

Hospital Information System in Improving Healthcare Quality in Hospitals

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ABSTRACT

This study represents the role of hospital information system in quality improvement in hospital have great potential in reducing health care costs and in improving health outcome the purpose of this study is to offer analytical research that explores the role of hospital information system in delivery of healthcare in its diverse organizational and regulatory settings this study aims to analyze the role of his in enhancing healthcare quality through improved the efficient data management in computers patient care and hospital operations. The research is conceptual in nature and it is based on secondary data collected from various research articles journal and online sources.

In this the study mark that his help in reducing waiting time medical errors and increasing operational efficiency enhancing communication among healthcare professionals and also improving decision making processes the implementation of his leads to higher patient satisfaction and better healthcare outcomes. The findings of the study highlight the use of hospital information system also improves overall healthcare quality by increasing the patient care and patient satisfaction reducing medical errors and reducing manual work and enhancing hospital efficiency. In using of hospital information system are able to provide faster more correctness and well- connected services with each department.

INTRODUCTION

Hospitals are very complex organizations with their unique characteristics which include large department and units that coordinate care for patient in this some hospitals were using hospital information system to assist in diagnosis their management and for their education purpose for their betterment and improved services and practices quality of services can be improved through this Hospital information system information system is divided into six major dimension that include system quality information quality use user satisfaction individual impact and organizational impact hospital information system have great and reducing health care cost and an improving healthcare outcomes of the patient the rapid growth in this field of information technology has strongly influenced the business of many hospitals hospital information system are very high in demand in lots of the hospital like who increased flow of patient and increasing populations

and also the doctor and support many clinical and non-clinical tasks.

A lot of studies have shown the benefit of implementing hospital information system that evolving shift resulting from Information technological, social and technological changes has been created a need for developing a new innovative knowledge in hospital which is based on their healthcare system for improving the quality of healthcare in hospital.

This research paper aims to explore the role of Hospital system in improving healthcare quality in hospitals and to analyze that how hospital can manage and maintain a hospital information system to enhance the patient satisfaction.

Objective of the study-

The main objective of this study is to inspect the role of hospital information system in improving healthcare quality in hospitals. Some objectives are-

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- To understand the area of concept and use of primary functions of hospital information system in large hospitals.
- To Evaluate the role of hospital information system in improving the quality of health care services.
- To examine the impact of hospital information system on patient care and patient satisfaction.
- To study and to know how the effectiveness of hospital information system in reducing medical errors and billing errors.
- To analyze that how hospital information system improves the hospital administration functions and their decision workflow management.
- To identify the benefits and challenges are associated with the implementation of hospital information system in hospital for quality management and patient satisfaction.
- To examine the role of hospital information system in enhancing the clinical and non-clinical communication between health care professionals.

Research Methodology

It refers to the systematic process used to collect, examine and interpret data for the purpose of the study. It provides a clear framework for conducting research in a structured manner. This study is based on descriptive and conceptual research design. It aims to describe and examine the role of hospital information system in improving healthcare quality in hospitals for patient satisfaction.

Nature of the study

In this study, the qualitative data were used as it is based on secondary data. Due to the absence of primary data, it focuses on understanding the concept, benefits, and impacts of hospital information system through existing literature or journals.

Data collection

In this research, the data has been collected from secondary sources which includes-

- Research papers and journals
- Books which are related to hospital management
- Online sources and hospital academic websites
- Some articles which are related to hospital information management system

Data Analysis Technique

The present study uses qualitative and descriptive data collected from secondary resources such as resources and online resources. The information has been

examined conceptually and descriptive analysis is used to explain the role of hospital information system in improving healthcare quality. Also, thematic analysis is applied to identify key areas such as patient care, efficiency, and error reduction.

Reliability and Validity

In this study, it is insured by using data from trusted and authentic secondary sources such as research and some academic websites. The consistent information from multiple sources increases the dependability of the study. This study is maintained by selecting relevant and appropriate data related to hospital information system quality. The information used is carefully examined to ensure that the findings are correct and meaningful.

Literature Review

It is an important part of research that helps in understanding the previous studies related to the topic. It provides a qualitative background and some highlights the contribution of various researchers in this field of hospital information system.

There are several studies which have been emphasized the importance of hospital information system in improving healthcare quality for the patients' satisfaction. According to different researchers, hospital information plays a very crucial role in enhancing patient care by providing accurate, timely, and accessible patient information. It supports healthcare in making effective clinical and non-clinical decisions which have ultimately improved treatment outcomes.

