International Journal of Psychosocial Rehabilitation, Vol. 24, Issue 08, 2020
ISSN: 1475-7192

# Intellectual Hospital Management System

[1]Dr. S Srinivasan, [2]S. Prasanna Bharathi, [3]G. Chamundeeswari

***Abstract--*** *An intellectual healthcare management system has been built to support the patient at a hospital's front desk. The patient will be able to learn about his / her health situation through physicians, appointment times, relevant services, laboratory tests and the necessary medication. The network provides the patients at the hospital entrance with an informed reception information facility. This also provides technical assistance to physicians to treat effectively and efficiently use the decision-making process of the system.*

***Keywords--*** *Intellectual, information management, decision mechanism, diagnose hospital front desk*

## I INTRODUCTION

A program designed to handle the logistical, economical, and healthcare elements of a hospital is a robust interactive information system. The goal is to include the best available patient care and management by means of the electronic data collection as part of medical information technology. This involves paper-based transmission of information and computer processing devices.Laboratory information system is a program class that performs the collection, retrieval and storing of medical lab results.The treatments in hospitals are usually unclear.You do not know which service you are expected to take for the personal health issues. Furthermore, they need an adaptive machine to support them.Initially patients with a polite question and answer menu would be recorded in the program. After enrollment is complete, they must use a program menu to pick their safety problems.

IHMS works at improving the handling of clinical resources. Intellectual Health Management System. The emphasis is on improving functional procedures in the hospital for medications and healthcare. For this first stage of the project the activity focuses on inbound and upstream logistics management: on the one hand the access to the data not protected by the law on privacy on the one hand is facilitated and the necessary management of change is minimized because it does not concern changes in the interaction of the doctoral practitioner on the other hand. The implementation of an sufficiently designed system will also help to reduce human error (and related societal costs) and the organizational hazards related with medical practices.

The architecture of IHMS would allow the process in two modes, 'peer-to-peer' and 'master-slaves': - certain individuals in the 'peer-to-peer' mode will tell other nodes of the Network regarding their stock (in front of them, hospitals, pharmacies, etc.) This allows the stock of a new network node to be utilized in the case of an accident,

[1]Program Director, Int. of Biomedical Engineering, Saveetha School of Engineering, SIMATS, Chennai, India, Email:srinivasan.me.03@gmail.com

[2]Asst. Professor, Dept. of ECE, SRM Institute of Science and Technology,
Vadapalani Campus, Chennai, India, Email: prasanns@srmist.edu.in

Asst. Professor, Dept. of CSE, SRM Institute of Science and Technology,
Vadapalani Campus Chennai, India, Email: easwarig@gmail.com

**Received: 27 Mar 2020 | Revised: 20 Apr 2020 | Accepted: 05 May 2020** 

taking into consideration the transition period (i.e. transhipment). For eg, an internal switch may be made between two stations in the same hospital and then vital resources from outside can be that.

This encourages the normal supply variation between various entities to be accounted for growing the need for large quantities of immobilized products. This will be especially beneficial for health consortia and private clinics operated by the same legal body as the handling burden will probably outweigh the savings. The stock institutions can be "monitored" by broader management structures in "Master-Slave" mode. Of example, a hospital's central pharmacy could provide real-time knowledge regarding patient wards, so it might know about the supply that is accessible in the hospitals and clinics. The controlling agency thus retains a clear vision of stock position in various systems and can even coordinate exchanges between specific frameworks, if appropriate, depending on consumer requirements or preferences. The central unit must officially control the stock in this arrangement before it is requested by the ward / hospital.

## II RELATED WORK

The purpose of this paper is to include advantages to better health content control through the application of the above strategies over specific data from an Italian hospital. [1] The key advantages are stock reductions, reduced operating capital expenses and reduced expiry or obsolescence threats, and warehouse visibility that can contribute to a reduction in health danger and stronger order management.Human errors are supposed to be observed and compensated by HAS. In the event that a computer is part of the team to conduct an operation,[2] HAS will cooperate successfully with humans.They were divided into 3 groups: a conventionally regulated community, a non-remotely controlled community, and a group with remote control. It took 180 days to follow up. Patients returned to hospitals for follow-up appointments at days 300, 90 and 180 after they were admitted. [3] Intergroup associations have been made in regards to pre-intervention and post-operation measures, including the number of target-blood pressure cases, blood pressure thresholds, obesity and home blood pressure assessment enforcement in the remotely-managed group.

