

Factors influencing Adoption of Electronic Medical Records in Government Hospitals of Sri Lanka

Maheesa Dayananda

Senior Project Manager (Digital Health), Information and Communication Technology Agency of Sri Lanka
maheesad@icta.lk

ABSTRACT

Article Info

Volume 6, Issue 6

Page Number: 190-199

Publication Issue :

November-December-2020

Electronic medical records (EMR) is a popular topic in the literature with the increasing use of EMR in both developed and developing countries. It supports to achieve health sector goals including but not limited to; improved quality, efficiency, cost reduction and patients' safety and contributes to the sustainable development goal "ensure healthy lives and wellbeing for all at all ages".

Developing countries like Sri Lanka have a critical requirement of having innovative solutions to improve health outcomes while controlling the cost. EMR identified as a better solution to fulfil this requirement. However, it is questionable whether the rate of adoption is at a satisfactory level compared to the importance and benefits of the EMR. This study aimed at identifying critical success and failure factors in adopting EMR in Sri Lanka and propose strategies for successful adoption. Both primary and secondary data were used for the study. The study focused on experience of forty Government hospitals where the EMR systems established under the Digital Health Project, Sri Lanka. Primary data were collected from the health professionals and the regional project officers of Information and Communication Technology Agency of Sri Lanka who managed and coordinated the EMR implementation process in the hospitals. Focus group discussions (FGD), key informant interviews (KII) were mainly used as data collection tools. Further, the research papers published in peer-reviewed journals were reviewed.

During the study, twenty-six factors that influence the success and failure of EMR adoption were identified. These factors were categorized and analyzed under six themes – i.e., human factors, technical factors, organizational factors, financial factors, legal factors and change management factors. The most influential category of factors was human factors. Even though the EMR implementation involves applying technology in the health sector, 'people' factor should not be forgotten. Ideally, the future EMR implementations should be based on the lessons learnt and best practices of the previous

Article History

Accepted : 15 Nov 2020

Published : 30 Nov 2020

projects in order to achieve successful adoption and to avoid waste of resources.

Keywords: Electronic Medical Records, Digital Health, Adoption, Sri Lanka

I. INTRODUCTION

The Electronic Medical Records (EMR) systems were popular in both developed and developing countries in recent decades as it gives many avenues to improve the health care services. EMR can be defined as “computerized medical information systems that collect, store and display patient information” [1, p. 1]. EMR was emerged and popular with the demand for portability and instant communication of health information. The ways of managing information have been changed over the past years with the rapid development of technology, especially the internet and mobile technologies [2].

The literature suggests that the implementation of EMR provides many advantages such as improved quality of health care, improved efficiency, improved clinical management, improved diagnosis, improved patients’ safety, enhanced documentation and many more [2], [3]. EMR also contributes to achieving the sustainable development goal “ensure healthy lives and wellbeing for all at all ages” by enhancing the data use and improving visibility into health systems [4]. However, EMR projects usually costly, time-consuming, require computer skills and it may lead to unanticipated issues [3].

Low and middle-level income countries have to face a difficult task of achieving health targets with both the challenges of the increasing demand of the consumers and the limitation of resources. These difficulties have led the policymakers to seek more cost-effective and innovative approaches to improve health outcomes [5]. Implementation of EMR has identified as a successful way to improve quality,

patients’ safety and efficiency of the health care services [2], [3], [6]. Even though there are many attempts to implement EMR in developing countries, literature shows that the adoption of EMR remains at a low level [1], [2]. Similarly, Sri Lanka also introduced EMR solutions to the health sector under various projects and initiatives. These projects and initiatives also experienced significant challenges in implementation, adoption and sustainability [7]–[9].

Ministry of Health published the National Policy on Health Information [10] and National eHealth Guidelines and Standards [11] to facilitate and guide the implementation of health information systems. Hospital Health Information Management System (HHIMS), developed by Information and Communication Technology Agency of Sri Lanka (ICTA) and Hospital Information Management System (HIMS), developed by National Cancer Institute and owned by the Ministry of Health are the two main health information systems being implemented in the state hospitals in Sri Lanka [12]. ICTA has supported for implementing EMR systems in 49 Government hospitals covering all the districts of Sri Lanka under the Digital Health Project. The digital health project, conducted by ICTA in close collaboration with the Ministry of Health in 2016, to improve service delivery of Government hospitals in Sri Lanka using the information and communication technologies [13].