Research studies have shown that the implementation of hospital information system leads to an important reduction in medical errors. Electronic medical records help in maintaining accurate patient data, reducing the chances of duplication and incorrect information from the hospital to the patient or any other family member. This integrated, smooth workflow and faster service delivery in hospital.

The various researchers have been highlighted that hospital information system improves delivery, communication, and coordination among the different hospital departments such as laboratory, pharmacy, and administration. This integrated system ensures a smooth workflow and faster service delivery.

From previous studies, Hospital Information System helps in reducing patient waiting time and increasing operational efficiency. It is the automated process for reducing paperwork, saving time, and improving overall functional areas of hospital, also for quality management and patient satisfaction.

In these studies, it indicates that patient satisfaction increases in hospitals where hospital information

system is efficiently and effectively implemented patients receive their reports timely and better communication between clinical and non-clinical departments and improved quality of care which increase or enhance their overall patients experience

The important aspect discussed in the literature is patient satisfaction some studies suggest that hospitals using Provide more systematic and organized because it gives a timely service which enhances the overall patient experience and increase their satisfaction in this patient benefits is shorter waiting time accurate billing and improved communication with healthcare providers

Overall, the literature review clearly indicates that hospital information systems have a positive and it is important impact on healthcare quality and patient satisfaction but in some studies also point out that certain challenges associated with hospital information systems such as high cost and staff need for technical training for the staff and data most researchers agree that the benefit of hospital information system and its limitations.

Scope of Hospital Information System in quality improvement in hospital

Hospital Information System have a very huge scope in improving the quality of health care services in hospital with the advancement of technology hospital information system has become an important tool for enhancing efficiency accuracy and patient satisfaction.

Hospital Information System improves are very important role in improving patient care quality it provides correct and complete patient information which help in healthcare professional for better diagnosis and treatment planning in this the availability of real time data confirms that timely and effective healthcare service provided to the patient

Hospital Information System operational efficiency by automating routine task such as patient registration billing and diagnosis report generation this reduces manually work and minimizes delay leading to faster service delivery and better utilization of hospital resources and provide all the diagnosis reports to the patient in their smart devices.

The most important scope of hospital information system is in reducing medical errors like electronic records eliminate issues like eligible handwriting and duplication of data overwriting in some registrations it also provides alert for medication and treatment which enhances patient safety

Hospital Information System contributes to better decision making by providing correct and updated

information to the health care professionals and managements it helps in planning monitoring and evaluating hospital services effectively and efficiency

It is also extend to data management and reporting where large amount of data can be stored analyzed and used for future planning and research purpose. Overall the scope of hospital information system and quality improvement is very wide as it supports clinical and non clinical.

Tools and Techniques of Hospital Information System and Quality Improvement in Hospitals

Electronic Medical records- Electronic medical record is one of the most important tools of hospital information system it stores patient information digitally and include medical history diagnosis treatment and reports it improves accuracy reduces errors and ensure easy access to patient data.

Clinical decision support system- Clinical Decision support system Provides alert and suggestion to doctors based on patient data it helps in better decision making and improve the quality of treatment

Laboratory Information system- Laboratory system and reports it ensures quick and accurate test result which help in timely diagnosis and treatment of the patient.

Pharmacy Information System- This tool manages all the medicine drug fluids and inventory prescriptions and Billings which is related with pharmacy it helped in reducing medication errors and ensures proper medicine management in the pharmacy or updated in the information system

Billing and Financial Management System- This system handles patient billing insurance claims and financial records this department also handles the third-party administration department it improves correct and transparency in financial operations

Appointment scheduling system- This tool helped in managing patient appointments effectively and efficiently it reduces patient waiting time and improve patient satisfaction by appointing their schedule from the dr and also take the feedback from the patient which improves the patient experience.