The network was built as five support systems that comprise of a home-based model, a community-based service model and a safe support platform for physicians. All such systems are operated by different agents who may be committed agents or reactive agents. [4] This text describes the design of the framework and associated operating strategies. The IHMS suggested would provide accessible, all-embracing and personalizing health services for the elderly and enhance the quality of life of the elderly.There are two algorithms implemented: one for resource planning focused on forecast demand and the other for patient preparation, which optimizes the direction according to actual departments position. A co-ordinating system is built in order to balance capital and stochastic demand, which real-time consolidation of ambulatory hospitals through auction-bidding processes. [5] First of all, the simulation analysis is done in an ambulatory clinic in Madurai, India, with the knowledgeable real-time scheduler. The patient demand in this hospital is immense and deliveries are spontaneous.

Management and coordination of health, financial and organizational knowledge with practice is expected of managers. In the past, this [9] data was manually compiled (with paper transaction), which took time and did not achieve the required quality standard. A robust Hospital Information System (HIS) is therefore important, which

increases the accuracy of records, reduces transcription mistakes, reduce the replication and increase [6] processing time, provision of good quality patient care, and financial management.This research is aimed mainly at designing and integrating a hospital management program to fulfill the defined needs. [7] A updated object-oriented design approach was picked and suggested to accomplish this aim. The approach suggested involves a multistage procedure, the first step defines the issue to be addressed while the last stage discusses the execution of the program.

Users are required to switch smoothly and also on a daily basis across various surveillance systems. As a consequence, users can find it difficult to understand and control systems which monitor them, how their data is used, and to agree with information8]. One alternative is to use smart phones to alert users selectively of improvements to their monitoring systems. However, it is sometimes challenging to define and plan a note for the correct period. This paper outlines an adaptation of the CFI model to generate three separate kinds of reports that are beneficial to consumers with all-embracing surveillance.

## III PROPOSED METHOD

The correct section, the name of the specialist, date and time of the visit, potential prescription, clinical results should be seen in the menu guided algorithm subject to doctor's approval. Doctors look through the patient's records and verify the evidence until the patient is tested. In Chart, a machine block diagram is shown. Fig 1. Application Developer is used by Borland C++ Creator V6.0 for the creation of a system-led menu-driven software kit. MS SQL Server 2007 is often used to hold a variety of hospital details used in information system applications. Database processing services are not usable.

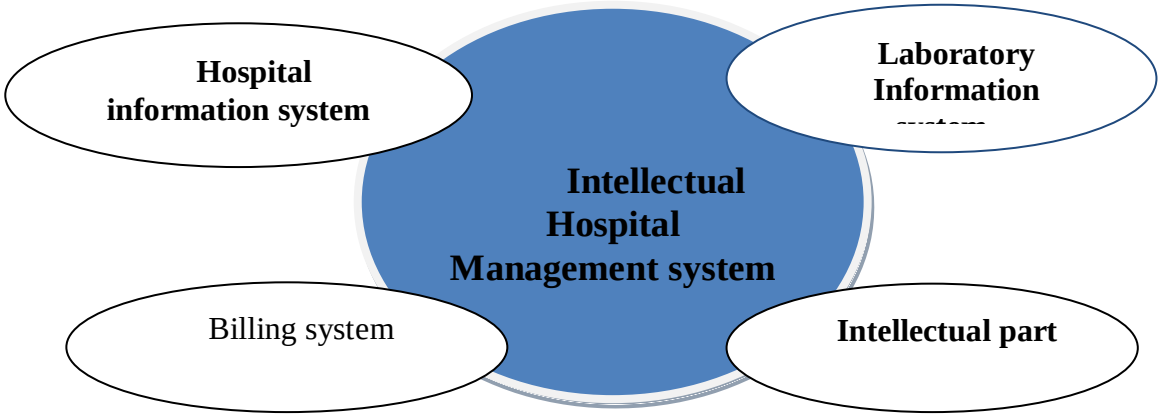


**Figure 1:** A block diagram of IHMS system

The clever component is applied in decision-making to the tech kit. This portion consisted of two sections: the patients use one segment; the doctors use the other segment. Such Types are program objects specialized in visual component library (VCL) and cross-platform feature library applications. Within the operating program, types usually exist as windows and dialog boxes. The program IHMS comprises 33 types. Both are illustrated throughout the chart. 2.

