Healthcare Management

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Abstract: The importance of health care is immense in the society and over the past years, this sector has been evolving to produce a more efficient system. This paper mainly aims in managing and coordinating healthcare services in society, hospitals etc. It describes a mobile system that enable electronic health care data storage, update and retrieval using cloud computing. It observed that people in unknown area in severe danger if they don't able to find hospital quickly, it is very important that automatic application must be used for decision making, maintain up-to date status of the hospital. When the doctor or family receives alarm message, they can immediately take measures to rescue the user. It can also manage the health record of the user.

Keywords: Emergency Medical Service, Hospital Tracking, Health record, Cloud Computing

I. INTRODUCTION

One of the most important and highly debated, elements of our society is the quality of healthcare available to patient. People get ill, accidents and emergencies do arise and the hospitals are needed to diagnose treat and manage different types of ailments and diseases. Many people aspiration and desires cannot be met with longer, healthier, happy lives. A true healthcare system is one that is capable of providing all aspects of healthcare to its citizen without over reliance on outside sources. Good quality healthcare is most important need of today's society. Any society which does not provide quality healthcare facilities will always lag behind in long run. Various papers suggest various methods to improve quality of healthcare. For example, Hospitals like Apollo United hospitals their own customized software to carry out the daily activities of hospitals such as patient registration, scheduling appointments or diagnostic test, medicine department, billing system and many others. In proposed system locates nearest available hospital, contact as ambulance emergence system, access an electronic health record of emergency patients.

II. LITERATURE SURVEY

This [1] algorithm can be used to scan for medical patients for the nearest hospital that is much easier and provides accurate results. The technology is mainly developed by health-conscious staff. This method will be used by the customer to comply with the situation he / she faces. The Director manages all sensitive issues. Only he / she will manage the entire system. The machine determines the best path for the nearby hospital to warn them with the patient's position if an incident happens. The system provides various features and facilities for patient and device customers. The program will provide the closest route and information of a given hospital's services. The device will also retain cloud transfer health record and medication issued to the customer for medical insight, the system will provide all safety-related patient request details to the hospital as an emergency alert and clinical management system courier, and there are some benefits for cell phone. Users may make a phone call to their friends and family, and their location can be bought with the aid of the GPS device. We chose Android Phone as our interface for this program. The goal of this program is to provide the patient with a simple emergency service, irrespective of where he / she is situated, by clicking a button, as well as to provide the doctor with all health-related information like medical prescription.

Patient [2] administration is linked to the network of patient details. The hospital management system includes better patient care, patient safety, patient confidentiality, quality and an enhanced information management program. The issue argument involves growing works on paper and saving a lot of energy. And promote the network definition that encompasses all physicians as well as patient information. It is a kind of database which involves tracking patient care. In the android platform, this executes using MySQL database. The device will be used in every hospital, pharmacy, doctor or pathology laboratory to get the patient's details and then storing the patient information is achieved by writing the patient name, age, and gender for possible use records. His information is stored anew whenever the patients come up and it helps to make potential comparison.

Online [3] Health Record (EHR) is an electronic version of the health care history for patients. An electronic health record captures, generates, and securely preserves health records. The electronic because it provides login I d and password is safe. The aim of this Advanced Hospital Management System project is to computerize the research in a hospital and successfully implement it in hospitals. Electronic health records are introduced in hospitals and the paper work is minimized and the data of all patients is quickly recollected. We are using COW's equipment in creating this

report and are based in LAN networks. This database is used in electronic systems such as I-pad, smartphone, and other If EHR technology is adopted and proper software, hardware and IT infrastructure are put in place, the healthcare industries will benefit greatly, the quality of patients and patient outcomes will be increased. It can boost the bottom line of health care facilities and bend the cost curve of the rising national health care costs. The system stands for achieving immense efficiencies in the healthcare environment.

Methodology [4] used to create electronic medical records. The main objective of this initiative is the college. This paper discusses EMR (electronic medical record) and CPR (computer-based health record) and provides opportunities for optimizing patient care, reducing costs and promoting medical research. These records used in hospital to represent patient data electronically and improve patient care. The data stored in the MySQL database is created using UML (Unified Modelling Language) and severe programming (XP). There are four stages for the production which are phase of implementation, phase of elaboration, phase of building and phase of transformation. The old way of using the types and documents in this present age has become cumbersome and unprofessional upon the end of this article. A computer-patient registry and online medical record were successfully implemented.

