Health Care Survey System using web Interface

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***Abstract*:- The aim is to design and develop a health care survey software in order to provide accurate and reliable health care report that answer's key questions of interest to health care and public health professionals, researchers, and health care policy makers. This survey process tracks the latest issues that affects hospitals and health care centers to influence the use of health care information, the status of health care, and imbalances provided by the health care services to the population. It also improves the infrastructure of Hospitals and Medical care centers, enabling them to upgrade to the latest technologies to help population in effective ways. The measurement of patient health issues is an important component of health care survey system. Some countries now have programs of work that include national surveys of patients undertaken at regular intervals. The health care survey software, analysis the healthcare data obtained from hospitals documentation. Doctors play vital role in providing feedback of patients. Our software integrates patient data formerly collected by the doctors from Hospitals, i.e. from sources like emergency department (ED) and, inpatient and outpatient department (OPD). Health care survey system uses web for frontend interface and PHP/SQL for backend processing. Also provides easy user interface using android application. Data obtained can be used to generate reports and use it to establish link between government and private hospitals to distribute medicines for less cost. Integration of projects into the hospital strategy would be of primary importance to guarantee the success of long-term systematic development work. The feedback is an important information for understanding the current status of large scale survey work relating to the estimation of countries health status..**

Keywords:- Healthcare, Survey,Report,Security.

1. INTRODUCTION

Based on population reports published by the United Nations in the 2017 revision of world population prospect, India stands at second place having population of over 1.4 billion people According to world health organization, there are 30,000 diseases found around the world. Also, the national family health survey (NFHS) is conducted the survey in a large scale for the representative sample of households all over India. And this survey has two major goals: (a) to provides needful data on health and family welfare needed by the administrative of health and family welfare and other agencies for policy and program purposes. (b) To provide information on important growing health and family welfare issues. Thus, the survey of disease reports to be generated for taking precautionary measures by the government takes lot of time. It's a challenging task for health care department to identify core cause of diseases which takes more time due to various reasons. Also this software has the ability to produce reports automatically. Future developments for the software such as the ability to auto generate reports in terms of email for healthcare departments of each regions periodically.

2. LITERATURE SURVEY

A According to Ronald J. Glotzbach[1] Healthcare is not about seeing patients anymore, the focus has shifted. Patients are concerned with the cost associated with the care and the amount of time they will spend at the doctor's office and away from work. Doctors are concerned with administration, management, business development, cost, review boards, lawyers, insurance companies, government, specialists, continuing education, and patient education. The focus is seldom on the doctor - patient relationship anymore. Improving the effectiveness of the patient data management system can help alleviate some of these issues so that more time can be spent focusing on that relationship. This study center's on faculty-led undergraduate students developing, implementing, and researching the use of a web-based, touch-screen, self-service computer, to (a) provide adequate history to the provider, (b) provide feedback and information to the patient, and (c) enable the sharing of patient record (in a future expansion to the project). Doctors and patients will be surveyed to assess the system's impact on doctor-patient interactions. Staff surveys will investigate the impact of the system on human error, paperwork reduction, and administrative costs. Data from the surveys will be

statistically analyzed to determine the effect of the system on the listed outcomes.

The study of Dr. Sandesh Kumar Sharma, Dr. Sudhinder Singh Chowhan [2] tells a set of dimensions that contribute to effective hospital management and sequential hospital operations. The study established reliable and valid scales and dimensions that effect hospital effectiveness and identified the gap between the optimal and actual performance perceived by outpatient visit. The performance gap identified provides some idea about the areas to be brought under intensive interventions of administrative change. The response of patients about their perception on quality of care in the hospital was collected by direct interview and the questionnaire method. The sample was selected by the random sampling method. It included 40 patients from OPD department with their proportionate representations to eliminate the biasness in the sample derived. The outpatients have in general expressed their satisfaction as per as the conduct and the efficacy of the Professional as well as administrative interventions. The researchers finding is that the hospitals should focus on the systematic identification of the outpatient needs and to focus on the evaluation of the modifications imparted in the hospital departments

