

Summer Training

at

Impact Guru

From 6th May 2021 to 2nd July 2021

A Report on

**Barriers in the adoption of Electronic Medical
Records among physicians' in India: A Systematic
Review**

by

Dr Aditi Gulati

MBA- Health and Hospital Management

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TO WHOMSOEVER IT MAY CONCERN

Date: 2nd July 2021

This is to certify that **Aditi Gulati** has successfully completed her tenure as a Business Development Consultant from 6th May 2021 to 2nd July 2021 at Impact Guru Technology Ventures Pvt. Ltd. her performance during the tenure was found to be good.

We wish her all the very best for her future endeavors.

A handwritten signature in blue ink, appearing to read "Sandeep", with a stylized flourish at the end.

Regards,

Sandeep Kumar Tripathy
(Senior VP Business Development)
Impact Guru Technology Ventures Pvt. Ltd

Impact Guru Technology Ventures Private Limited
101, Jai Singh Business Center, 119, Sahar Rd, Andheri East, Mumbai, Maharashtra 400099

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ABBREVIATIONS

EMR- Electronic Medical Record

EHR- Electronic Health Record

HR- Human Resource

IT- Information Technology

MoHFW- Ministry of Health and Family Welfare

MS-excel- Microsoft Excel

NGOs- Non-governmental organization

R&D- Research and Development

OBSERVATIONAL LEARNING

About The Organization

Impact Guru, a crowdfunding platform supported donations for various NGOs, Startups, social enterprises, and individuals through global crowdfunding. The startup was incubated in Harvard Innovation Lab, USA in August 2014. It was PACT in Impact Hub, Singapore in May 2015.

It was founded in 2014 by Piyush Jain who is a Wharton Business School graduate, and the co-founder is Khushboo Jain who is Welingkar Institute of Management alumnus. It was launched in September 2015 by Maneka Gandhi.

The company has mobilized about Rs. 150 crores for various organizations in 15 different countries. It is located in Mumbai, Maharashtra. Impact Guru helps people raise funds for their causes. Impact Guru is a financial technology company that provides comprehensive crowdfunding solutions that combine social media crowdfunding, rewards, and investment.

Impact Guru mission is to make healthcare affordable to save lives and create innovative technologies with great finance solutions to empower people to raise funds for their needs and causes. It is India's leading online platform for crowdfunding which helps individuals to raise funds for their medical expenses or creative projects and NGOs to help raise funds for their programs. Impact Guru also allows people to donate or support a cause.

It has tech innovative features to create an automated crowdfunding appeal through story bot and create instant video appeal. It has both Android and iOS applications for campaigners. The application helps in real time tracking of their campaign and notification of donation.

Impact Guru has helped raise funds for more than 10 thousand people from more than 10 lakh donors and about 1500 crore raised. With their innovative technology, Impact Guru has made fundraising easy, accessible, and effortless for people in need.

The type of crowdfunding Impact Guru deals in are: -

- 1.) Medical Crowdfunding- Impact Guru is one of the top 10 leading platforms for crowdfunding. Medical crowdfunding is easy and effortless unlike loans. It helps reduce the financial burden as fundraising is free of cost.
- 2.) Organ transplant Crowdfunding- It is the same as medical funding. It helps in arranging funds required in organ transplant procedure.
- 3.) Cancer Crowdfunding- It helps to cover medical expenses required for the treatment of cancer like blood cancer, kidney cancer, lung cancer and breast cancer.
- 4.) NGO Crowdfunding- It helps raise funds for NGOs causes. It helps in noble causes like education, women and children welfare, animal welfare etc.
- 5.) Education crowdfunding- Impact Guru helps individuals raise funds for basic or higher education without education loan as Impact Guru believes education to be a fundamental right for all and not just a privilege for few.
- 6.) Creative crowdfunding- It helps to raise money for creative projects or startups or films.

Vision: - Impact Guru believes in the power to make someone smile, to save life, to foster great ideas, to make social change and to have an impact.

Mission: - To make healthcare affordable to save lives today and secure families for a better tomorrow.

General Findings on Learning

The organization is divided into various departments mainly, human resource, finance, public relations, administration, product and technology, sales and business development, customer feedback, marketing, communication, donor retention and social media or creative teams.