This [5] research established a desktop and mobile technology interface for the triage system in hospitals. Triaging is the method of assessing medical needs in a facility for the diagnosis. The system's knowledge base will store and allow access to triage profiles of patients, consisting of name, age, gender, medical information, and triage categories. The Graphical User Interface (GUI) has been created which provides many user experiences features that make the program easy to use. The program was turned into an application that can be used for mobile devices and desktops. The program was tried and tested by registered nurses, who, with the aid of the framework, replied to questionnaire sets including walk-in patient triage scenarios. The study was able to develop successfully a mobile and desktop application for a hospital triaging system using opensource programs. Python was the language of programming used for this research. The triage system was using Python's Kivy module for graphical user interface programming. The said system was able to utilize the algorithm for the knowledge base system and the classification of decision tree. As for the reliability tests, according to the nurses who have tested the system, the developed GUI shows to be very user friendly and straightforward.

Technology plays an important role in the healthcare system, not only in measuring parameters by tactile instruments but also in interacting, capturing and showing the parameter recorded. Monitoring of various medical parameters and postoperative data is very necessary. The [6] main aim of this paper is to communicate the criteria of the patient's health tracking via wireless communication. Such input detail was transferred to the cloud server and forwarded for doctor's access to the device and smartphone. Microcontroller data is transmitted through M2 M gateway to a cloud server. In this article, three parameters viz., heart beat rate, temperature and stress level are tracked and transmitted. Proteus program simulates the configuration of the healthcare system, and virtual health app and M2 M patient tracking interface displays the parameters. The system is capable of providing long-term surveillance of the status of a patient and is fitted with an emergency rescue method via SMS. Through obtaining certain safety parameters from the patient's body, this device may be improved.

The program can be used to scan for the situation patients in the nearest hospital which is much easier and provides accurate results. This [7] paper is essentially built by health-conscious workers. The client will be using this application to comply with the emergency he / she faces. Many people are facing health problems with the growing social strain, particularly lots of high-level personnel issues and modern social injuries sometimes occur. Designing a health-safety system for people is more important. Depending on the conditions of the patient, the provider will give the medication to the user's phone to help the consumer in a timely manner to get care. The machine determines the best path in case of an emergency for the nearby hospital to notify them with the patient's location. The system provides Machine customer and patient with different features and facilities. The device will also retain cloud transfer health record and medication issued to the customer for medical viewpoint, the network will provide all safety-related patient request details to the hospital as a provider of emergency warning and healthcare management system, with some benefits for cell phone. Electronic Health Record is a key factor playing an important role in making mobile health care systems effective. For convenience and safety, EHR can also be used by people to keep and maintain their health record on the cloud, and future work is to implement the Nearest Distance Tracking Algorithm, Tracking Different Parameters such as Blood Module, Clinic Module. Hospital Information Maintenance and updating of databases, Cloud Deployment Improves the Graphics User Interface.

This [8] paper addresses the creation of a web application for Bangladesh's general public where they can store and view their own medical data from anywhere at any time. Users may register as patients within the Online Health Care system and access their medical data in the database. The program also comprises of physicians licensed under the hospitals appointed, who can give free medical advice. Users may register as patient within the Online Health Care system and their medical data can record. The program also comprises of licensed doctors under the hospitals appointed, who can give free medical advice and administer the required medications to the patients upon request for an appointment. The physicians are able to view data from their patient and give medications. The system was developed using the PHP platform, Code igniter. The database was drawn up using MySQL and XAMPP as the basis server. The program was checked, confirmed and put into practice. This offers an efficient way of electronically storing information, a quicker method of contact between patients and doctors, and also guarantees greater security for consumers. Access to proper

healthcare is the fundamental right of every person. This field has grown to create a more effective and informatic framework. Online Health Care is a cost-effective and efficient way of virtual communication between patients and physicians. The main challenge this project encountered was time constraint and limited resource exposure.

Web-based e-Health systems provide people with easier access to their healthcare records and resources as an evolving type of leveraging technologies. This [9] paper develops and introduces such an e-Health system that can easily incorporate multiple backend medical services. The e-Health platform concept intends to fulfil as follows a series of functional requirements. The first three conditions are for platform users, while the four comprise network owners or service providers. SOA is a software system architecture that allows the components of different applications (exposed as services) to communicate with each other via well-defined programming interfaces. Those interfaces are language-independent hardware platforms, software platforms and programming. Web services protocol stack has been the most common application of SOA. Web services provide a simple way of interoperating on a variety of platforms and/or systems between different software applications. SOAP is a mechanism that enables peers to share XML-based messages via computer networks. This offers a standard way of getting links to Web services. With the growth of industry and organization, it's important to have a single platform that can combine different applications and frameworks in the same location to share resources. It also provides a single platform for multiple users to access all the software over the Internet. These can all be accomplished through portals. Various medical facilities and software can be built into e-Health portals. Throughout our test framework, our e-Health platform contains real-time ECG monitoring service, BP monitoring service, EPR program and teleconsultation service.