Chandrani Ray Chowdhury[3] says cloud communicating is an emerging technology that can be integrated with traditional health management used to provide better health services. Again social media nowadays become an important medium of communication. The scalability, adaptability, cost reduction, and high performance features of cloud improve the medical services. This paper surveys integrations of cloud computing and social media with existing health management system

According to the research by Y.R.Risodkar [4] in recent decade the bridge inspection is an crucial issue due to the huge number of bridge collapsing incidents. Thus there is need to take care of bridges with the help of different advanced and smart technical aspects. The government generally appoints an engineer who uses the method of visual inspection for every 2-3 years. Since this is not a optimistic method, the use of new technology can be invoked with the help of the different methods to deal with the bridges & structural monitoring can be completed with all security measures. The proposed system consists of the WSN based system to ensure bridge life and avoid disaster situations.

According Rakhi Dandona**,** et al [5] Health information assembly is an important part of any health system, but is often weak in low-income countries, plagued by poor quality data that are inadequate for informing health policy. Health survey based on population is a key source of health information. The main moto of these health surveys is to provide essential data for project development and planning, monitoring and evaluation of health. Survey based on population have been used tremendously to collect information on fertility, mortality, family planning, maternal and child health, and some more aspects of health, nutrition and health care in India. They have conventionally summarized that the epidemiological transition of health system in India was satisfactory. In this review, they collected the information regarding the survey conducted by the national health survey till 1992. They described and compare the health information covered by these surveys over time, the availability of resulting data in the public domain and the use of these survey data in publications. Based on their findings, they underlined the issues that need consideration to improve the utility of these health surveys. They believe that they can provide the more reliable health care statistics and health information based on the population and disease.

NFHS [12]: The National Family Health Survey (NFHS) is a wide-ranging, multi-round survey organized in an indicative sample of households throughout India. The NFHS is a collaborative project of the International Institute for Population Sciences (IIPS), Mumbai, India; ORC Macro, Calverton, Maryland, USA and the East-West Center, Honolulu, Hawaii, USA. The Ministry of Health and Family Welfare (MOHFW), Government of India, designated IIPS as the nodal agency, responsible for providing coordination and technical guidance for the NFHS. NFHS was financed by the United States Agency for International Development (USAID) with additional support from United Nations Children's Fund (UNICEF). IIPS collaborated with a number of Field Organizations (FO) for survey implementation. Each FO was responsible for conducting survey activities in one or more states covered by the NFHS. Technical assistance for the NFHS was provided by ORC Macro and the East-West Center.

According to S.M.Riazul, Islam et, al[13] The Internet of Things makes smart entities the ultimate building blocks in the growth of cyber-physical smart prevalent frameworks. The Internet of things has a variety of application domains, including health care. The Internet of things revolution is redesigning modern health care with promising technological, economic, and social expectations. This paper surveys proceeds in Internet of things-based health care technologies and analyses the state-of-the-art network architectures/platforms, applications, and industrial trends in Internet of things-based health care solutions. In addition, this paper analyzes distinct Internet of things security and privacy features, including security requirements, threat models, and attack taxonomies from the health care perspective. Further, this paper advances an intelligent collaborative security model to reduce security risk; discusses how different innovations such as big data, ambient intelligence, and wearables can be leveraged in a health care context; addresses various Internet of things and e-Health policies and regulations across the world to find out how they can facilitate economies and societies in terms of sustainable development; and provides some avenues for future research on Internet of things-based health care based on a set of open issues and challenges.

According to I. Hurst[14] It is doubtful that any new health care delivery system using computer and telecommunication technologies will be successful without the active partnership of health care clients in the conceptualization, implementation, and evaluation of these

new models of health care. The Hawaii Telehealth Care Community Assessment Survey (HI TCAS) was developed as part of a one year planning initiative toward the establishment of a policy and process foundation for the effective use of telehealth care in the state of Hawaii. The HI TCAS is an initial effort to gather information that can be used to facilitate collaboration between health care clients and providers and corporate and government organizations.