The business development team works and arrange meetings with doctors or staff of hospital management for information of patients who require crowdfunding help for their treatment cost. The team works with the social media marketing team to start a campaign for donor engagement. The business development team is expected to put efforts in increasing new fundraisers for the patients who require funding for critical illnesses.

Business Development Department: -

Head: - Mr. Sandeep Tripathy

Reporting Manager: - Mr. Avin Nair

Other team members: - Mr. Roopesh Kumar Jha, Ms. Quba, Mr. Anish, Ms. Bhavna Nahata and Ms. Pavithra.

Organization Responsibilities

1. Dealing with the doctors and management of the hospitals to help start and create a campaign for fundraising.
2. To support the business development function of the organization.
3. Participate in efforts to extend the amount of campaign creators.
4. Organize and attend meetings with doctors or management staff of hospitals.
5. Lucknow city hospitals and doctors to be contacted.

PROJECT REPORT

Barriers in the adoption of Electronic Medical Records among physicians' in India: A Systematic Review

Abstract

Introduction: Electronic Medical Record (EMR) is a digital or electronic collection and storage of medical information about a person. EMR is considered to be an important part of quality care in the healthcare world, but there are various barriers in the adoption and implementation of EMR by physicians. The main aim of this study is to find out the common barriers as perceived by physicians and a way forward for the implementation of it.

Methodology: A systematic literature review was done based on articles published in PubMed, ResearchGate and BMC-Medical with unpublished sources like Deloitte from 2016-2021, for barriers as perceived by physicians for adoption and implementation of EMR.

Results: This study consists of review of 16 articles out of 805 potential articles for final analysis. The common barriers as perceived by physicians among all were financial, legal, technical, difficulty in adapting to new technology and privacy concerns.

Conclusion: The present study shows various barriers faced by the physicians while using EMR. Therefore, for proper implementation of EMR, the policy maker and implementer should keep these barriers in mind while making standards and policies. There should be proper training before implementing EMR.

Keywords: Electronic Medical Record, Electronic Health Record, physician, adoption, barriers, EMR and implementation.

Introduction

Electronic Medical Record (EMR) is a digital or electronic collection and storage of medical information about a person. It includes a patient's medical details like medical history, diagnosis, allergies, tests, medications, immunizations, and treatment plans.⁽¹⁸⁾ They are used in practice and not shared outside. Electronic Health Record (EHR) is often used interchangeably but it is defined as the complete health information of an individual in a digital form which can be shared with other providers, labs etc. EHR contains information about demographics, insurance information along with previous medical history, vital signs, progress report, lab data, medications, immunizations, treatment plan, allergies, and radiology reports.

EMR is important in today's digital world for hospitals and other health-care organizations. Along with EHR, EMR helps in improving the quality of health and reducing the cost. Its adoption is increasing in the health sector from the past decade. Physicians should use such technology as it is far better than paper records as it is adaptable and saves time. Usage of EMR or EHR will improve quality of health care thus improving the healthcare delivery system.⁽¹⁹⁾

Many previous studies have proven that use of technology in healthcare has improved guideline-based care with proper monitoring and surveillance and less medical errors.⁽⁷⁾ EMR helps in decreasing the transcription error which is common in paper-based records. It helps in a faster decision-making process with no mishandling or missing of medical files. In addition to the above benefits, EMR saves space and reduces operational cost.⁽⁷⁾

India, as a developing country, needs a quality healthcare delivery system. Digitization of healthcare is the need of the hour to have quality and equal access to healthcare to all. The government has led to many initiatives for adoption of EMR and EHR in hospitals and healthcare organizations. Policies like National Digital Health Blueprint in 2019 emphasize on digital health record system pan-India. Tata memorial and Max hospitals have already implemented EMR. However, a proper system is not maintained and tracked on adoption of EMR by the government.⁽¹⁾

Some barriers to adoption of EMR include high initial cost and time with uncertain financial benefits, difficult to use technology, lack of support and incentives. ⁽⁶⁾

Rationale

The implementation of EMR by various government policies has been increased in India but still EMR/EHR is not adopted by many hospitals and healthcare organizations. It is essential to study the potential barriers and challenges in adoption of EMR among physicians. Thus, the main aim of this study is to explore and evaluate various barriers for adoption of EMR as perceived by the physicians in India by reviewing literature systematically based on the published studies. This will help to have a broad perspective about the situation and work accordingly for future implementation of EMR.