Impact of hospital information system and quality improvement in hospital

Hospital Information System a significant impact on improving the quality of healthcare service in hospitals with the integration of technology hospital information system enhances both clinical and non

clinical functions leading to better patient outcome and efficient hospital management

One of the major impacts of hospital information system is the improvement in patient care quality it provides correct and accurate complete patient information which help doctors in making correct diagnosis and treatment decisions real time access to patient data ensures timely and effective healthcare service

It also plays a very important role in decision making and management hospital administrators can use real time data for planning monitoring and improving hospital performance this leads to better resources utilization and strategic decision making

Furthermore, hospital information system helps in increasing patient satisfaction patient benefit from faster services accurate billing and improved communication which enhances their trust and confidence in the hospital

It also contributes to increased operational efficiency it automates routine processes such as patient registration billing and report generation this reduces paperwork saves time and allows health care staff to focus more on patient care

The implementation of hospital information system may face challenges such as high initial cost need for staff training and data security concern despite these challenges the overall impact of hospital information system on healthcare quality is highly positive

Advantages

Hospital Information System provides numerous advantages that significantly contribute to improving the quality of health care services in hospital one of the major advantages is the improvement in patient care as his allows healthcare professionals to access accurate and to complete patient information in real time leading to better diagnosis and treatment

It also helped in reducing medical errors by eliminating manual record keeping and ensuring accurate documentation of patient data and benefit is time efficiency as automated system streamline processes such as patient registration billing and report generation thereby reducing waiting time and improving services delivery

It also enhances communication and coordination among different hospital departments include laboratory pharmacy and management which ensures smooth workflow and better patient management

It also supports better decision making by providing real time data and reports to hospital

management and it increased patient satisfaction by offering faster more organized and systematic transparent services

Overall hospital information system plays a very important role in improving healthcare quality effectively efficiency and patient experience.

Challenges

The implementation of hospital information system also faces several challenges that can affect its effectiveness in hospital there are many major challenges that is-

The high cost of implementation is setting up hospital information system requires important investment in technology infrastructure and maintenance. Another challenge is the need for proper training of staff and hospital staff must be trained to use the system effectively and efficiently and lack of technical knowledge can lead to errors and inefficiencies

Resistance to change is also a common issue as some employees may prefer traditional manual based system and may not easily adapt to digital technology Data security and privacy concerns are another important challenge as patient information must be protected from unauthorized access and cyber threats technical issues such as system failures software errors and network problems can also disrupt hospital operations. Regular maintenance and system updates are required to keep the system functions properly which can be time consuming and costly therefore hospital information system offers many benefits these challenges must be addressed to for its successful implementations.

Findings

The findings of the study clearly indicate that hospital information system have a significant positive impact on improving healthcare quality in hospitals it has been observed that hospital information system enhances patient care by providing accurate timely and complete information which help healthcare professional in making better clinical decisions.

The study also finds that hospital information system plays an important role in reducing medical errors as electronic records minimizes mistakes related to manual data entry and improve patient safety Also hospital information system improves operational efficiency by automating routine processes which save time and reduce the workload on hospital staff. It also enhances communication and coordination among different departments leading to better service delivery and the study reveals that hospital information system contributes to reducing

patient waiting time and improving overall patient satisfactions

Patient benefits from faster services improved communication and better management of their medical records and hospital information system supports effective decision making and hospital management by providing real time data and analytical reports. Overall, the findings confirmed that hospital information system is valuable tool for improving healthcare quality efficiency and effectively and experience in hospitals of the patient.

Conclusion

System plays a very important role in improving the quality of healthcare services in hospitals the study highlights that hospital information system enhances patient care by providing accurate timely and complete information which help healthcare professionals in making effective clinical decisions and non-clinical decisions

It also reduces medical errors by eliminating manual record keeping and ensuring proper documentation of patient data Hospital information system improves operational efficiency by automating routine tasks such as registration billing and report generation thereby saving time and reducing patient waiting time .The system also is trending communication and coordination among different departments leading to smooth workflow and better services delivery hospital information system supports by providing real time data and analytical reports

Although there are certain challenges such as high cost need for training and data security concerns the overall benefits of hospital information system are much greater therefore it can be concluded that the implementation of hospital information system is important for improving healthcare quality efficiency and patient satisfaction and their experiences in modern hospitals

Limitations of the Study

The present study has certain limitations that should be considered while interpreting the results-

- The study is based only on secondary data as no primary data has been collected due to time and resources concentrates

- The study is conceptual in nature and does not include real time data from hospitals which may limit the practical applicability of the findings
- The limited access to detailed and updated research materials which may affect the depth of analysis
- The study is restricted to general aspects of hospital information system and may not cover all technical and practical issues in detail
- The study provides a clear understanding of role of hospital information system in improving healthcare quality in hospital.

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