3. METHODOLOGY

Health survey report software are becoming widely popular due to easy availability of powerful personal computers, large memory devices, graphics software and many more.

3.1 Proposed system

We develop health care survey software to provide automated, efficient, accurate and reliable health care statistics that answer's key questions of interest to health care and public health professionals, researchers, and health care policy makers. Our software collects data from all the doctors from across all registered hospitals. This data from the hospitals are stored in the database server which is analyzed and compared with the database of predefined data fed by the administrator's. This helps in generating reports as per requirement of the user within the available list of features provided by our software. This survey process tracks the latest issues that affects hospitals and health care centers to influence the use of health care information, the status of health care, and imbalances provided by the health care services to the population. Also improves the infrastructure of Hospitals and Medical care centers, enabling them to upgrade to latest technologies to help population in effective ways. The measurement of patient health issues is an important component of health services evaluation. Several countries now have programs of work that include national surveys of patients undertaken at regular intervals. The health care survey software, analysis the healthcare data obtained from hospitals documentation. Doctors play vital role in providing feedback of patients.

3.2 System Model and implementation

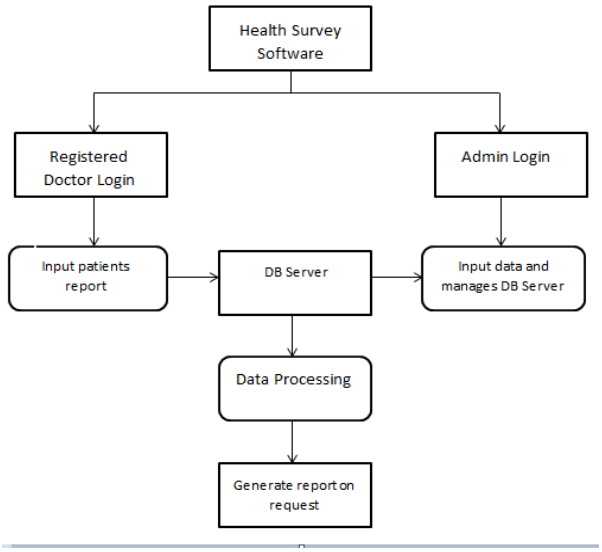

Figure 3.1: Data Flow Diagram of Healthcare Survey System

Implemenation Steps:

Our health care survey software used in systematized way to deliver the useful reports instantaneously Figure 3.1 ittustrate the complete data flow of the software system and the results accomplished by the following steps

Step 1: Admin login and update the Database server by the predefined medical data.

Step 2: Registered user (Doctor's) logs in.

Step 3: Input patients diagnosis details by the user.

Step 4: The data submitted by the user is uploaded to the main Database server.

Step 6: This database can be used to generate Health statistics report using PHP/SQL query at the server end.

Step 7: The reports obtained can be used for various reasons.

Use case diagram

Use case diagram is a uncomplicated way to represent the interaction of user with the system in different scenario and using which we can easily identify the different users activity and their relationship. Figure 3.2 illustrate the complete overview of the different kinds of user in our health survey system. There are two kinds of actor's Doctor and Administrator. Doctors play vital role in providing feedback of patients, also login privileges are provided, and given an access permission to add the patient's details regarding the description of the diseases and the location of the patient. On the other hand admin's activity is more important as he can only register the doctor by the Authorization and also have the complete access to the system and the database server i.e. structuring, maintaining the data reports that will be used for hospitalization and other government policy that was designed for health care of the nation.