Research Question

What are the barriers in the adoption of Electronic Medical Records among physicians' in India?

Objectives

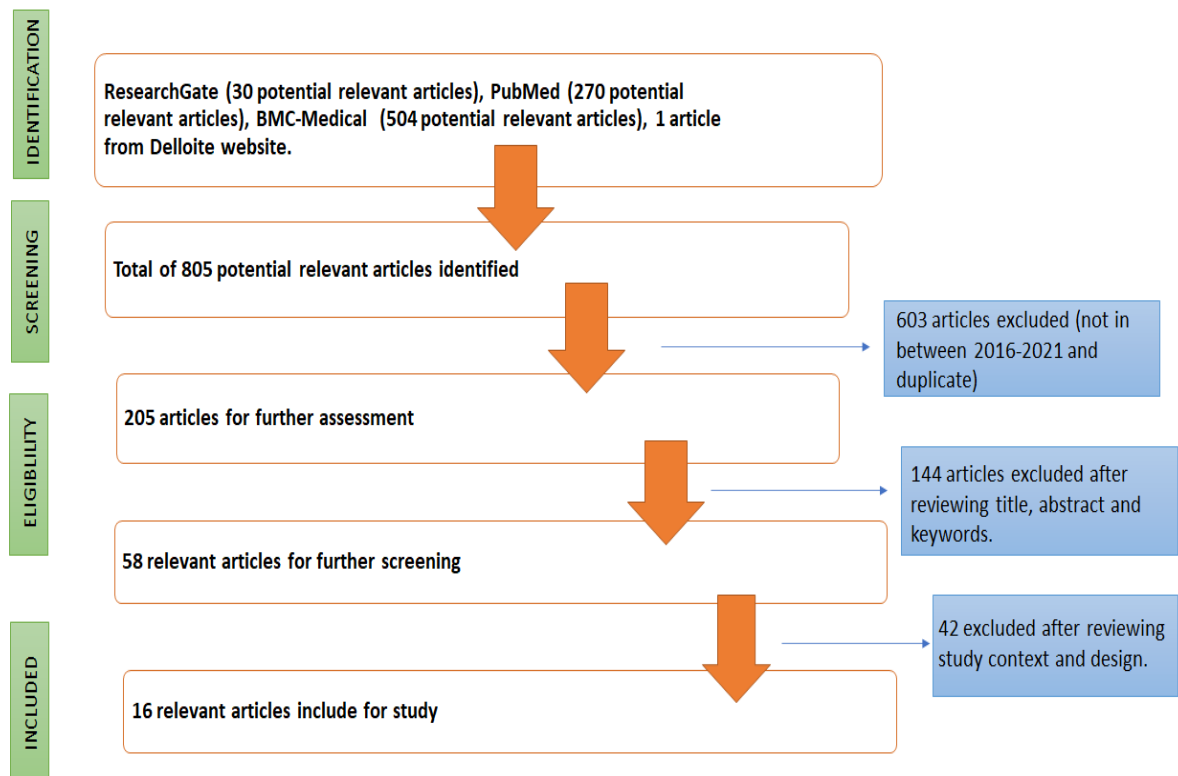
- To find out the common barriers in adoption of EMR in India.
- To help in a way forward for proper implementation of EMR.

Methodology

- **Study Design:** Descriptive study based on systematic literature review.
- **Information sources:** The search was carried out using three databases for the present review which includes, PubMed, ResearchGate, BMC-Medical and unpublished sources include Deloitte. The search was carried out from their respective start dates till May 2021 using different keywords for different databases with their unique combinations.
- **Search Strategy:** The search was limited to articles published between 2016 till 2021. Search included only articles published in English language. The keywords in the search include, “**Electronic Medical Record**”, “**Electronic Health Record**”, “**physician**”, “**adoption**”, “**barriers**”, “**EMR**” and “**implementation**” with different combinations in Boolean AND/OR for different databases.
- **Eligibility criteria:** Articles that focus on barriers perceived by physicians were included and the other articles which focus on EMR users other than physicians were excluded from the study. Articles published in English were only included for review. Studies which include implementation and adoption of EMR were included. Literature with policies and implementation strategies by India was studied. The studies which include barriers from a particular region or country outside India were excluded. Articles which include any of the terms, EMR or EHR were taken into consideration with major focus still on EMR.
- **Study Period:** 2 months
- **Studies Included:** By using different search strategies, 805 potential articles were identified for further review.

