



DIGIDOCTOR- HOSPITAL INFORMATION SYSTEM

MAKING HEALTHCARE SERVICE MORE EFFECTIVE AND INNOVATIVE

DigiDoctor Hospital Information System is a complete Hospital Information System. A hospital information system (HIS) is essentially a computer system that can manage all the information to allow health care providers to do their jobs effectively

HOSPITAL INFORMATION SYSTEM

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WHAT IS A HOSPITAL INFORMATION SYSTEM SOFTWARE?

The hospital information system provides the automation and monitoring of health vitals in daily processes. It covers the services that simplify the process of healthcare professionals as well as their interaction level with patients.

There is always a wide range of features but the most important thing is that it can streamline certain procedures that meet end-user requirements. In this, we have covered some advanced features without compromising their quality, and security in the medical industry.

HIS has had great changes over the last few decades: business models, modern tools and technologies, websites, and mobile apps.

The number of healthcare service providers has also increased in the market, and the patients have a wide choice of medical specialists. The interactions between the hospital and the patient to make it more convenient for both parties.

Software features, like communication, and coordination between all users, automate their daily tasks, patient-oriented workflows, manage financial resources, and provide an uninterrupted supply chain service. All medical records are safe and only accessible for the allowed users.

HOSPITAL INFORMATION SYSTEM ADVANTAGES

The implementation of HIS software can improve the quality, standard, and efficiency. It can use by three kinds of user groups: patients, hospital staff, and third parties. Third parties like drug suppliers, and insurance companies. Cooperation and communication are the fundamental requirements here.

Advantages of Criterion Tech's DigiDoctor- Hospital Information System?

It covers all the healthcare solutions like EHR, EMR, HIMS, RIS, Diet Management System and other solutions of medical record.

We have created the features list; you need to identify your priorities as per benefits

- Powerful inbuilt Business Intelligence engine
- Graphical MIS, using dashboards and graphs
- Multi-location connectivity
- Enhances information security and integrity
- Reduces transcription errors
- Reduces duplication of information entries.
- Optimizes report turnaround times
- COVID dashboard

- **Advance and Interactive Processes**

Automation makes the best benefits here. It helps to optimize the user experience. Medical experts, patients, and hospital administrations so that they can interact online, get appointments, and exchange information.

- **Keep Digital format of medical records**

The hospital management saves the database which includes all the important patient data. The medical records, lab reports, and prescribed medicines, and treatment can only be available to doctors, and medical staff. Helps in taking an exact decision without any delay after getting an exact diagnosis. Can track a patient's health which enables the low chance of risks.

- **Easy for staff interaction**

This is important to engage all your staff for better coordination and teamwork. They do not have to make special requests and wait for a long time for an answer. There is a tier level defined for each medical expert, and they will be in charge of their treatment stages only. After that, they will be able to share the outcomes with other medical staff/colleagues in one click.

□ **Easy to Manage Facility**

Hospital's administrations can manage their available resources, analyze staff work, reduce equipment downtime, optimize the supply chain, and help hospital staff to deal with digital data instead of endless paperwork.

□ **Saves time**

Once all the services and interaction between the patients, staff, hospitals, and hospital gets improved in all possible ways and a planned manner then it saves a lot of time. Helps in making better plans in leisure time, and provides them with up-to-date information.

□ **Patient self-service**

Patients can also make their self-accounts on the telemedicine app where the list of various actions can be performed. They can make online appointments or reservations, can receive the lab test results, can do online consultations with medical specialists, and many more.

□ **Better user experience**

Finest quality GUI by ASP.NET which gives better UI/UX and feel them a wonderful by using portals. Interactive features make the treatment process less stressful for both patients, doctors, and staff. In addition, all the requested information can also be received online.

CLINIC MANAGEMENT AUTOMATION

The hospital information system comes up with clinic management tools which also automates the clinic's work and optimizes the utilization of resources. It can provide the telemedicine app. Automation helps to manage, analyze, and sends notifications to the patients. The hospital information system aims to manage the employee and patient activities remotely with immediate access for the authorized users. The patient-centric and well-managed company will also ensure a better work environment for its employees.

Workflow Automation

Workflow automation illustration with Example.