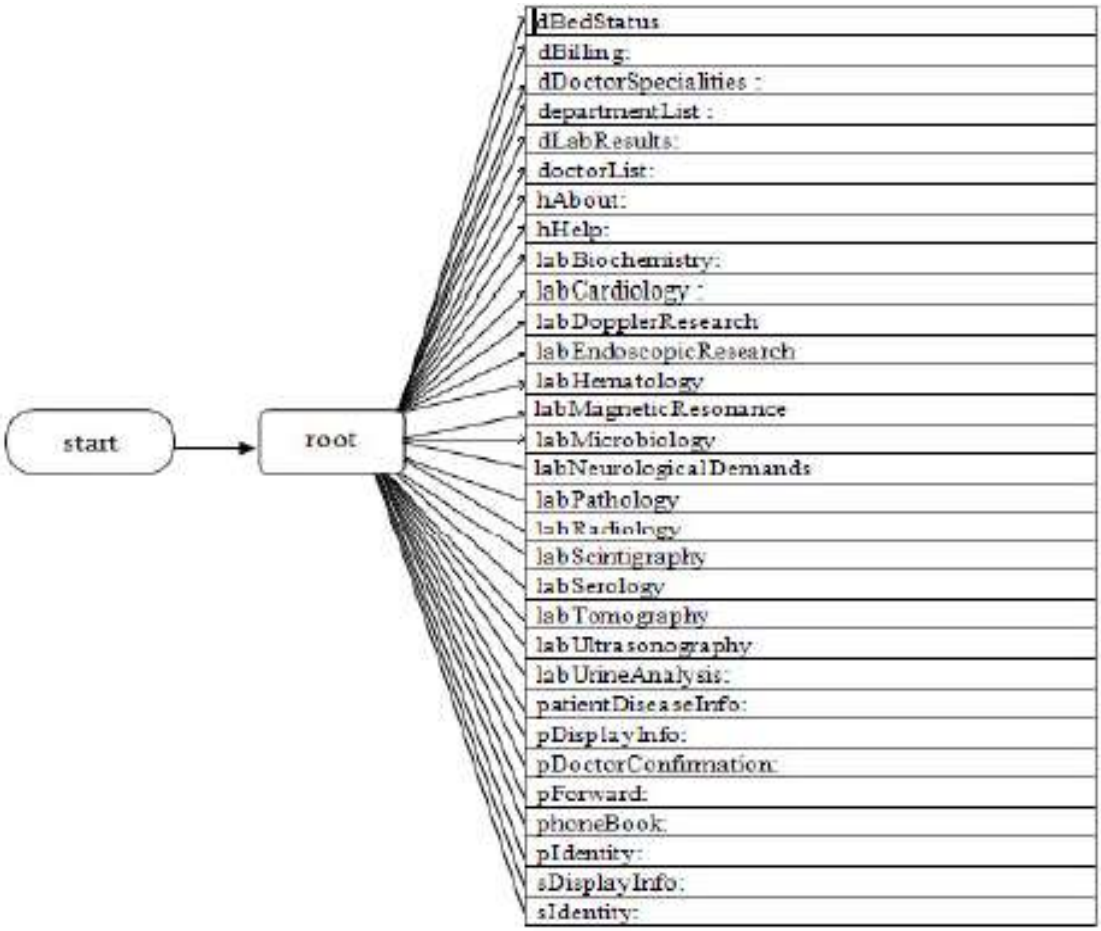


**Figure 2:** IHMS Forms

The directory is called a facility. The database consists of 39 tables each with a link to the hospital. It is used in system entries or scanning system. Tables are connected by primary and international keys in order to have continuity. 24 of them are connected by international keys to each other. Fifteen of them only store predefined data that reflect a laboratory test term.

The patient medical problems service was provided in the form of a C # application via various menus. This contrasts them and agrees on the best potential answer to the actual applicable data in the database. The outcomes are given in menu types for the consumer.