The [10] primary purpose of this study is to help in the allocation of emergency response equipment and create a mathematical model that has been used in emergency medical services or a significant number of patients or a major accident. This paper designed a questionnaire composed of three parts to identify variable with significant role in decision making. The first part was meant to know if rescue personnel expertise and form of emergency hospitalization can help EMTs make a better choice. The second part was to classify factors showing the degree of seriousness arising from type of emergency hospitalization. Our study's main purpose is to build a model to support EMTs in handling the equipment for emergency medical services. Deciding an appropriate hospital for emergency patients is a problem of several requirements. As the AHP approach is a blend of multi-objective and decision-making methodology, we used the Analytic Hierarchy Process (AHP) to evaluate and build our model using the parameters and related variables correlated with emergency medical services. This study suggests this EMTs appreciate their daily duty very well, but the logic behind them is missing. Any training is needed to allow them the hospitals ' choices recognize the material ' meaning ' of the type. That will allow them to specifically fill it up.

First responders typically assess the medical needs in cases involving mass casualties from individual experiences obtained from uncoordinated emergency calls by non-experts at the scene of the accident. In this article, through a decentralized ad-hoc sensor network and localized real-time (RT) sensor data processing. This [11] paper proposes a novel approach for rating the level of urgency of mass casualties. Our strategy is focused on simple patient contact to provider without depending on first responders or communication infrastructure. This paper recommended pushing the boundaries of the linked medicine by allowing patient-to-patient contact (Pa2Pa) in mass casualties scenarios. There, a patient-to-expert communication cannot be anticipated. A contact between patient and specialist cannot be believed there. The paper shows how the combination of low-cost medical devices / sensors and mature near-field communication standards is an opportunity to develop a modern first response system with enormous benefits for paramedics and patients alike. Electronic and electronic wellness are rapidly seen as a key driver for health systems development. We are no less important than developing new drugs or methods for diagnosis. Nonetheless, there is still only limited effort to help recovery in cases involving mass casualties, although these situations are one of the most difficult safety areas to tackle.

This [12] paper introduces an emergency warning and healthcare management system, which is primarily implemented in an easily used and held and Android-based handset. For most users, our program is appropriate. Using the GPS and GSM network, the device will guarantee users ' position when they are in danger, and activate the warning. We selected Google Phone as our forum for this article. The Google Phone is an iPhone-like handset, but Android-based. Android is a mobile operating system that Google was originally developing. Similar to iOS, Android is an open source program so by modifying or updating the source code, we can change it to suit the specific needs. This device has two main functions: fire warning and administration of the healthcare. Emergency alarm system can be activated manually or remotely, for example with myocardial infarction, when the unexpected event happens. The warning response will give alert messages and calls to the families of consumers and the doctors. We are introducing an android-based emergency alert and healthcare management system which is practically installed on android-based phones. The program can provide emergency assistance at anytime and anywhere, can inform users about medication or doctor's prescription reaction, and can provide the purpose of seeing a doctor for use.

The [13] main purpose of this work was to perform evaluation of the challenges and opportunities of cloud computing technology in the management of health records at Kampala International University in the Teaching Hospital in Tanzania. The case study research design has been used because a case study is an exhaustive description and analysis of a single situation or a number of specific situations. The results of this study show that maintaining the data security of patients and their safety is a crucial problem in many hospitals where the common data management concern and

privacy issues resulting from abuse are discussed, including misuse of a particular set of information from both internal and external threat actors. Constant medical monitoring of sick patients or tenants at distant, inaccessible and underserved sites, and readily available alerts to healthcare records, was considered to be a very good opportunity to incorporate cloud computing capabilities into healthcare record management. The writer used case study research design as a case study is a detailed summary and review of one or more particular scenarios. A self-designed structured questionnaire was used at Allied Science School to collect data from the 100 respondents randomly selected from experts, administrators and students in information technology (IT). The results of this study suggest that in many hospitals the protection of data and privacy protections for patients is a crucial problem.

