ANALYSIS OF THREE HOSPITAL INFORMATION SYSTEMS

Emma Drolet

Health Sciences Senior

BIS 362 Healthcare Informatics

INTRODUCTION

Hospital Information Systems (HIS) represent:

- computer hardware and software dedicated to the collection, storage, processing, retrieval, and communication of patient care information in a healthcare organization.

Purpose of this work:

- to investigate and compare three Hospital Information Systems (HIS).

Relevance for BIS362 Healthcare Informatics:

- to illustrate the process of evaluation and selection of Information Systems in Healthcare.

METHOD

- The analyzed HIS were chosen because they were developed by significant industry players: SoftClinic, Comarch, and Wipro.

- The first step was to study information for the three companies.

- Next were investigated the typical components of hospital information systems.

- These features were used in the comparison of the three hospital information systems.

HOSPITAL INFORMATION SYSTEM BY SOFTCLINIC

- Comprehensive Electronic Medical Record (EMR) system that provides medical institutions with a system that fits their requirements for the treatment outcome for their patients.

- Designed to manage the administrative, financial, and clinical aspects of a healthcare facility.

- Decreases patient wait time and improves productivity of medical staff.

HOSPITAL INFORMATION SYSTEM BY COMARCH

- The company focuses on creating their own products which is their key to success and assisting in their business customers.

- Can serve facilities of all sizes in any medical field and can customize systems to accommodate facilities needs.

- Quick and easy to use, flexible with documentation and forms, extremely secure, and user-friendly which includes installation and updating.

HOSPITAL INFORMATION SYSTEM BY WIPRO

- WIPRO is one of the largest IT companies in the world.

- The system effectively automates various functions including clinical operations, EMR, administrative operations and inventory management.

- As a result are improved operational efficiency and reduced costs.

- The HIS assists to achieve greater efficiency and produces higher quality of work from the medical professionals.

TYPICAL COMPONENTS OF HOSPITAL INFORMATION SYSTEMS

Feature	Description
Patient Registration System	• Add, edit, and delete patient information • Can search by time or patient name • Adding a new patient is convenient and simple • Family details are easily accessible from patient details
Outdoor Patient Management	• Add, edit, and delete visit details • Add a visit, ordering medication, and making sure the details are correct and extremely easy
Investigations	• Add, edit, and delete test details • Additions are made by selecting the patient, tests, and doctor and entering observations and conclusions
Indoor Patient Management	• Add, edit, and delete admission details • Adding a new patient is simple and convenient
IPD Bed Management System	• Can search which beds are open and which are being used
Operation Management System	• Add, edit, and delete operative notes • Very easy to enter all the necessary information to add a new patient

Clinical Notes in IPD	• Add, edit, and delete round notes • Can easily add information to notes, and see the list of medications
Patient Discharge Management	• Adding, editing, and delete discharge detains • Adding a patient to a discharge list requires the patient's name, final diagnosis, treatment, tests given, and medications needed
Vaccine Chart	• Add, edit, and delete vaccine chart details • Add new vaccines or ones that are needed by choosing out of a list of vaccines • Select a patient to see their vaccine history
Consent Master	• Adding consent is achieved by entering the patient name and a description
Consent Form	• Add, edit, and delete consent details • Can be filtered by time period • Add consent by selecting the patient, writing a description, and agreeing
Estimate	• Add, edit, and delete estimate details • To add the patient is selected from a list, and charges are added onto the statement
Billing Details	• Add, edit, and delete billing details • To add a patient is selected, the estimate is selected, and if there is a need to add a new charge that is possible • The total payment is calculated, and the payment method is entered into the system
Receipt	• Add, edit, and delete receipt details • To add a receipt the patient and bill is selected, and payment is entered

Payment	• Add, edit, and delete payment details • To add a payment, enter the debit account, select the patient, and enter the balance
3C Register	• Select a starting and ending period, and the 3C register will be generated from this period • Can be filtered by entering the case, type, doctor, or referral
Multiple Receipt	• Multiple receipts can be printed at the same time • The receipt results can be filtered by entering a time period
Certificates- Letters	• When viewing certificates, they are filtered by a patient's visit details of a visit, and treatments can easily be added
Clinical Analysis	• Are formed by selecting modules and fields • Can be filtered by patient, appointment, visit, test, admission, discharge, receipt, and receipt details and searched for by gender
Referred by Labels	• View all the patient referrals by medical professionals in this report
Expense Register	• Can view from a certain start or end date
Income Register	• Can view from a certain start or end date
Follow-up Reminders	• Can filter details and add reminders by selecting the patient, entering the reminder, and including contact information
Settings	• Settings found under this tab include general database, print, import details, taglines, others, and accounts
File Manager	• When looking for files a patient can be searched by an ID number of their name and their file can be added to each appointment, they have

COMPARISON OF FEATURES OF THE THREE HIS

Features	SoftClinic	Comarch	Wipro
Patient Registration System	Yes	Yes	Yes
Outdoor Patient Management	Yes	Yes	Yes
Investigations	Yes	Yes	Yes
Indoor Patient Management	Yes	Yes	Yes
IPD Bed Management System	Yes	No	Yes
Operation Management System	Yes	Yes	Yes
Clinical Notes in IPD	Yes	Yes	Yes
Patient Discharge Management	Yes	Yes	Yes
Vaccine Chart	Yes	Yes	No
Consent Master	Yes	No	No
Consent Form	Yes	No	No
Estimate	Yes	No	Yes
Billing Details	Yes	No	Yes

Receipt	Yes	No	Yes
Payment	Yes	No	Yes
3C Register	Yes	Yes	No
Multiple Receipt	Yes	No	No
Certificates- Letters	Yes	Yes	Yes
Clinical Analysis	Yes	Yes	Yes
Referred by Labels	Yes	Yes	Yes
Expense Register	Yes	No	No
Income Register	Yes	No	No
Follow-up Reminders	Yes	No	No
Settings	Yes	Yes	Yes
File Manager	Yes	Yes	Yes
User Notification	No	Yes	No
Autosave	No	Yes	No
In-Built Tally Interface	No	No	Yes

CONCLUSION

- Each of these three HIS systems by SoftClinic, Comarch, and Wipro serve a similar overall purpose which is to maintain Electronic Medical Records.

- All the HIS systems have multiple features enabling improved functioning of medical facilities.

- SoftClinic is the system with the most advanced functionality because of its comprehensive array of features serving diverse types of medical establishments.

REFERENCES

Comarch - Global IT Business Products Provider. (2020). Retrieved February 18, 2020, from https://www.comarch.com/healthcare/products/comarch-optimed-nxt/

Hospital Information System (HIS) Software: Clinic Information System India. (2020). Retrieved February 18, 2020, from https://www.softclinicsoftware.com/hospital-information-system-his/

Hospital Information System (HIS) Solution. (2020). Retrieved February 18, 2020, from https://www.wipro.com/healthcare/hospital-information-system--his-/