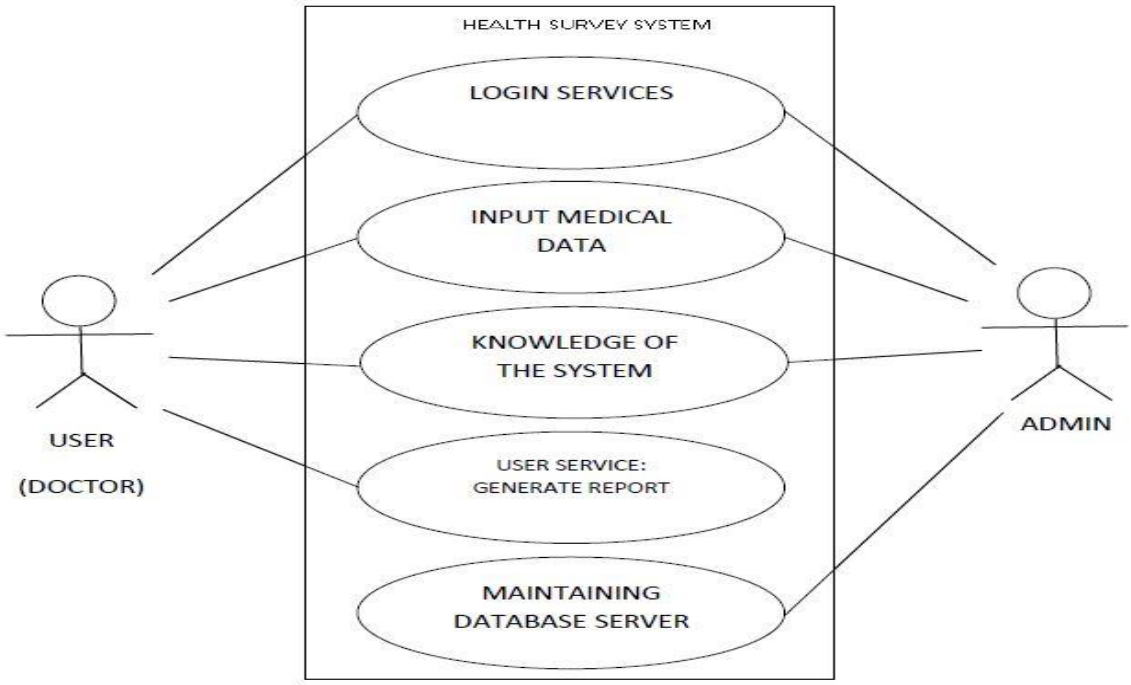

Figure 3.2: Use Case Diagram of Healthcare survey system

4. APPLICATIONS

1. Increases the health security of our country.
2. With advanced health security – challenging global disease threats through computing and analysis of huge amounts of data to quickly find solutions.
3. Placing science into action – tracking disease and finding out what is making people sick and the most effective ways to stop it.
4. Helping medical care – fetching new knowledge to individual health care and community health to save more lives and reduce waste.
5. Detecting and confronting new germs and diseases around the globe to increase our national health security.
6. Well-resourced public health leaders and capabilities at national, state and local levels to protect Indians from health threats.
7. Identifying and providing solution to new and emerging health threats.
8. Approaching the biggest health problems causing death and disability for Indians.
9. Putting science and advanced technology into action to prevent disease.
10. Nurturing healthy and safe behaviors, communities and environment.
11. Motivated leaders and trained health professionals directs the public health workforce, including disease detectives.
12. Taking the health pulse of our nation

5. RESULTS AND DISCUSSION

Our health care survey software is mainly used in order to reduce the time consumed to conduct a survey on health report. It can provide the results instantaneously; our software is capable of segregating the data according to the time span given by the report viewing option. The main objective is that using this any individual maybe a doctor, a pharmacist ,a common man or any authorized person can view the most relevant report as it is needed by them .The report generated provides us with overview of number of patients suffering and being admitted to the hospitals in the particular region .this data is used in an creative way and is displayed in the form of piechart.which in turn helps in various fields as specified under applications and helps in making the decision regarding the state of the health care.The snapshot of the tested and viewed report is shown in the figure 5.1,5.2,5.3.