We are living in an era where manual processes are outdated and are being substituted by e-platforms for increased efficiency and improved productivity. Five [14] hospital records systems in southwest Nigeria were used as case studies to establish a reliable and detailed online database architecture. The code was built utilizing Java programming language (NetBeans IDE 6.7.1), whereas MySQL was used as the query language. The technology provides numerous advantages over the conventional manual record keeping method including data accuracy, data integrity, data recovery tool, data management and data mining. Medical records contain information regarding personal data of the individual, previous ailments and conditions, procedures and operations, medications and drugs, as well as the family history of the person. Doctors need to know the details in these medical records so that their doctors can make accurate and timely decisions. Medical records allow doctors to prepare treatment and recovery for a condition, and help them identify possible triggers of a patient's disease. This is the terminology used in this work for the programming. The Java Se Runtime Environment includes the Java virtual machine, runtime object libraries, and Java application launcher needed to run programs written in the java programming languages.

Hospital Management [15] Framework is a framework of information management designed to help control the different aspects of a hospital (administrative, therapeutic and financial). This helps monitor and control the day-to-day activities of the facility, as well as the efficiency of the patient. It also helps meet the hospital's urgent needs. The HMS is focused on the methods of the database, object-oriented programming language and networking. My SQL (Structure Query Language) is used in areas where record keeping is necessary in the database, this system uses JAVA as the front-end software that is an object-oriented programming technique and connects to My SQL, the back-end software. The program for the Hospital Management Device satisfies interface criteria for accessing patient information. This indicates how many patients the hospital account has recorded. The device also displayed patients past medical information such as diagnosis, prescribing of the medicine and dose.

The [16] main aim of this project is to improve medical services. Our project hospital management system and nearest domain search is a web application which is develop for storage of patient medical history and also search for nearest blood bank, medicals and hospitals. This project is developed by three perspective i.e. doctor, patient, & nearest domain We have provided security for authenticated user as new user have to register according to their type of perspective and existing user have to login ,unique OTP will provided to every patient while login so proper authentication is maintain This project requires internet connection as it runs dynamically. This project requires complex internet connection as it operates. This program stores user account details in the database server, and we provide GPS for nearest domain quest. We also provide specialty search options for physicians so that patients may make appointments. The web application merges various programs such as nearest quest, patient login, doctor login, etc.

This [17] paper is intended to computerize the Hospital's Front Office Management and create user-friendly easy, quick, and cost-effective applications. This deals with gathering information about the patient, symptom specifics, etc. This was done manually, historically. The system's main function is to record and store patient information and doctor data, and to recover these details whenever and where appropriate, and also to exploit these details meaningfully. Output of the system includes patient information, symptom details, and output of the system is to get these data on the computer. You can access the hospital management program using a username and a password. It is available through either an administrator or a receptionist. They can only add data to the database. The data is quickly retrievable. The data is well secured for personal usage and allows analysis of the data very quick. This program would allow the user access and update all of his reports online from anywhere. An aspect of prejudice may have come in from the interviewing official's face. This could also have contributed to some kind of modification of the revealed material.

This [18] introduces an electronic healthcare system leveraging cloud computing principles that will be effective in delivering automated safety inspections booking facilities at discounted rates, obtaining information on preventive measures and tips for combating infectious diseases, supplying multiple route labs and keeping track of patient health inspections data. If anyone requires blood, they can send their requirements directly to the app and send notification to all users who are registered with the same blood group via emails and messages. It program will be helpful in solving all manner of health related issues. An automated system that allows you to conduct your health checks at the best price easily through nearest path laboratories and view your reports anywhere on your devices.

The [19] goal of this paper was to design and implement an automated system that would alleviate the problem of handling data from patients in a hospital. Due to the inherent challenges of hospital file management manual program the researchers were inspired to work on this mission. This manual method has so many related problems including computer instability, weak file extraction mechanism and unreliable file updating program etc. A paper explores a hospital's existing information system and proposes an automated system that can help medical doctors and those who

handle data from hospitals do their work more efficiently and effectively. A Browser, Apache, MySQL and PHP (WAMP) applications would be used to build the Framework. The HDBMS would be a web application that operates on a network of computers. It would provide security against unauthorized access by different users with easy & quick access to stored data as required. Any authorized user on their user-assigned-role will attach, remove & restore data to the database base. It would also have the capability to automatically give each individual a unique identity, & maintain the records of each patient and the workers. This provides a search facility to know the actual state of each hospital room. Using this a person will check for doctors' availability and a patient's information. The design is very adjustable.

The [20] system proposed here consists of various medical devices such as sensors and web-based or mobile-based apps that interact via network-connected devices and help to track and capture health data and medical information from patients. The paper's proposed outcome is to create a system for providing world-class medical assistance to patients even in the most remote areas without hospitals in their areas by connecting via the internet and gathering information about their health status through the wearable devices provided in the kit using a raspberry pi microcontroller to record the patient's heart rate etc. In case any medical emergency occurs, the program would be wise to notify the patient's family members and their psychiatrist about the current health situation and full medical records. Using data mining tools, the obtained knowledge can be used to examine and forecast cardiovascular illnesses or other conditions such as potential heart attacks themselves.

