

An Overview of E- Hospital Management System

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Abstract: This paper is to computerize the Front Office Management of Hospital to develop software which is user friendly simple, fast, and cost – effective. It deals with the collection of patient’s information, diagnosis details, etc. Traditionally, it was done manually. The main function of the system is register and store patient details and doctor details and retrieves these details as and when required, and also to manipulate these details meaningfully. System input contains patient details, diagnosis details, while system output is to get these details on to the screen. The Hospital Management System can be entered using a username and password. It is accessible either by an administrator or receptionist. Only they can add data into the database. The data can be retrieved easily.

Registration of patients, storing their details into the system and also computerized billing in the pharmacy, and labs. Our software has the facility to give a unique id for every patient and stores the details of every patient and the staff automatically. It includes a search facility to know the current Status of each room. User can search availability of a doctor and the details of a patient using the id. The interface is very user-friendly. The data are well protected for personal use and makes the data processing very fast.

Keywords— *hospitality, trigger, administrators, receptions.*

I. Introduction

Before computerized Hospital Management System came into practice, it was difficult to keep proper records of the daily activities of hospitals, patient information, maintenance schedule of equipment’s in the hospital, and how funds are being allocated and used. This resulted in waste of money, time and manpower. Hospital Management System is an information management system designed to help manage the various aspects of a hospital (administrative, clinical and financial). It helps in monitoring and controlling the hospital’s daily transactions, as well as the hospital’s performance. It also helps to address the critical requirements of the hospital. Hospital Management System enables access to the right information and automation of complex task, thereby allowing staff to spend more time caring for patients. Hospital Management System is custom built to meet the specific requirements of the medium and large size hospitals across the globe¹.

Current Management System

Most hospitals face several challenges with Hospital Management System because some of them are still using manual processes, while the ones that use the computerized method are also faced with the challenge of adjusting to it.

Such problems include:

- By using software development, deployment and improvement happens.
- Difficulty in migrating from manual processes, because both staff and patients are used to the manual.
- processes and so are unable to speedily cope without the software.
- Lack of IT friendly medical personnel is also presenting several challenges.
- Huge influx of patients visiting government hospitals makes the process of migrating to automated without software. They do not have the patience to wait for registration and data entry that’s why we need online platforms to save the time and there is no need to have patience.

Considering the above, there is need for the improvement of computerized hospital management system to such hospitals as it would help provide and customize clinical data, enable faster diagnosis with readymade templates, allow doctors to follow advanced medical prescription patterns, and so on².

Hospital Management System

Management has been defined as the process, comprised of social and technical functions and activities, occurring within organizations for the purpose of accomplishing predetermined objectives through humans and other resources (Longest, Rakich & Darr, 2000). Healthcare quality and patient safety are the common mantra of all primary and secondary health care providers. In hospitals, over the years, a variety of models and schemes for hospital interventions and development have been deployed (Friesner, 2009). Hospital Management System provides the benefits of streamlined operations, enhanced administration & control, superior patient care, strict cost control and improved profitability. There are different modules in the process of Hospital Management System.

These include:

- Patient management,
- Services management,
- Appointment scheduling,
- Store management,
- Pharmacy management,

Hospital Information systems are in high demand to handle increasing population needs and also aids the practicing doctors and hospital service and support staff with timely service and precision. There are varied metrics available to assess the performance of services like hospital industry, and the successful implementation and usage of Hospital information system forms a crucial role. Hospital information systems are available in the software market which in most cases needs to be customized and in some cases HIS needs to be developed as a customized software based on specific hospital requirements (user requirements). The paper looks at assessing and identifying the key components⁴. “Advanced Hospital Management System” includes Registration of patients,

storing their details into the system and also computerized billing in the pharmacy, and labs. Our software has the facility to give a unique id for every patient and stores the details of every patient and the staff automatically. It includes a search facility to know the current Status of each room. User can search availability of a doctor and the details of a patient using the id. The Advanced Hospital Management System can be entered Using a username and password. It is accessible either by an administrator or Receptionist. Only they can add data into the database. The data can be retrieved easily. The interface is very user-friendly. The data are well protected for personal use and makes the data processing very fast. Existing system refers to the system that is being followed till now. Presently all the hospital functionalities are done manually. That is if a Patient want to consult a doctor, he can visit they're till his chance called. This makes the person very difficult. Outpatients and Inpatient tickets are Distributed directly. The main disadvantage is time consuming³.