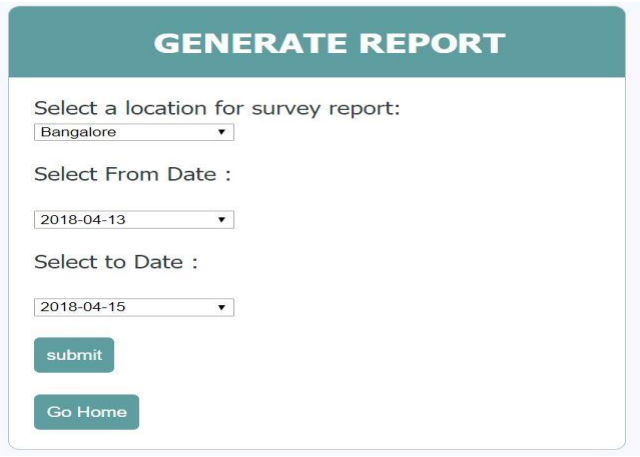

Figure5.1:Generate Report

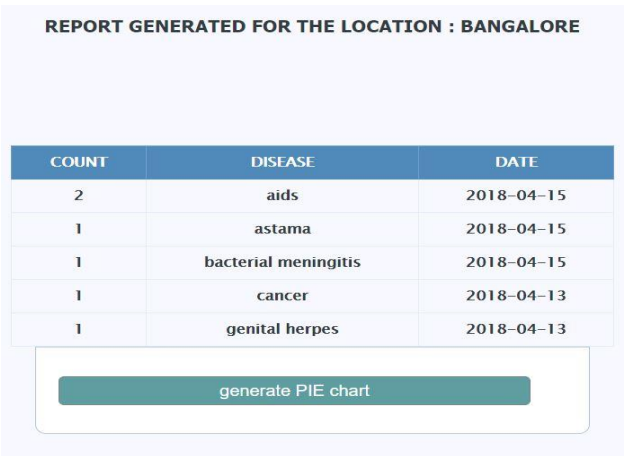

Figure 5.2:Report genarated for the location

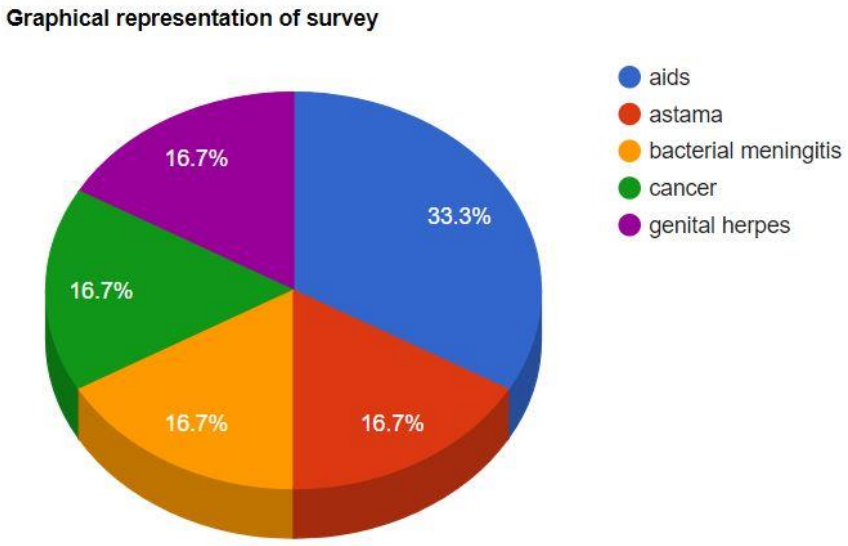

Figure 5.3: Graphical representation of survey

6. CONCLUSION

Collecting of Health information is an important aspect of any health system, but it is often weak in low-income countries, suffering from poor quality data that are inadequate for creating health policy. We develop health care survey software to provide automated, efficient, accurate and reliable health care statistics. Our health care software survey is often used in an area where number of patients are struggling with a problem of the shortage of the medicine and it can be provide the solution instantaneously. The main aim of these surveys is to gain high level of knowledge regarding health problems in order to help provide policy makers develop, plan, monitor and evaluate high-quality data.

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