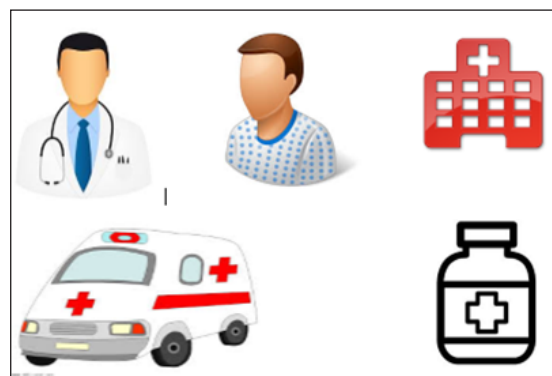

GIS

For the information of stationary elements like police station, hospitals, chemist shops etc.

Participants

- Patient
- Doctor
- Hospital
- Ambulance Driver
- Chemist

Processes and Functioning

Registration Process

- Every Hospital of the city to be registered on medical portal stating every available facility and list of specialists.

Dogne N et al.
J. Adv. Res. Cloud Comp. Virtu. Web. Appl. 2018; 1(1)

38

- Every chemist of the city to be authorized and registered on portal stating every medicine available with generic name and dosage.
- Every Doctor of the city to be registered stating his/her specialty and hospitals or clinics they are associated with.
- Every Citizen to be registered on portal stating his/her diseases and all data associated with medical history.
- Every ambulance driver need to be registered stating

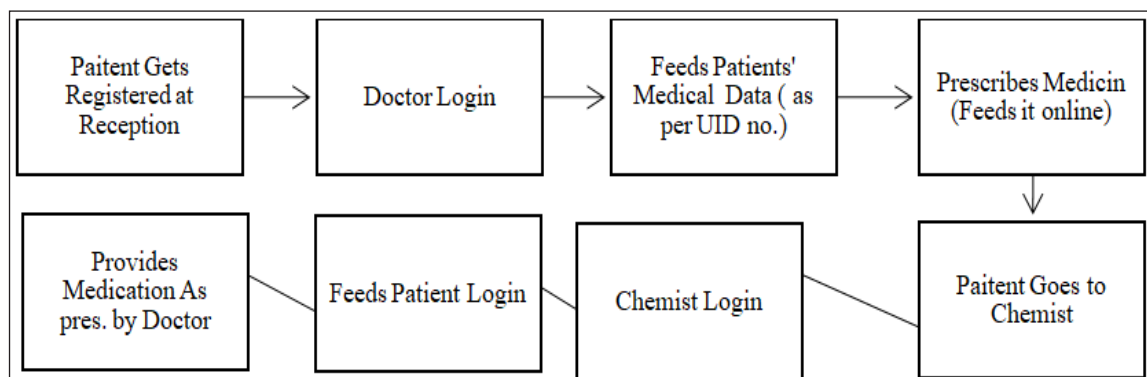his/her viable radius of service and registration no. of vehicle he/she is serving for.