This study aims at identifying the key factors leading to success or failure in adopting electronic medical records in Government hospitals of Sri Lanka. The study also intends to propose strategies for the

successful adoption of EMR based on the success and failure factors identified.

II. LITERATURE REVIEW

A. *Electronic Medical Records*

Collecting, storing and displaying patient information in digital form can be defined as Electronic Medical Records [1], [14]. Both terms “Electronic Medical Records” (EMR) and “Electronic Health Records” (EHR) are being used for the same meaning in the literature [1]. There are different terms related to medical records used in the literature depending on the focus and what information it contains; Eg: Electronic Patient Records (EPR) and Computerized Patient Records (CPR) - contains the clinical information of a particular patient of a particular hospital [14].

B. *Why EMR is Required for Developing Countries like Sri Lanka?*

EMR has been identified and accepted globally as a solution for improving quality, safety, efficiency and continuity of health care services [1]–[3], [14]. There are many benefits of EMR including but not limited to; reducing paper works, minimize the chances of errors, improve the information flow, improve access to patient information, improve quality, proper records of patients visits, etc. [3], [15]–[19]. However, the implementation of EMR is a time-consuming and costly task, and it requires human resources with computer expertise [3]. EMR has a great potential to improve the health services of developing countries as the developing countries have a great demand for innovative solutions to improve health care services with the limitation of finances [5], [19].

C. *Theories and Models related to EMR Implementation and Adoption*

Previous studies have used the Roger’s theory of diffusion-of-innovations to describe the diffusion of health information technology. Greiver et al. [20] in a

qualitative study with twelve community-based family physicians, applied diffusion-of-innovations theory to identify the factors influencing implementation of EMR. Based on the theory, they selected nine factors that can influence the implementation of innovation in the health care settings namely; relative advantage, compatibility, complexity, observation, reinvention, organizational size, organizational slack, presence of champion, and supportive leadership. The researchers found that some factors such as lack of relative advantage, high complexity, and low compatibility as the critical barriers for implementation of EMR.

Merhi [21] explain the process model leading to a successful implementation of EMR in three main stages; pre-implementation, implementation and post-implementation (please see figure 1).

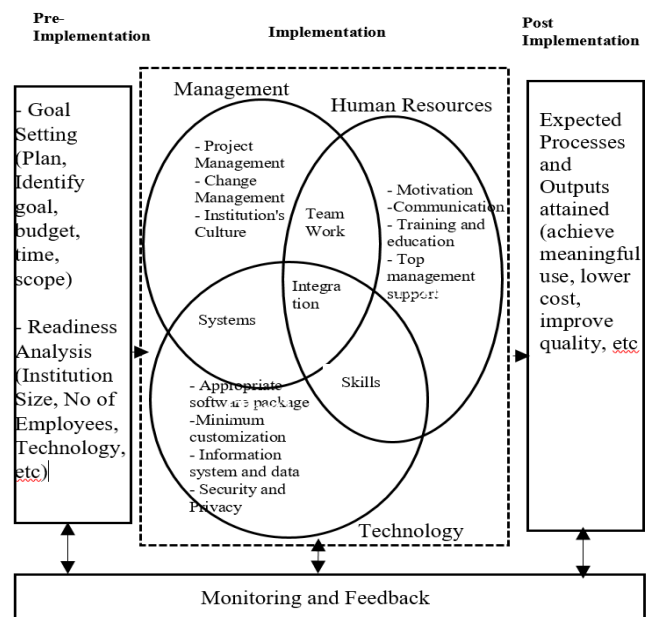


Figure 1. Process Model of EMR Implementation

Source: adapted from Merhi. [21]

Human-Organization-Technology (HOT) Fit Model developed by Yusof et al. is useful for understanding the adoption of healthcare information systems [22]. This model is quite popular among the researchers

that describe human, organization and technology as critical components of information systems [23].

D. Factors Lead to Success or Failure of EMR Adoption in Developing Countries

Since there are many efforts to implement EMR in developing countries that have not achieved the expected outcomes, many researchers have investigated different aspects of EMR implementation with different user groups. Boonstra and Broekhuis [1] in a systematic review have described that there are main eight categories of barriers related to acceptance of EMR. The categories are; i) financial, ii) technical, iii) time, iv) psychological, v) social, vi) legal, vii) organizational and viii) change process. However, this systematic review has considered only the physicians' perspective. There may be different barriers for EMR implementation related to other categories of staff, including Medical Administrators, Nurses, Medical Laboratory Technicians (MLTs), and Pharmacists, etc.