When the patient wants to have an appointment, he might choose among a few options. Firstly, you can find the data about visiting hours on the medical specialists' profiles and book a

convenient time. Secondly, you simply dial the receptionist who will check the doctors' schedule for you and set your appointment. In both cases, the doctor gets the information about the next visit whereas the patient will get a reminder via SMS, email, or even receive automated calls.

As for the medical specialists, the healthcare record management system that contains the patient information in one place enables more efficient work of the staff. Automation speeds up the process of patient registration and filling out all the necessary records. The doctors can check the disease history, test results, as well as add new data to the patient file. The job of the doctor that previously involved too much paperwork can be completely computerized. Doctors spend more time on patients' treatment rather than documentation. If something is requested in a written form, they can print it.

Finally, the clinic authorities receive automated control of all the interactions in their facility. The hospital system software can generate the analysis of staff work, financial expenses, revenue, set the general priorities of the institution, and outline future directions.

HOSPITAL INFORMATION SYSTEM FUNCTIONS

This will organize the stable functioning of daily tasks and interactions. This is smooth operating software for vitals in the clinic administration. This keeps a track of all the operations, stores the users' data, performs its analysis and can generate reports. It can allow collecting its information in one place with one click. It includes the data of the patient, doctors as well as the financial affairs, and supply management. Furthermore, it is only accessible for authorized users. The hospital database management system provides users with data security due to all regulations.

You can check performed operations and the billing status of each customer.

Moreover, the system is capable of generating regular reports of the tracked data including healthcare, staff efficiency, finances, inventory, and facility utilization.

CORE MODULES OF DIGIDOCTOR - HOSPITAL INFORMATION SYSTEM

CORE MODULES

Phase 1: DIGIDOCTOR Remote Monitoring Dashboard

About our Solution:

DIGIDOCTOR *Remote Monitoring Dashboard* displays list of patients along with their live vitals (viz. Blood Pressure, Oxygen Saturation, Heart Rate, Pulse Rate, Temperature) and latest investigative parameters (viz. KFT, LFT, Random Blood Sugar, ABG Parameters such pH,

PCO2, PO2, Sodium, Potassium, Calcium etc). All these values are coloured coded to visually differentiate between values that are normal, borderline-deranged and deranged. The live patient data is continuously analysed by dashboard to sort the most critical patients to the top of the list.

Scope of work:

- Machine Integration
 - Patient Monitor
 - Ventilator
 - Infusion Pump
 - ABG Machine
- Lab data (Manual Entry)
- Notification (Clinical)
- Data History
- Manual Data Entry Page (for Isolation Beds)

Phase 2 DIGIDOCTOR Hospital Information System

Phase 2a: OPD Module

Online Registration & Appointment	Electronic Health Record
Online OPD via DigiDoctor App	OPD Duty Roster
Cash Counter & Billing	ICD-Code Autosuggestion
Prescribe Medicines & Investigations	Antibiogram Integration
Patient App for viewing EHR	Smart OPD Kiosk (Optional Add-On)

Phase 2b: IPD Module

HIS App	Electronic Health Record
Cash Counter & Billing	Case Sheet Management
Causality	Dietetics
Entry Forms	Bed Management
Prescribe Medicines & Investigations	Antibiogram Integration
Patient App for viewing EHR	ICU/ICCU/NICU
ICD-Code Autosuggestion	

Ancillary Modules:

The following modules can be implemented alongside any of the above phases:

Module Name
• Hospital Laboratory Services
• Radiology Services (RIS)
• Pharmacy Management System
• OT Management
• Blood Bank
• Physiotherapy & Counseling

<input type="checkbox"/> Clinical Calculator Integration
<input type="checkbox"/> Smart OPD Kiosk
<input type="checkbox"/> Bluetooth BP Machine (per machine)
<input type="checkbox"/> Bluetooth Pulse Oximeter (per machine)

KNOWMED (Clinical Decision Support System) Integration:

About our solution:

Knowmed is a comprehensive database of diseases, medicines and food products. Clinicians can use this software for getting Smart Alerts such as:

- Drug Interactions
- Drug Food Interactions
- Drug Contraindications
- Dietary Contraindications
- Dose Modification Suggestions
- Side Effect Checker

Details of Feature list : -

This outlines the more details of its functions, and benefits that the medical institution expects to get at the final point. Their number might differ depending on the clinic's needs; however, it usually includes some basic hospital information system modules.