- **Method of Data Collection:** After the initial screening, 603 articles were excluded as they were not in between the 2016-2021 date of publication and duplicate. Out of the remaining 205 papers, 144 were excluded as they failed to meet the selection criteria (the title, abstract, and keywords). Of the remaining 58 papers, 42 were eliminated after reviewing study context, design, and literature review, hence an absence of significant contribution. Thus, 16 papers that met the inclusion criteria were selected for the final analysis.

PRISMA Flowchart



- **Data Management and Extraction:** The articles were managed through an MS-excel sheet demarcated by their titles and author's name. The duplicate articles were removed. A PRISMA flow diagram was made for the article's selection procedure.

The articles which were eligible were fully reviewed and the findings were compiled using MS-excel sheets into a table. The data extracted was checked again for any error. The data, which was extracted includes, author's name, publication date, method of study used, key findings, conclusion, and source of the article.

Literature Review

<i>S. No.</i>	<i>Authors</i>	<i>Date</i>	<i>Study Method</i>	<i>Key Findings</i>	<i>Conclusion</i>	<i>Source</i>
1.	de Grood, Raissi, Kwon & Santana	1st August 2016	Scoping literature review	11 common barriers were found after reviewing 74 articles which included financial, liability issues, unwillingness of using a new technology and lack of support and training.	The barriers could be resolved by including some incentives at the government level and privacy laws implementation to protect the information. Physicians should be involved in each step of implementation to have their perspective for adoption of such e-health strategies.	PubMe d
2.	Palabinda la, Pamarthy &	26th October 2016		Legal and lawsuit complications can be a barrier if not properly implemented can cause user error. Medical errors can be caused by	Proper team should be marked before the implementation of EMR so that errors can be avoided. Proper training and regular skill	PubMe d

	Jonnalagadda			not providing proper training. The cost of implementation stands out to be the critical factor for failed adoption.	upgrading should be done for physicians.	
3.	Kruse, Hays, Orav, Palan & Sequist	26th July 2016	Cross-sectional study	Findings showed that around 63% people think that quality care is improved by EMR whereas 76% reported documentation time to be increased and loss of interaction between patient and physician. Productivity loss was one of the findings as well.	These barriers could be handled by providing support to the physicians, help them increase their productivity and develop methods for improving the patient-physician relationship.	PubMed
4.	Jung et al	8th April 2021	An ethnographically inspired interpretive case study.	The major barriers in implementing EHR are low-skill, poor usability, complexity of the system and distrust towards the system. The common facilitators of EHR include well-executed training programs, improved productivity, and better quality of	Regular education to the EMR users will help in a successful implementation. EMR is expected to increase work productivity and interpersonal collaboration.	PubMed

				care.		
5.	Kumar, Sundar, & Agarwal	February 2020		Advantages of EMR are multiple like, faster and better documentation with no diagnostic errors but improper infrastructure and financial issues are some reasons for poor implementation of EMR	EMR is a worthy portal for better, easier and efficient care of the patient but it should not affect the traditional patient- physician relationship. A balance should be maintained.	ResearchGate
6.	Janssen, Donnelly, Elder, Pathmanathan & Shaw	6th January 2021	Qualitative Methodology to collect data with interviews.	Pre-Implementation Interview findings were, 1. Basic understanding and proper awareness about EMR. 2. Users were in some way engaged in the implementation process. 3. Most find EMR beneficial for data collection while few find interoperability to be an issue.	The major barriers for adoption of EMR include lack of technical support, health professional perception that EMR increases workload and learning curve.	ResearchGate