Fritz et al. [24] in a systematic review explains that there are seven categories of success factors in EMR implementation. The categories are; i) ethical, ii) financial, iii) functionality, iv) organizational, v) political, vi) technical and vii) training. However, this study has mainly covered the African countries. Further, out of the selected systems, almost 50% were focused on a specific disease such as HIV/AIDS. The success factors of EMR implementation may vary region to region as well as depending on the education level, income and other factors.

E. Basic Framework Used for the Classification of Success and Failure Factors in EMR Implementation

Brender et al. [25] in a pilot Delphi study with a group of health informaticians introduced a success and failure criteria based on six key categories. The six categories are; i) functional, ii) organizational, iii) technical, iv) managerial, v) cultural and vi) legal. They have identified a total of 110 success factors and

27 failure factors and then summarized into above six key categories.

The above framework was used for this study as the basic framework since this framework was developed based on the vast experience of many experts in health information systems.

Sood et al. [2] describe that there are apparent differences in the challenges of EMR implementation in developed and developing countries. Considering the above differences and based on the factors identified during the literature review of this study, the identified factors were categorized into six main categories by excluding the cultural, functional and managerial categories of the Brender et al.'s framework and by adding two new categories of human and change management. The final categories identified for this study were; i) human, ii) technical, iii) organizational, iv) financial, v) legal and vi) change management. The cultural factors were considered under 'human' category while including functional factors under 'technical' category and managerial factors under the 'organizational' category (please see figure 2).

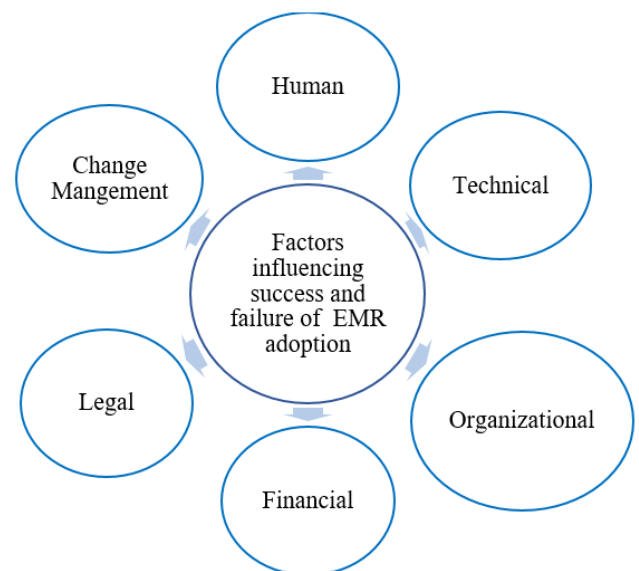


Figure 2 : The six key categories of factors influencing success and failure of adoption of EMR

Source: Developed by the Author (2020)

F. Conceptual Framework

Based on the literature review, there are six main categories of factors that influence success and failure of EMR adoption out of which change management process involves from beginning to end of the EMR adoption process. These six categories of factors decide the level of adoption, which may be low or high (Please see figure 3).

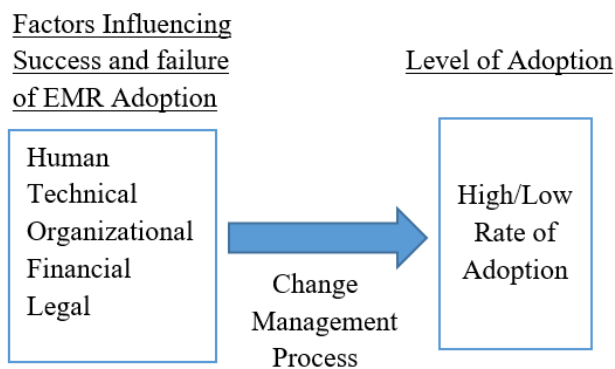


Figure 3: Conceptual framework of EMR Adoption
Source: Developed by the Author (2020)

III. METHODS AND MATERIAL

This paper uses the deductive approach to draw conclusions by interpreting the findings of the research. The study used both primary and secondary data. The study focused on the experience of HHIMS implementation in 40 Government hospitals under the Digital Health Project as;

- i) these hospitals have two to eight years of experience with an EMR system,
- ii) hospitals are belonging to different categories, and
- iii) geographically distributed in all districts of the country.