Functioning

- For OPD
- For Long term diagnosis
- For Therapy
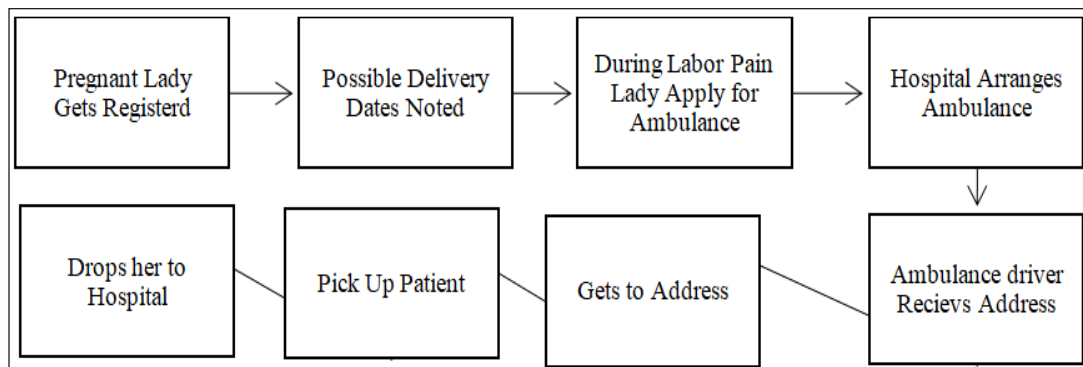- For Labor/ Delivery
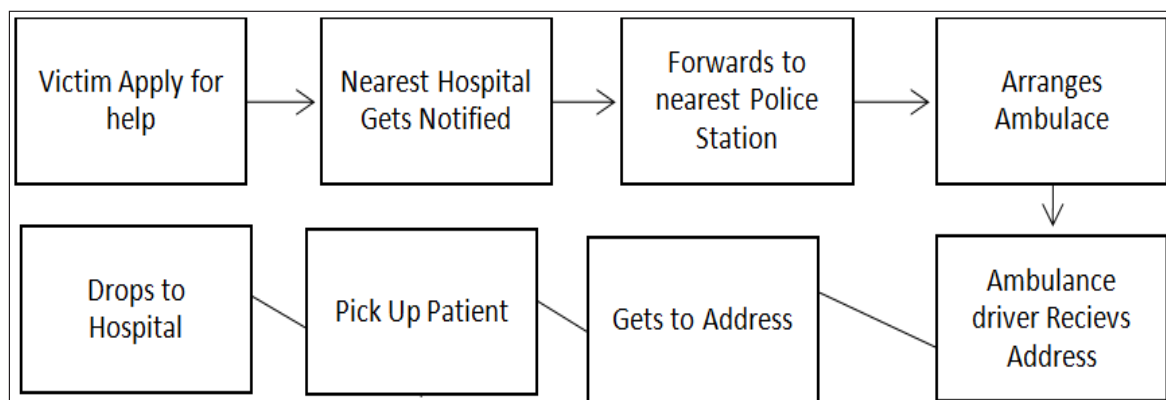- For road and other accidents

Operational Flow

Flow Chart

OPD

Labour

Accident

39

Dogne N et al.
J. Adv. Res. Cloud Comp. Virtu. Web. Appl. 2018; 1(1)

Swot

Strength

- Authentic Medication.
- No Drug Fraud.
- No over dose.

Weakness

- Not very vital for Emergency.
- Hospital and Doctors' co-operation is must.

Opportunities

Promotion of Generic medicines.
Patient's medical information can be helpful in mysterious deaths.

Threats

- Doctor may refuse to take responsibility.
- Patient may get frustrated.

Scope and Conclusion

In case of remote or rural areas of country this can be a better support system. E-Healthcare system can be as simple as providing a patient with the means to provide SMS alert about vaccination of his child or a remote care provider of their need for assistance. Some of the reasons for delay for such projects are - shortage of human resources, constraint of funds, higher sensitivity of patients for health issues, and high expectation for best quality treatment at lowest cost without inconvenience. For now many models are proposed but there has been undue delay in implementing them in many parts of country due to following reasons:

- Absence of competition in health sector (For long time healthcare is handled by Public Health System (PHS) by state government, with no competition.).
- Poor customer with low bargaining power.
- Non-existence of funding system like insurance or social security agency.
- Weak professional culture among doctors to adopt new IT applications.
- Doctors and nurses not familiar with computer.
- Lack of computer-aid in medical and nursing education.

The above explained system can be more simplified by the proper use of IT applications. This can be offered in PPP model. We need investors to show interest in this to make government such model practical. Some more services like help customer contact, allocating patient at different level of health care, provision of an electronic forum for patients' mutual interaction for better results can be added for further phase. It is right time to explore how doctors and smart IT personnel can come up together to reduce medical cost, deliver a high quality service and cover both rural and urban mass using IT and such model. Such reform can be extremely revolutionary and user friendly.

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