				4. Increase overload was a major concern. Post Implementation Interview findings were, 1. EMR found useful for data completeness. 2. Both negative and positive effects on workload. 3. Problems raised with features and functionality. 4. Learning of data was a concern.		
7.	Sharma & Aggarwal	September 2016	Bibliographic learning from many hospitals	As per the CAGR report, in 2020 the global market of EHR would be 25.98 billion dollars. But adoption rate is low in India as compared to other countries. The major barriers for this are interoperability standard issues, lack of funds and shortage of appropriate government policies.	For improving the condition in India, mandatory use of EHR should be made in hospitals which are large and medium sized with proper standards to be made and incorporated into the system.	ResearchGate

8.	Srivastava et al	October 2016	Reports and documents from various government bodies and analysis of strategies in other countries	It includes the various steps to be taken for adoption of EHR in India as compared to other countries and India's current policies which includes work on ICT infrastructure, policy, and regulations, standard and developments with research and development.	Adoption of EMR through following measures: - 1. Creating a secured health network. 2. Exchange of health information safely. 3. Open-source software usage. 4. National policy and privacy laws. 5. R&D and HR development 6. Health IT standards	PubMed
9.	Powel, Ludhar & Ostrovsky	21st April 2017	Survey done on leaders of some hospitals in Chandigarh	Among the organizations which were surveyed in Chandigarh which includes 17 hospitals with EHR systems faced barriers to be around financial and staff matters with others like safety, privacy, and interoperability.	This research concludes the presence of EHR in at least one region completely. The EHR system can share information intra-organizationally rather than inter-organizationally. Clinical research is promoted by the data of EHR.	ResearchGate
10.	Newkirch	10	Survey	EMR/EHR benefits the physician	To improve the experience of the	Deloitte

	en & Elsner	September 2018		with reduction in documentation burden, but interoperability and workflow burden remain some problems in adoption of EMR.	physicians, measures could be taken like, feedback of the physician must be taken, optimizing the workflow of the complete team, ensuring a training and support team for EHR, progress can be communicated, and always be up to date with the latest technology.	website
11.	O'Donnell, Kaner, Shaw & Haighton	13th November 2018	Systematic Literature Review	It includes physician's perception about adoption of EMR. The concerns like accessibility, reliability and EMR utility. While some young practitioners showed a positive attitude, the old ones were less skilled technically. Moreover, financial factor and training are common barriers in adoption of EMR	A series of barriers were synthesized by the study as perceived by the primary care physicians while adopting EMR, which could be kept in mind while designing initiatives for implementation. The physicians should be involved in the implementation process for a feasible and user-friendly EMR system.	BMC-Medical
12.	Dutta &	21st	A PRIMA	The study included a total of 25	The barriers should be kept in mind	PubMe

	Hwang	February 2020	compliant systematic review	studies. In these studies, some common barriers were privacy and security concerns, high startup cost, workflow changes, system complexity, lack of reliability and interoperability.	while implementing EMR. The policy makers and health professionals should take in consideration all these factors and other factors like standards and vendor issues. All these need to be eliminated for proper implementation of EMR.	d
13.	Singh, Jadhav & Roopashree	2nd June 2020	Cross-sectional Method based on Technology Acceptance Model	Four factors were identified by the survey. They were according to the technology acceptance model. It includes a positive attitude towards EMR, reliability of the system, the level of difficulty in using EMR and adaptability of the system.	EMR is the future to be used in healthcare settings by physicians. To increase the usage hospitals should focus on, improve positive attitude towards EMR, reduce the difficulty level of its usage, selecting a reliable, proven and an adaptable EMR.	PubMed d.
14.	Nageswararaj, Raman & Basha	10th October 2020	Short Online Survey	According to this study, paper charts are still mostly used in clinical data recording by oncologists rather than EHR	Major obstacles are administrative barriers and cost with lack of awareness and culture as barriers.	ResearchGate

				systems.		
15.	Rahal, Mercer, Kuziemy & Yaya	19th February 2021	Systematic Literature Review	This study reveals some barriers including EMR's system functionality, lack of awareness, lack of training, lack of technical support, limited resource availability and policies for mature use of EMR.	Factors were identified which influence the EMR implementation. These factors could be eliminated by proper training and support with policies. This would lead to a rightful implementation of EMR.	PubMed
16.	Pai MM, Ganiga, M. Pai & Sinha	January 2021		A cloud based EHR system with error-free capturing and data sharing has been introduced. This would allow managers of hospitals to achieve goals both national and international in public healthcare.	The research objective was to provide a simplified system for patient care in the healthcare systems of India. EHR helps healthcare professionals to have patient's information at any point of time.	ResearchGate

