

Achieving the performance and efficiency in patient related operations Office Management System for Healthcare Institutes

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Abstract:

This paper is related to a hospital management system. It maintains records of all the operations that occur at any of the medical center in public institutions. it maintains two level of users, administrator level and the user level. The administrator lever encompasses the nurses and the doctors while the user level includes the receptionist. The administrators are able to perform operations on more sensitive and confidential documents /modules that contain different information about students and staff to ensure confidentiality. The modules include laboratory, treatment and consultation and medicine stock modules. The user level is able to manage other modules such as registration and report generation for stock of medicine and staff reports.

Keywords: Hospital management system, CMS, Efficiency, Patient Records, Automation, Office Management.

Introduction:

Hospitals are the essential part of our lives, providing best medical facilities to people suffering from various ailments, which may be due to change in climatic conditions, increased work-load, emotional trauma, stress etc. It is necessary for the hospitals to keep track of its day-to-day activities and records of its patients, doctors and other staff personals that keep the hospital running smoothly and successfully.

But keeping track of all the activities and their records on paper is cumbersome and error prone. It is inefficient and a time-consuming process. Observing the continuous increase in population and number of

people visiting the hospital, recording and maintaining all these records in highly unreliable, inefficient and error prone. It is also not economically and technically feasible to maintain these records on paper.

This paper is aimed to automate the hospital management system. This paper is developed mainly to administrate doctor's appointment with the patients. The purpose of the project as "Practice Office Management System" 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 to register and store patient details and doctor details and retrieve these details as and when required and also to manipulate these details meaningfully.

Hospital Information Systems provide a common source of information about a patient's health history. The system have to keep data in secure place and controls who can reach the data in certain circumstances. These systems enhance the ability of health care professionals to coordinate care by providing a patient's health information and visit history at the place and time that it is needed. Patient's laboratory test information also visual results such as X-ray may reachable from professionals. HIS provide internal and external communication among health care providers.

The HIS may control organizations, which is Hospital in these case, official documentations, financial situation reports, personal data, utilities and stock

amounts, also keeps in secure place patients information, patients medical history, prescriptions, operations and laboratory test results.

The HIS may protect organizations, handwriting error, overstock problems, conflict of scheduling personnel, official documentation errors like tax preparations errors.

Existing System:

Existing system the patient registration, record management, allergy management, and other patient related takes are performed using computer software. The following takes are performed manually in existing system:

- Patient Registration
- Immunization and allergy management
- Insurance details
- Patient Growth charts
- Lab Reports
- Administrative Reports

Proposed System:

Proposed system is going to convert the existing system into computer based application, and thus achieving the performance and efficiency in patient related operations. Taking the advantage of biometric, RFID and other IT enabled services.

Some of salient features:

- Patient Verification by using Biometric
- Lab Investigation Tracking using RFID
- Insurance details exchange by using digital signatures
- Data storage using high volume databases
- HL7 Engine for medical data transmission.

Modules Description:

Online Patient Registration:

- Here the patients are provided with unique id which contain demographic details like name, address, illness, insurance data...etc.
- This enable the exchange of the patient data between the providers makes easy and also accuracy of the service would be improved by generating some real time and offline MIS (reports).
- Here the authentication of the patient is done through biometric device

Illness history:

- This contain all the illness history of the patient i.e what kind of disease the patient have, what tests has been done and what are the reports generated after conducting the tests etc...
- This module contains
 1. past illness
 2. lab reports

Lab Investigations:

- Lab Investigation Tracking is done using RFID. This module contains all the information based on the tests conducted and this information will be in pdf format.
- RFID is a device which is used to track the patient details like through which way patient is going it is mainly used for mentally retarded people.

Growth Charts:

- Growth chart are generated based on the infant growth and also what medication is given to the infant.
- It is based on that what is the growth of the child every year this whole thing is generated in the form of charts.

Algorithm

- Step 1: patient gets registered through online
- Step 2: patient gets login to hospital website
- Step 3: take appointment
- Step 4: Enter into hospital on his appointment date
- Step 5: Receptionist enter all the details of the patient by login to the hospital website
- Step 6: unique id is generated
- Step 7: with the unique id given to the patient he go to the doctor for checkup
- Step8: Doctor gets login to the hospital website
- Step 9: enter unique id of the patient
- Step 10: Analyze all the details of the patient
- Step 11: generate reports

Flowchart

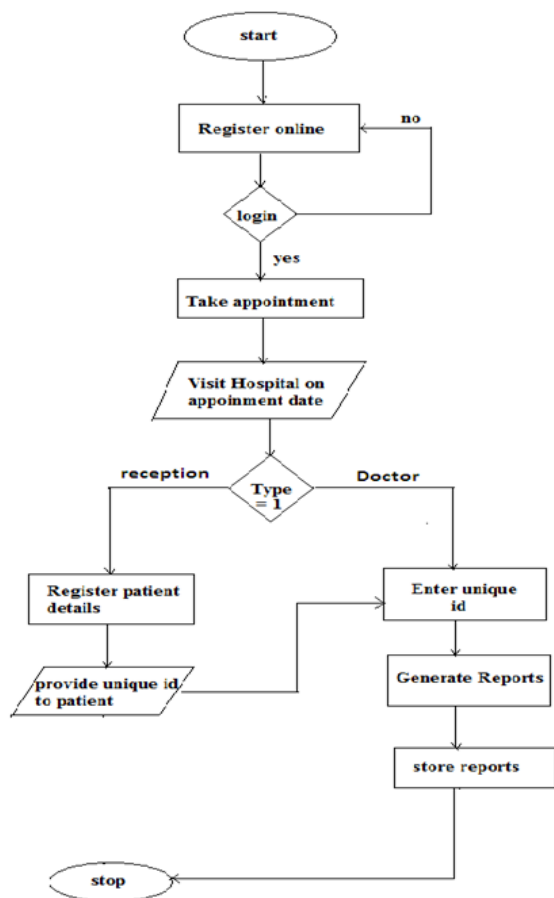


Fig. 3.2 Flowchart of Practice Office Management System

Conclusion

This paper identifies the main attributes in the healthcare business to especially public hospital as an empiric's research subject for the purpose of patient satisfaction improvement. Practitioners on hospital management need to consider that the relationship between performance of attributes and patient satisfaction depends on the classification of attributes. This paper analyzed two methods of SERVQUAL perspective and the Kano model for patient satisfaction improvement. This study also made a contribution to our understanding of the complexity of the healthcare service. This research reveals shifts in categories over time and with patient and management experience. As competitive forces continue to pressure imitation and innovation, both in the ways a specific interactive attribute is executed as well as in the adding of new attributes, the hospital management must continuously monitor the their service and patient satisfaction relationship in order to implement changes that will strengthen the relationship and improve the loyalty. The last but not the least, the research limitations is the Kano model of patient satisfaction needs to be extended to other patient behavior variables and also management strategic response to increase patient loyalty; which not include in this paper. The implication is the methodology employed here can be easily applied by hospital management to evaluate patient behaviors and service quality performance.

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