Objectives of proposed system:

The Hospital management system software is user-friendly software. The main objectives of the system is which shows and helps you to collect most of the information about Hospitality and Medical Services the system is very simple in design and to implement².

II. LITERATURE REVIEW

- a) “A hospital resource and patient management system based on real-time data capture and intelligent decision making” Author(s): Musa, A. Lancashire Bus. Sch., Univ. of Central Lancashire, Preston, UK Yusuf, Y, Meckel. Systems and Informatics (ICSAI), 2012 International Conference

One of the major challenges existing hospital management systems faces is around operational efficiency and wait times between different processes, departments and persons. This paper highlights such limitations of existing systems and proposes a RFID (Radio Frequency ID) and wireless sensor based, location and information management framework that facilitates real time tracking of hospital assets, personnel and patients as they move through pre-set procedures as part of daily activities of the hospitals. The system covers

the visual simulation and providing ability to analyse the ongoing operations so they can be corrected to achieve increased process efficiency and service levels.

- b) **“Study on information system of health care services management in hospital” Author(s): Daiping Hu, Antai Sch. of Manage., Shanghai Jiaotong Univ., China Weiguo Xu ; Huizhang Shen ; Mengyu Li. Services Systems and Services Management, 2005. Proceedings of ICSSSM '05. 2005 International Conference**

This paper reviews the HIS (Hospital Information Systems) which are widely used in many hospitals in China mainly to provide easier and faster way for daily medical tasks /activities with a GUI And provides for overcoming some of the limitations of HIS, e.g. HIS aims at improving quality of health care services but do not have way of evaluating /measuring those.

- c) **Enterprise Architecture Interoperability Framework (EAIF) (Figay and Ghodous, 2009)**

Propose a new EAIF with a goal of achieving “pragmatic interoperability” between systems

- d) **“Developing Effective Hospital Management Information Systems: A Technology Ecosystem Perspective”. DATE OF SUBMISSION: 5 October 2014 PREPARED BY: Dr Christopher Bain MBBS, Master Info. Tech Student No: 10054499**

The author of this paper focuses more on needs of hospital manager and the ecosystem in which he/she operates. The internal and external Environment shaping factors ESFs that bear an impact or association on daily hospital activities and decision-making process that the hospital manager has to go through in each situation. Some of the challenges that this ecosystem needs to work on are high demand pressure, greater customer satisfaction level and low profit margins. This paper more so contributes to Planning, Design and development aspects of any Hospital management system by highlighting ESFs that should be considered. The external and internal factors the author mentions are: The public at large, Law and policy makers, Funders, International Journal for Research in Engineering Application &

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III. SCOPE OF THE PROJECT

This application will help user to access and view all his reports from anywhere online. An element of bias might have crept in from the side of the official interviewed. This could also have resulted in some kind of modification of the information divulged. Through an attempt was to collect information from the best possible source in the company, it was difficult to meet the top officials due to their busy schedules. Most of the analysis and interpretations, made for this report, are based on secondary data obtained. This data could have some inherent mistakes and errors. Finally, although due care has been taken those can be typing and compilation errors in the report itself. The tasks specified were not well defined because nothing was mentioned regarding validations in the project. Though we gave maximum effort to check the software with different validation tests, a few of them might be present in this version. • Due to limited time available survey could not be undertaken for intended 20 consumers and thus had to be limited to 10.

- Communication gaps exist between employees and management, as seniors don't share problem with subordinates resulting in violation of psychological contract.

- Poor rewarding system(slow)

- Poor working conditions

The limitations may be many and the magnitude of the influence of these limiting factors may have a bearing on the report, but it in no way alters the ultimate aim of the project and because it's highly USER FRIENDLY, it would be the choice of all kinds of personnel.

VI. Discussion

The system is very simple in design and to implement. The system requires Very low system resources and the system will work in almost all Configurations.

Security of data.

Ensure data accuracies.

Administrator controls the entire system.

Reduce the damages of the machines.

Minimize manual data entry. Greater efficiency.

User friendly and interactive.

Minimum time require.

V. Conclusion

Since the Hospital Management System is essential for maintaining detail about the Doctor, Patient, Hospital staff etc. we understand that by using of Hospital Management System project the work became very easy and we save lot of time. Hospital administrators would be able to significantly improve the operational control and thus streamline operations. This would enable to improve the response time to the demands of patient care because it automates the process of collecting, collating and retrieving patient information. Accounting sometimes becomes awfully pathetic and complex. This product will eliminate any such complexity.

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