Results

After reviewing the above literature, there were many barriers found in adoption of EMR/EHR by physicians. The most common are financial, legal, interoperability, technical, security and privacy issues. Legal and lawsuit complications, usually due to improper implementation which in turn leads to medical malpractice and medical errors.⁽²⁾⁽⁶⁾⁽¹²⁾ Financial issues and start-up cost of EMR/EHR system is common in private practices as well as in hospitals as the cost of implementation is high and due to lack of funds.⁽²⁾⁽³⁾⁽⁶⁾⁽¹²⁾⁽¹³⁾⁽¹⁷⁾

Physicians are usually unwilling to use e-health or new technology as they have technical limitations which makes it difficult to use and distrust the system.⁽³⁾⁽⁴⁾⁽⁵⁾⁽⁷⁾ The time which is required to enter a patient's medical record is a major concern for clinicians as the documentation time increases which makes it time consuming and causes work overload and loss of productivity.⁽³⁾⁽⁴⁾⁽⁶⁾⁽⁷⁾⁽¹⁰⁾⁽¹¹⁾ Lack of computer literacy, low EMR functionality awareness with steep learning curve are also some common barriers.⁽⁵⁾⁽⁸⁾⁽¹²⁾ However, the young clinicians have shown a positive attitude, they think that EMR/EHR is helpful in clinical productivity, patient safety and care quality.⁽¹⁴⁾ But as per many physicians, use of EMR/EHR causes poor patient-physician interaction as most time is consumed in entering data in the system.⁽³⁾⁽⁴⁾ Often, the feedback of physicians on EMR/EHR system is also overlooked.⁽¹⁰⁾

Lack of training and technical support by the vendors also lead to decreased adaptability by the physicians.⁽³⁾⁽⁴⁾⁽⁶⁾⁽⁷⁾⁽⁸⁾ Lack of standards and incentives with shortage of government policies are barriers in adoption of the EMR/EHR system.⁽⁶⁾⁽¹²⁾

There are technical complications as there could be system failure, lack of harmonization, design concerns and complexity of the system thus causing usability issues.⁽³⁾⁽⁴⁾⁽⁵⁾⁽⁶⁾⁽⁷⁾ Interoperability, reliability and standard issues are most common.⁽⁶⁾⁽⁷⁾⁽¹⁰⁾⁽¹²⁾⁽¹⁴⁾⁽¹⁷⁾

Privacy and security concerns of the patient data commonly affect the adaptation of EMR/EHR system, patients do not feel safe sharing their personal information for record on computer systems as they have safety issues.⁽³⁾⁽⁴⁾⁽⁶⁾⁽¹²⁾⁽¹⁷⁾

Discussion

The strategies for adoption of EMR system in India includes,

1. ICT infrastructure with a health net which is nationally secure, health network storage and exchange infrastructure and a free and open source EMR.
 2. Policy and regulations which includes National Health IT policy, protection of privacy of health information while sharing and using and liability of technical failures.
 3. Standards and interoperability with an agency for health IT standards, using of a unique patient identity, support for standard adoption and various guidelines for health IT solutions.
 4. Research, development and education in health IT, human resource development in health IT, development of online application software and international collaboration.
- (9)

The Digital India Movement started by the Government of India, has created advancements within the Healthcare and IT industry.⁽¹⁶⁾ EMR/EHR are very beneficial for the advancement of the healthcare system in India. It is a faster documentation system, has quicker integration of various details and avoids diagnostic errors with better, easier and efficient patient care.⁽¹⁵⁾ It decreases malpractices as review can be done easily, increases follow up results, decreases medication errors, and improves quality of care.⁽²⁾⁽⁴⁾⁽¹¹⁾ Besides so many benefits of EMR, the adoption rate in India is still low. The hospitals which are using EMR in India are given in Annexure-1.