## IV RESULT AND DISCUSSION

When a patient appears at the hospital door, a basic question and response package is used to register the software to the individual. The patient then begins the panel as a Termination & Service Marker and selects the pre-specified medical conditions number from 4 selection boxes called 1,2,3,4 triggers. 1. Patient clicks on 6 Decision buttons identified as: search for a department to scan, locate the appropriate doctor, date &time to assign, locate the shelf and bed for hospitalization, find the drug needed for the proposed prescription, find the laboratory recommended by Necessary Laboratories. When the whole details contained in combo boxes for a patient is displayed, the patient must save it by pressing the "SAVE" Figure 4.

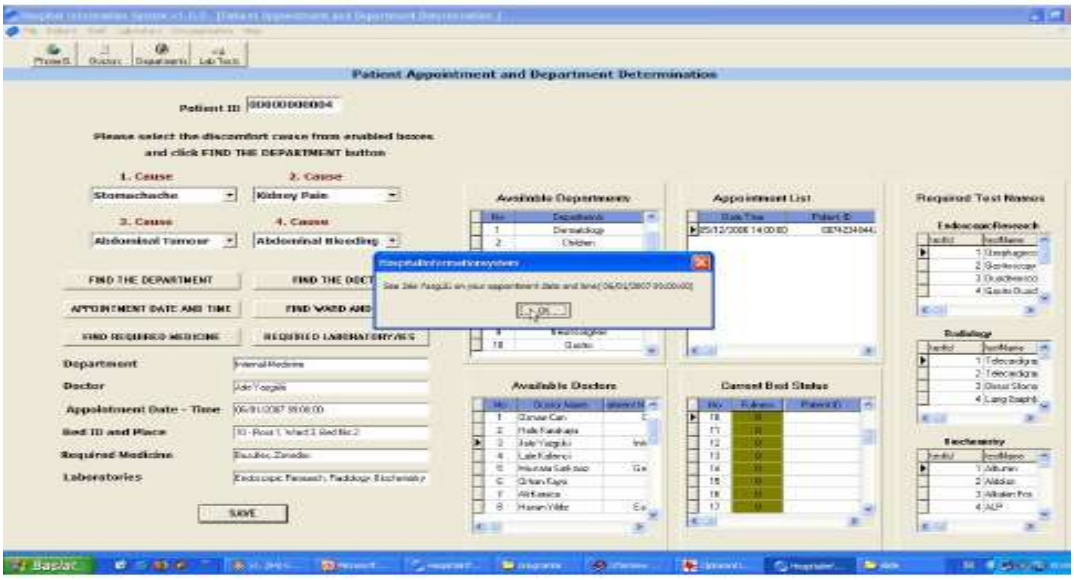


**Figure 3:** IHMS menu screenshot(Patient)

To remember the appointment details, a message box is produced. The medical knowledge is outlined by a medical menu for the specialist, Fig 5. In the second section of the management program.