Primary data were collected from the health professionals and the regional project officers of ICTA who managed and coordinated the HHIMS implementation process in the hospitals. Focus group discussions (FGD) and key informant interviews (KII) were mainly used for data collection, and telephone

interviews were conducted in the incidents of physical meetings were not possible. Further, the research papers published in peer-reviewed journals on similar topics and other related publications were reviewed.

Thematic analysis was used for data analysis. Initially, factors that influenced on success and failure of EMR adoption were identified. Then the factors were grouped into six main categories – i.e., human factors, technical factors, organizational factors, financial factors, legal factors and change management factors. The data were synthesized and analyzed under these themes (categories) and sub-themes (factors).

IV. RESULTS AND DISCUSSION

Twenty-six factors that influence the success and failure of EMR adoption were identified. These factors were categorized into six main categories (please see table 1)

Table 1: Factors influencing adoption of EMR

Category	Factors influencing adoption of EMR
Category 1: Human (HUM)	1.1 Awareness on benefits of EMR 1.2 Knowledge and Experience of using EMR 1.3 Availability of IT Professionals/ Health Informaticians 1.4 Perception on EMR 1.5 Willingness to change 1.6 Self-innovativeness
Category 2: Technical (TEC)	2.1 Availability of manuals/ guidelines 2.2 Technical sufficiency 2.3 Customizability of software 2.4 User-friendliness of Software

	2.5 Availability of IT resources 2.6 Support and Maintenance Services
Category 3: Organizational (ORG)	3.1 Leadership / managerial support 3.2 Strategic planning for adaption of EMR 3.3 Monitoring mechanism 3.4 Continuous follow-up 3.5 Length of implementation time period 3.6 Supportive organizational culture
Category 4: Financial (FIN)	4.1 Initial cost 4.2 Operations & maintenance cost 4.3 Return on investment
Category 5: Legal (LEG)	5.1 Availability of policies / procedures 5.2 Supportive legal framework 5.3 Confidentiality
Category 6: Change Management (CHM)	6.1 Re-design workflows / Process Improvements 6.2 Training and capacity building

A. *The Six Categories of Factors Influencing Adoption of EMR*

[1] Category 1: Human factors (HUM)

Human factors category mainly includes health care professionals. The findings show that the beliefs, behaviours and attitudes of the health staff have a significant impact on EMR adoption. Lack of awareness on the benefits of EMR, lack of knowledge and experience on how to use EMR, negative perceptions and attitudes on EMR are vital barriers for successful implementation and adoption of EMR. Inadequate staff, including the IT professionals and the health informaticians, was identified as one of the critical barriers for ensuring sustainability. Resistance

to change also affect implementation and adoption. Self-innovativeness is an important factor for success since it creates champions. During the study, it was identified that more focus on technical matters while ignoring the people who use the system will lead to failure. On the weight of the evidence, the human factors were the most influential category that leads to success or failure of EMR adoption.

[2] Category 2: Technical factors (TEC)

The technical category includes all the technological aspects of EMR. All the concerns related to computer hardware, network infrastructure, EMR software and the support and maintenance activities are considered under this category. EMR systems are usually high tech systems; therefore, the users have to have some level of IT knowledge. Non-availability of manuals and guidelines, technical issues related to network, hardware and software, lack of customizability according to different requirement of the users, lack of user-friendliness of the system, lack of IT resources and issues related to support and maintenance services were identified as the critical barriers of EMR adoption. This category also a key area that needs special attention as success heavily depend on these factors, especially in the rural areas where the resources and support services are limited.

[3] Category 3: Organizational Factors (ORG)

The organizational category includes the management aspects within the organization. Leadership and managerial support were identified as the most crucial requirement for successful implementation of EMR at any place. Proper monitoring mechanisms and follow up actions had been beneficial to ensure proper adoption of EMR. Strategic planning and supportive organizational culture facilitate proper adoption. Implementation duration also identified as an important matter for the adoption of EMR. Both too short and too long durations of implementation have led to failures.

[4] Category 4: Financial Factors (FIN)

The financial category includes all the monetary requirements that need for EMR implementation and continuation. The monetary requirements mainly include the initial cost and the operations and maintenance cost. The initial cost of EMR implementation is usually high as it requires a significant amount of resources such as computer hardware, network infrastructure, software, and training, etc. Many people have an uncertainty about the return on investment, that also one of the barriers for successful adoption. Adequate attention and pre-planning for operations and maintenance (O&M) cost are one of the most critical factors to ensure the sustainability of the project.