There are various factors which influence the adoption rate of EMR/EHR. The common barriers among physicians includes,

1. High financial cost for setting up an EMR/EHR system in a hospital or private setting.
- (3)
2. Lack of skills and unwillingness of physicians to accept new technology.⁽⁷⁾
 3. Legal complications leading due to medical errors.⁽²⁾

4. Privacy and security issues to patients.⁽⁶⁾
5. Lack of training and support by the vendors.
6. Lack of standards and government policies.

The above barriers need to be taken care of for proper implementation of EMR/EHR in India. Implementation of EMR should be proper with prior meeting with the vendor and regular system upgrading.⁽²⁾ Customizable EMR should be introduced with proper feedback from the physicians and selection of a reliable and proven EMR. An adaptable EMR system which is particularly made as per the requirements and specifications of physicians should be used.⁽⁶⁾⁽⁷⁾ Proper training and upskilling of the users by the vendors to reduce risk of errors.⁽²⁾⁽¹¹⁾⁽¹⁴⁾ This will decrease errors while entering patient information and improve productivity. Government level pay incentives and privacy laws overcome cost and liability issues.⁽³⁾ Government should have prepare a complete security and privacy standards to overcome the issues in safety.⁽⁶⁾ When proper training is given and physicians are habitual in using EMR/EHR, it will be time saving and effective.⁽¹¹⁾ EMR/EHR should be made compulsory for the big and average sized hospitals.⁽¹²⁾ Implementation of EMR/EHR is possible by the combined efforts of all the stakeholders which includes, both the Central government and the State Governments, health professional, medical associations, and Information Technology industry, etc. The e-health named system is being used in many hospitals in India including AIIMS, New Delhi. The MoHFW has issued various guidelines and standards for implementation of EMR.⁽⁹⁾ This would increase the adoption of EMR/EHR systems in India.

Limitations

This present study has some limitations, one of which includes the small number of studies reviewed after exclusion. This could be due to the reason that our study only includes physicians' perspective on barriers and no other healthcare workers or EMR users. Secondly, it is based completely on the review of literature which have different objectives and results which might not even match with the current study.

Conclusion

The adoption rate of EMR is low despite having so many advantages in patient care. The barriers for the low adoption rate have been identified in the study. The most common barriers include, financial, technical, legal, privacy and unacceptance of new technology by the physicians.

The policy makers and government should make standards and guidelines keeping the above in mind for proper implementation of the EMR/EHR system. They should eliminate such barriers to increase the adoption rate. Resistance to any new change is basic human characteristics, thus this should be kept in mind and look forward properly.

EMR implementation is a revolutionary process for the advancement of the healthcare system in India, but barriers remain a concern. Therefore, National policies are required for the regulation of problems. More technologies like web based or cloud-based solutions can be used.

EMR/EHR is the future of quality medical care of the patient and thus from the initial stage only, physicians should be involved for proper adoption along with implementation of the system.

Suggestions

1. Future studies can include barriers perceived by other healthcare workers using EMR as well to have an in-depth knowledge on the subject for a smooth and proper implementation of EMR.
2. Studies could be done using a cross-sectional method with surveys in hospitals using EMR in a region or state and analyzing the barriers faced by them. This could help in future implementation in other hospitals and to improve the adoption rate.

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Annexures

Annexure-1: -

The various EMR/EHR providers and hospitals using them in India are ⁽¹²⁾ :-

<i>Hospitals In India Using EMR</i>	<i>EMR/EHR providing software company</i>
AIMS, Coimbatore	IBA Health
Apollo Hospital, Chennai	Vepro
Artemis Health Sciences, Gurgaon	Siemens
Christian Medical College, Vellore	Karishma Software
Fortis Hospital, Mohali & Delhi	Sobha Renaissance IT Pvt. Ltd.
Manipal Hospital, Bangalore	21st Century healthcare solutions
Max Devki Devi Hospital, Delhi	Soft link International
P D Hinduja Hospital, Mumbai	Prognosys
Ruby Hall Clinic, Pune	Srishti Software
PGIMER, Chandigarh	CDAC
Sri Sathya Institute of Higher Medical Sciences, Bangalore	GE Healthcare