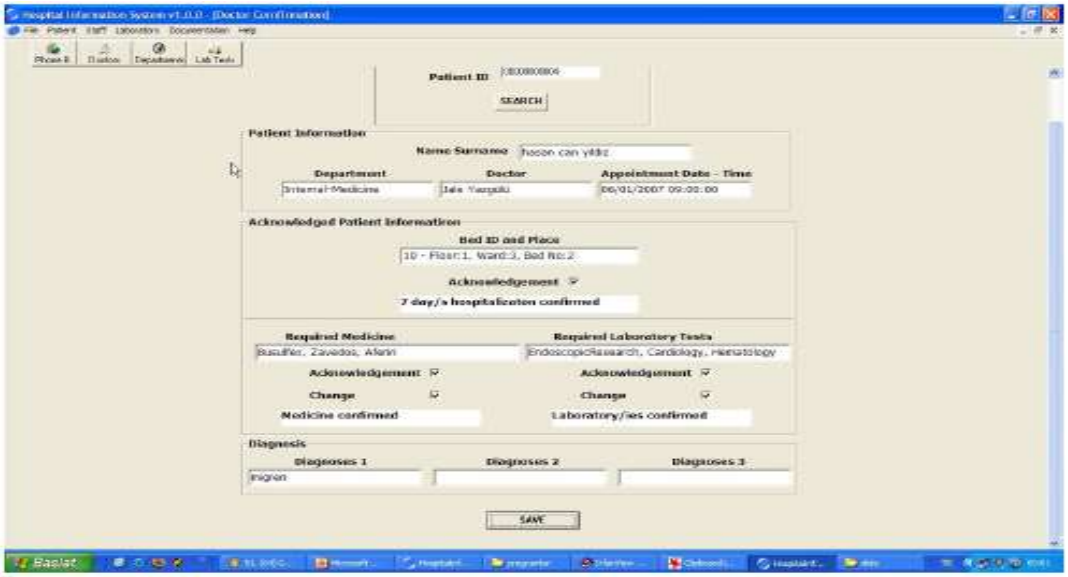


**Figure 4:** IHMS Menu screenshot(doctor)

The doctor enters the ID number of the patient and all necessary medical details is shown. The doctor may accept or change the data provided by the program. A fresh combination box is accessed and details are inserted if there are improvements. Of instance, if a different laboratory test in a specific case is introduced and the physician is unaffected by the management program, the physician may return with the "Switch" button to the new laboratory test. The fresh data is saved and substituted in the folder by the delete icon.

## V CONCLUSION

Hospital Data Management Software in the world include several product sets. This is an environment that is evolving and several researchers intend to create and add new functionality to the applications. Contains the decision element in the program in the methodology that has been developed. The machine decides when and what to do to the patients when a specialist is seen. This saves a great deal of energy and makes doctors spend more on their patients. There are not many smart tech packages on the market comparable to those created. The app also provides an enquiry feature that helps the individual to pose multiple questions and identify them. The inventory of the hospital is managed by other patient information systems in the literature.The product contains material for customers and staff, packaging and drugs, accounting and monitoring. A dynamic program includes a context storage system which handles all hospital logistics information. Nevertheless, our program includes patients and provides them with a specific and special querying process. Alternatively of easy administration it recommends practical measures for patients and physicians. It program can be tailored to every hospital and clinic in portable form. The built program would soon be placed on the internet, so that elderly and disabled people can now visit hospitals from home.

## REFERENCES

1. De Simone, Valerio, Francesco Giordano, and Massimiliano M. Schiraldi., "Intelligent Health Management System–an Italian project to streamline stock management in health facilities," *In A challenge for the future: the role of industrial engineering in a global sustainable economy*, pp. 185-190, 2014.
2. Lin, Yingzi, "Toward Intelligent Human Machine Interactions," *Mechanical Engineering*, vol. 139, no. 06, pp. S4-S8, 2017.
3. Zhang, Yuqing, Wen Wang, Shijun Li, Yongliang Ni, DejunZhong, Weifang Qi, and Zengwu Wang, "A multicenter randomized controlled study of the effects of remote management of hypertension based on the Yijiayi Intelligent Hypertension Management System," *Journal of Hypertension*, vol. 36, 2018.
4. Lasheng, Yu, Li Jie, and ZouBeiji, "Research on a Multi-agent Based Integrated Health Monitoring System for the Elderly at Home," *In Future Wireless Networks and Information Systems*, pp. 155-161, 2012.
5. Munavalli, Jyoti R., ShyamVasudevaRao, AravindSrinivasan, and G. G. van Merode, "An intelligent real-time scheduler for out-patient clinics: A multi-agent system model," *Health Informatics Journal*, 2020.
6. Ibrahim, Suleiman KhalifaArafa, "Developing and Implementing a Hospital Management System: A Case Study of Razi Medical Center", *Khartoum State, Sudan*, 2013.
7. Hemphill, R. E., and W. Grey Walter. "The treatment of mental disorders by electrically induced convulsions," *Journal of Mental Science*, vol. 87, no. 367, pp. 256-275
8. Moran, Stuart, and Joel E. Fischer, "Designing notifications for ubiquitous monitoring systems," *IEEE International Conference on Pervasive Computing and Communications Workshops*, pp. 115-120, 2013.
9. Pandey, Amit, and GyanPrakash, "Deduplication with Attribute Based Encryption in E-Health Care Systems," *International Journal of MC Square Scientific Research*, vol. 11, no. 4, 16-24, 2019.