[5] Category 5: Legal Factors (LEG)

The legal category includes both policies & procedures within the organization and laws enacted in the country. The legal factors facilitate EMR implementation and adoption. The key factors identified were appropriate policies, guidelines and procedures, availability of Laws to ensure the legal validity of data and the confidentiality and security of data.

There are some important laws already in place, i.e.

- i) The electronic transaction act No. 19 of 2006, as amended by Act No. 25 of 2017, recognize the validity of electronic records, authorize the Government organizations to keep the data in electronic form and to provide services by electronic means,
- ii) The computer crimes Act No. 24 of 2007, provide the legal basis for action against the unauthorized access to computers, computer programmes or data [26].

Though these laws are in place, some health care professionals have little understanding and awareness about the validity of electronic medical records. It may negatively impact on EMR adoption.

[6] Category 6: Change Management (CHM)

Change management was identified as one of the essential aspects of EMR implementation and heavily contribute to successful adoption. This category includes redesigning workflows and process improvements, training and capacity building, incentives for the best performers, etc. Change management process should be there throughout the project from the inception to completion. According to the findings, a considerable number of healthcare workers have limited exposure to IT as they have specialized in the healthcare domain. Therefore, there is a natural reluctance to change. Change management must be planned before the project implementation, and the highest priority must be given as it is one of the critical factors that highly influenced the adoption of EMR.

B. *Proposed Strategies for Successful Adoption of EMR*

Several strategies were identified during the study for successful adoption of EMR, especially in the low resource settings. Since the human factors identified as the most crucial factor that decides the success of adoption, it is vital to address the issues related to users. Some of the possible strategies identified are, conducting proper orientation on benefits of EMR before implementation, formal and informal training, attitude changing programmes and motivational programs for health staff. Further, introducing electronic medical records to the curriculum of medical education at an undergraduate and post-graduate level will be useful in the long-run.

The findings revealed that having a proper mechanism with all stakeholders including the hardware, software and network providers to attend technical issues within a short period and provide user manuals and guidelines in advance to the users is essential. Conducting proper requirement analysis with the users before the design and implementation of the EMR system is a crucial factor to avoid most of the software issues related to usability and

operational acceptance. Further, having back-up computer hardware and provide sufficient resources are also identified as critical factors for successful adoption.

Leadership and managerial support is one of the most influential factors for successful EMR adoption. Therefore, finding good leaders and convince them on the benefits of EMR is essential. Include the EMR implementation and adoption activities in the strategic plans of the hospital and action accordingly will generate better results. Furthermore, applying project management concepts is a vital element to achieve the project objectives within the expected timeline and the budget. It will improve the trust among the users on the EMR implementation project. Identifying the budget requirements in advance and allocating budgets under the relevant budget estimates at the hospital, regional and national level is useful to solve many issues related to finance. Otherwise, it may lead to system failures in the incidents where the hospitals do not have sufficient funds to purchase consumables, make the payments for vendors for support and maintenance services, etc. Further, private-public partnerships, sponsorships and donations also can be effectively used to fulfil the financial requirements.

Legal factors facilitate the EMR implementation process by providing legal cover for the users as well as by ensuring the safety and confidentiality of data. This is a very important element as the health data are globally considered as one of the most sensitive and most confidential data categories. Therefore, identifying the existing gaps in legal aspects and strengthen the legal frameworks facilitate EMR implementation and adoption.

Change management is a crucial aspect that should initiate from the beginning of the project and last until the project end. Provide continuous training, continuous human resource development activities

and redesign the medical and administrative workflows in-line with the EMR implementation are some critical strategies for success.

C. *Limitations*

The study focused on 40 Government hospitals where the Hospital Health Information Management System (HHIMS) implemented under the Digital Health Project. There are some other hospitals available with different EMR systems. However, they were not included in the study due to resource constraints. EMR implementation were limited to mainly the outpatient departments and the selected clinics of the hospitals included for the study. This study mainly focused the project implementers and system users' perspectives. The beneficiaries (patients) perspectives have not been captured in this study.

V. CONCLUSION

This study aimed to identify critical factors influencing on success and failure of adopting electronic medical records in Sri Lanka. Twenty-six factors that contribute to success and failure of EMR adoption were identified, and these factors were categorized into six main categories – i.e., human factors, technical factors, organizational factors, financial factors, legal factors and change management factors. On the weight of the evidence, the analysis revealed that the most influential factor that contributes to the success or failure of EMR adoption is human factors, among others.