This [21] article incorporates a broader concept, an Exercise Plan for the individual. They explain how to construct such an exercise planning tool, with a particular interest in what details it should provide. Then investigate how it can be used by the home healthcare networks to perform operations more effectively. The unique background discussed is the role of multiple healthcare providers in the patient process, and in particular the Home Health Care (HHC), which views patient homes as components of the healthcare supply chain. Although it is not a health facility, the patient home is the site of hospitalization, and the services transfer until there to carry out the treatment tasks necessary. In this paper a new concept is implemented that can relate to the organizing and planning of the operations listed in the ThP of patients. This is a ThP application extension called the Event Program. This definition reflects a link between clinical and organizational / logistics-type practices. It is important for service providing health practitioners and for operations management practices for managers / logisticians.

In [22] this article, we discuss a vision and strategy for developing approaches within health behaviour utilize behavioural informatics methods, a new transdisciplinary study area focused on system-theoretical concepts in tandem with behavioural science and information technology. The paper describes the features of the clinical services closed loop system. Such elements vary from characterizations of fine grain instruments to individual models of behavioural change. This paper provides an example of a clinical wellness coaching program integrating a closed-loop strategy focused on these multi-scale models. The proposed computational modelling approach to evaluating mental, physical, emotional, and affective environments is projected to revolutionize healthcare delivery, by delivering efficient, appropriate, and personalized treatments. The main tenant of this paper is the idea that multiscale theoretical models spanning from indicators to behavioural judgments are an essential foundation for designing strategies that help people learn and stick to better health behaviours.

Healthcare technology [23] is not just medical equipment, medications, funding mechanisms and administration, but it is the multidisciplinary method extended to science, like information technology (IT), eco-epidemiology (ecology and epidemiology interaction) and medical technologies, to be used by healthcare professionals and healthcare systems (HCT modem concept). Simplified images of events and structures are templates. We are like a chart that helps us to research, grasp, customize and analyse how a system works, e.g. a highway road map would help us to consider London's shape without traveling on any path. HCT's classic definition, that science can only be seen as medical equipment, medications, and management issues. The model will be a simple map to show the actual situation of HCT in a type of fi, was to established and developing worlds. This will make health technology needs a focus, tracking the level of assimilation and its potential to be replicated in various regions.

The [24] paper describes a concept of such a software-based platform that utilizes email, networking, cloud, and app programming technology to make certain medical / hospital operations online which can be very useful in incorporating online medical management capabilities. This will assist with case care, monitoring specialist schedules, maintaining patient records that can be viewed throughout the facility. Digital filing, accounting, correspondence, review and monitoring of patient information. That doctor can also use android programming to provide a tablet with the customized version of this application which is unique to their speciality. This can handle several activities that are usually time consuming and cumbersome by integrating this web-based framework utilizing cloud computing and designing personalized computer programming using android technology. The platform and personalized program on the tablet introduced by applying the web base framework. Patient management will be much simpler.

Doctor-patient portals [25] are electronic platforms related to healthcare that empower patients to interrelate and interact with their medical providers such as doctors and medical organizations. Patients must first register on the database to schedule a doctor's appointment, and use the website's other apps. List of clinicians including gastro surgeon, neurologist, dermatologist, etc. are made available on the website. He / she should book an appointment for a procedure according to the locations near the patient and the time the doctor will be eligible for. When a patient makes an appointment, his / her medical records are kept in the database, so that next time patient can see that information as well

as physicians can use these earlier patient records for further diagnosis and examination monitoring etc. Other than all of these apps, our program often contains organ donor and blood donor section. When patient wants to donate blood or tissue, he / she will sign. Once the individual appears on the database, they can also check for the supply of a particular type of blood or organ in a specific hospital. The proposed system provides an easy way to find the best doctor and care, as well as statistics on the supply of blood and organs in a facility.

III. CONCLUSION

This paper is all about discussing many of the proposed systems for healthcare management system. The major issue in our society is increasing diseases and in this busy life schedule peoples are face the health issue due to lack of monitoring and managing health. The proposed system is helpful for peoples because the system can access it from anywhere at any place. Online health care services are anything and everything that can be delivered without actually meeting a doctor and get examined. It is all-new way to provide consultations by medical experts. An Electronic Health Record is the Systemized collection of patient electronically stored information in digital format. It is mainly useful for hospitals to manage patients treatment.

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