Patient management

This is used to control the flow of patients. Patient can register themselves easily on platform. Doctors can get the data of the patients' health condition, view their treatment, and check reports.

Appointment module in hospital management

The appointment module arranges the scheduled visit of doctors due to the patients' requests. It helps to organize the availability of medical specialists on time.

Facility management

The facility management module is responsible for tracking and maintaining the room availability of rooms, the status of occupancy as well as various kinds of administrative documentation.

Inventory management

The inventory management module controls the inventory. It will keep you updated with inventory available. The whole supply chain is automated for the convenience of the staff that can concentrate on the patients' needs.

Billing & Accounting

The accounting module organizes the financial affairs of both customers and the medical institution. It stores and presents all the patient payment details, hospital financial records on expenses, and overall profit.

Medicine management

This is auto-populated medicines system and suggest the frequently used medicines. The medicine management module contains a list of drugs that are usually used for specific treatment. It keeps records of every patient's drug used during their treatment.

Anti-Biogram Linked

The clinician, on obtaining the report of the patient from microbiology department, can change or continue with the same treatment and prescribe the final antibiotic for the patient. It shows the no of patients resistant or sensitive to any given antibiotic.

Smart Notifications & Alerts

Notification related to immunization; routine checkup & other messages are also instantly sent to patient's registered mobile number. It has the unique feature of Medical Error Notification. It notifies the clinician if he advices wrong medication or there is presence of any allergy or drug interaction.

Remote Monitoring Dashboard

The continuous monitoring of patient's health is also required for preventing deterioration of patients. It is set up of a control room where doctors can monitor all the patients simultaneously through a Centralized Patient Monitoring Dashboard. The dashboard displays list of patients along with their live vitals (viz. Blood Pressure, Oxygen Saturation, Heart Rate, Pulse Rate, Temperature) and latest investigative parameters (viz. KFT, LFT, Random Blood Sugar, ABG Parameters such pH, PCO₂, PO₂, Sodium, Potassium, Calcium etc.).

Ease of Operations

For safety and security purpose, we have **QR code, Barcode facility**, patient can use QR code to get registration for OPD, patient can use barcode to get fast and secured result of pathology, microbiology reports. Using this system there is no chance of error at any level like billing, investigations, OPD, IPD etc.

Auto Calculators

Various calculators are integrated with HIS software like BMI, dosage calculator, diet plan as per medicine, these are formulated calculations that are used to get the health status score of any patient. These are calculated by MDRD equation

Recommended Dietary Allowances (RDA)

This is the level of intake of essential nutrients, it can be customized as patients' condition, disease, toxicity and deficiency. If RDA is changed or customized then old data is also kept for investigation.

Laboratory and tests management

The lab management module shows the test results of the particular patient. The lab data can be viewed by the authorized staff generated for the patients' and patient can also view their report in med-file software after login their credentials.

Reporting

The report management part stores the already processed detailed information. This module helps management to collect, analyze and view the performance data in a comprehensive format. eliminates them to keep the business profitability as well as the high customer satisfaction level.

Helpdesk & support

The helpdesk support module specializes in handling different issues, problems, and requests. It ensures that the operations are maintained properly, the data is valid and reported in accordance.

IN CONCLUSION

Taking into account all the mentioned details, we can conclude that the hospital management system is the inevitable part of the lifecycle of the modern medical institution. It automates numerous daily operations and enables smooth interactions of the users. Developing the hospital system software is a great opportunity to create a distinct, efficient, and fast delivering healthcare model. Implementation of hospital management system projects helps to store all kinds of records, provide coordination and user communication, implement policies, improve day-to-day operations, arrange the supply chain, manage financial and human resources, and market hospital services. This beneficial decision covers the needs of the patients, staff, and hospital authorities and simplifies their interactions. We are an outsourcing company with great expertise in software development for hospitals and clinics and were ready to find out the best approaches. If you have any questions, feel free to contact us via the contact form. Criterion tech will be glad to provide professional consultation and find the best solution for you.

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