Proper awareness on benefits of EMR to all stakeholders, continuous human resource development activities, redesign medical and administrative workflows in-line with the EMR implementation are few key proposed strategies that need to be prioritized among others. In addition to that, establish a proper mechanism to address technical issues, conduct proper requirement analysis with the stakeholders, identifying good leaders,

applying project management concepts in EMR implementation, adequate budget allocations in advance based on the correct budget estimates and formulate laws, policies and procedures to facilitate EMR implementation are some of the other important strategies to ensure successful adoption of EMR.

Even though, EMR implementation involves with applying technology in the health sector, 'people' factor should not be underestimated since the evidence show that it is one of the most critical aspects that contribute to the success of EMR adoption. Furthermore, it is essential to implement EMR, based on the lessons learnt and best practices in order to achieve successful adoption and to avoid waste of resources, especially in the context of a low-resource setting.

VI. REFERENCES

- [1]. A. Boonstra and M. Broekhuis, "Barriers to accept EMR," *BMC Health Serv. Res.*, vol. 10, no. 231, 2010.
- [2]. S. P. Sood et al., "Electronic medical records: A review comparing the challenges in developed and developing countries," *Proc. Annu. Hawaii Int. Conf. Syst. Sci.*, pp. 1–10, 2008, doi: 10.1109/HICSS.2008.141.
- [3]. R. R. Shield, R. E. Goldman, D. A. Anthony, N. Wang, R. J. Doyle, and J. Borkan, "Gradual electronic health record implementation: New insights on physician and patient adaptation," *Ann. Fam. Med.*, vol. 8, no. 4, pp. 316–326, 2010, doi: 10.1370/afm.1136.
- [4]. Global Digital Health Index (GDHI), "About the Global Digital Health Index," 2020. <https://www.digitalhealthindex.org> (accessed Nov. 22, 2020).
- [5]. J. D. Piette et al., "Impacts of e-health on the outcomes of care in low- and middle-income countries: where do we go from here?," *Bull. World Health Organ.*, vol. 90, no. 5, pp. 365–372, 2012, doi: 10.2471/BLT.11.099069.
- [6]. S. Rathnayake and R. Hewapathirana, "Impact of Electronic Health Records in Sri Lanka: Case Study of Four Government Hospitals .," 2015, Online]. Available: https://s3.amazonaws.com/academia.edu.documents/38725595/IMPACT_OF_ELECTRONIC_HEALTH_RECORD_IN_SRI_LANKA_IEEE_final_v.3.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1509778654&Signature=vXxafXOZjgNOsrGG3l5ZNwuynCU%3D&response-content-disposition=inline.
- [7]. D. Pole, "Computerization of Clinical Records in Out-patient Departments of Sri Lankan Hospitals," *Sri Lanka J. Bio-Medical Informatics*, vol. 1, no. 4, p. 200, 2010, doi: 10.4038/sljbm.v1i4.2235.
- [8]. T. Jeyakodi and D. Herath, "Acceptance and Use of Electronic Medical Records in Sri Lanka," *Sci. Res. J.*, vol. IV, no. I, pp. 1–5, 2016, Online]. Available: www.scirj.org.
- [9]. K. Sarathchandra and S. Rathnayake, "Implementation challenges and Research Gaps of Electronic Medical Records (EMR) in Public Sector Hospitals of Sri Lanka," *Int. J. Sci. Res. Publ.*, vol. 9, no. 7, p. p9124, 2019, doi: 10.29322/ijsrp.9.07.2019.p9124.
- [10]. Ministry of Health Nutrition and Indigenous Medicine, "The National Policy on Health Information," 2017. Online]. Available: http://www.health.gov.lk/moh_final/english/public/elfinder/files/publications/publishpolicy/NationalPolicyonHealthInformation.pdf.
- [11]. Ministry of Health, "National Digital Health Guidelines & Standards 2.0," 2020. Online]. Available: http://www.health.gov.lk/moh_final/english/public/elfinder/files/publications/list_public/NDHGS_v2.pdf.
- [12]. K. Mendis et al., "Cloud-Based Open Source Primary Care Electronic Patient Record System for Sri Lankan Citizens," 2019 *Natl. Inf. Technol.*

- Conf. NITC 2019, pp. 8–10, 2019, doi: 10.1109/NITC48475.2019.9114518.
- [13]. ICTA, “Digital Health Project,” Official Website ICTA, 2020. <https://www.icta.lk/projects/digital-health/#1447655280990-9ce25279-b127ffac-1feb> (accessed Nov. 22, 2020).
- [14]. K. Häyrynen, K. Saranto, and P. Nykänen, “Definition, structure, content, use and impacts of electronic health records: A review of the research literature,” *Int. J. Med. Inform.*, vol. 77, no. 5, pp. 291–304, 2008, doi: 10.1016/j.ijmedinf.2007.09.001.
- [15]. L. G. Yamamoto and A. N. G. A. Khan, “Challenges of electronic medical record implementation in the Emergency Department,” *Pediatr. Emerg. Care*, vol. 22, no. 3, pp. 184–194, 2006, doi: 10.1097/01.pec.0000203821.02045.69.
- [16]. R. Wong and E. H. Bradley, “Developing patient registration and medical records management system in Ethiopia,” *Int. J. Qual. Heal. Care*, vol. 21, no. 4, pp. 253–258, 2009, doi: 10.1093/intqhc/mzp026.
- [17]. M. Top and Ö. Gider, “Nurses’ views on electronic medical records (EMR) in turkey: An analysis according to use, quality and user satisfaction,” *J. Med. Syst.*, vol. 36, no. 3, pp. 1979–1988, 2012, doi: 10.1007/s10916-011-9657-6.
- [18]. M. Khalifa, “Barriers to health information systems and electronic medical records implementation a field study of Saudi Arabian hospitals,” *Procedia Comput. Sci.*, vol. 21, pp. 335–342, 2013, doi: 10.1016/j.procs.2013.09.044.
- [19]. G. B. Cline and J. M. Luiz, “Information technology systems in public sector health facilities in developing countries: The case of South Africa,” *BMC Medical Informatics and Decision Making*, 2013. <http://www.biomedcentral.com/1472-6947/13/13>.
- [20]. M. Greiver, J. Barnsley, R. H. Glazier, R. Moineddin, and B. J. Harvey, “Implementation of electronic medical records: Theory-informed qualitative study,” *Can. Fam. Physician*, vol. 57, no. 10, pp. 390–397, 2011.
- [21]. M. I. Merhi, “A process model leading to successful implementation of electronic health record systems,” *Int. J. Electron. Healthc.*, vol. 8, no. 2–4, pp. 185–201, 2015, doi: 10.1504/IJEH.2015.075355.
- [22]. J. W. Lian, D. C. Yen, and Y. T. Wang, “An exploratory study to understand the critical factors affecting the decision to adopt cloud computing in Taiwan hospital,” *Int. J. Inf. Manage.*, vol. 34, no. 1, pp. 28–36, 2014, doi: 10.1016/j.ijinfomgt.2013.09.004.
- [23]. I. Muslimin, S. P. Hadi, and E. Nugroho, “An Evaluation Model Using Perceived User Technology Organization Fit Variable for Evaluating the Success of Information Systems,” *Sci. J. Informatics*, vol. 4, no. 2, pp. 86–94, 2017, doi: 10.15294/sji.v4i2.12012.
- [24]. F. Fritz, B. Tilahun, and M. Dugas, “Success criteria for electronic medical record implementations in low-resource settings: A systematic review,” *J. Am. Med. Informatics Assoc.*, vol. 22, no. 2, pp. 479–488, 2015, doi: 10.1093/jamia/ocu038.
- [25]. J. Brender, E. Ammenwerth, P. Nykänen, and J. Talmon, “Factors influencing success and failure of Health Informatics systems: A pilot Delphi study,” *Methods Inf. Med.*, vol. 45, no. 1, pp. 125–136, 2006, doi: 10.1055/s-0038-1634049.
- [26]. ICTA, “Enabling Legal Environment,” Official Website ICTA, 2020. <https://www.icta.lk/act/> (accessed Nov. 29, 2020).

Cite this article as :

Maheesa Dayananda, "Factors influencing Adoption of Electronic Medical Records in Government Hospitals of Sri Lanka", *International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT)*, ISSN : 2456-3307, Volume 6 Issue 6, pp. 190-199, November-December 2020. Available at doi : <https://doi.org/10.32628/CSEIT206624>
Journal URL : <http://ijsrcseit.com/CSEIT206624>