Journal of Ecohumanism
2024
Volume: 3, No: 8, pp. 5129 – 5137
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v3i8.5164

Critical Analysis of Healthcare Technology Integration, Patient Empowerment, and Cost Efficiency

Bader Ayed Alqarni[1], Noorah Samir kurdi[2], Jaber fayez Mohammed Alelyani[3], Abdulrazaq Mulfi Almutairi[4], Ahmed Mohammed Ali Alshehri[5], Nasser Muidh Ali Almansour[6], Mohammed Ayed Alqarni[7], Mona Abdulrahman Mohammed Alshehri[8], Norah Ayed Alamri[9], Reem Salman Hassan Alamri[10]

Abstract

This paper examines the role of Healthcare Technology in patients' involvement and determining cost efficiency in healthcare delivery. This critically examines how the technological advancement in the healthcare industry, e.g., EHR, telemedicine and AI, are transforming one's care, enhancing quality, and lowering costs. Also, the paper describes the role of patient self-management-support, including using digital solutions, knowledge, and involvement in enhancing health and resource management in practice. The last section describes the costs and revenue that might be gained from technology in the center and the main issue of integrating innovation with restraint in technology investment.

Keywords: *Critical Analysis, Healthcare, Emotional Impact, Cost Efficiency.*

Introduction

The scope and impact of the introduction of integrated healthcare technology on patient outcomes and cost directions should be outlined. Explain why healthcare innovation is important with emphasis on patients' participation and the functionality of technology in the growth of healthcare. Explain the rising need and expectations for enhanced healthcare organizations that aim to deliver better quality patient care cheaper and then frame this relationship with technology use.

Literature Review

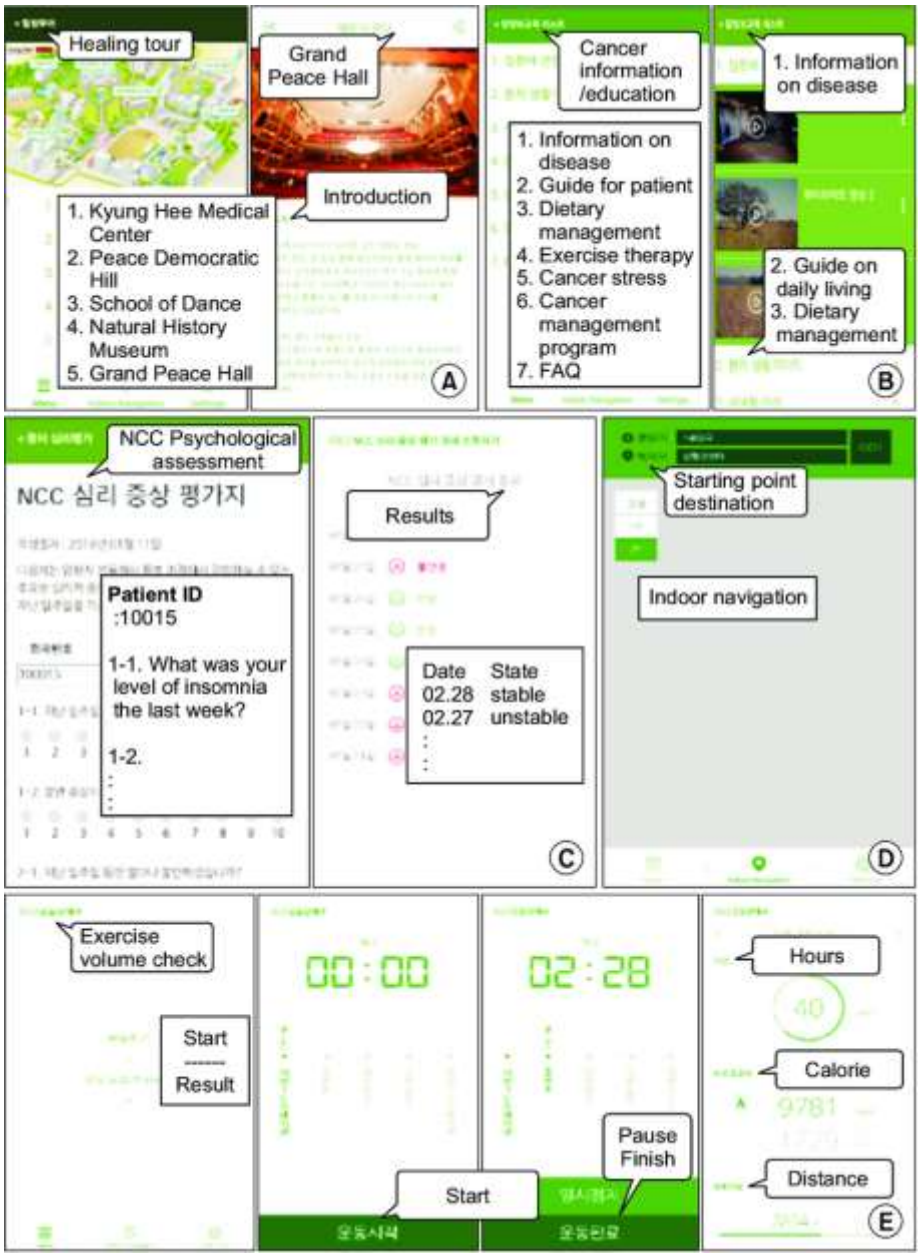
Interfaces in Medical Care

The use of innovations in the structures of health facilities has revamped the way of attending to patients, arriving at clinical decisions and the functionality of the total health facilities. The most popular technological advancement implemented today is the use of Electronic Health Records (EHR). EHR systems(boost clinical decision-making) enhance the doctor's understanding of the patients by giving them access to all available records, which helps to minimize the chances of making wrong diagnoses and prescriptions (Alzyoud et al., 2024; Mohammad et al., 2022; Rahamneh et al., 2023). For example, EHRs help to identify possible drug-drug interactions, allergies and previous medical conditions, which can be devastating when they go unnoticed. In addition, through EHRs, communications and coordination

[1] Jeddah first cluster, Saudi Arabia, Email: baayalqarni@gmail.com
[2] The first health cluster, Al-Thagher Hospital, Saudi Arabaia, Email: nskurdi@moh.gov.sa
[3] Jeddah first cluster, Saudi Arabia, Email: jfalalyani@moh.gov.sa
[4] Jeddah first cluster, Saudi Arabia, Email: aalmutairi183@moh.gov.sa
[5] Jeddah Second cluster, Saudi Arabia, Email: aalshehri15@moh.gov.sa
[6] Najran cluster, Saudi Arabia, Email: naseer_mm@outlook.com
[7] Assir cluster, Saudi Arabia, Email: malqarni20@moh.gov.sa
[8] Aseer Health Cluster, Saudi Arabia, Email: malshehri94@moh.gov.sa
[9] Aseer Health Cluster, Saudi Arabia, Email: naalamrei@moh.gov.sa
[10] Aseer Health Cluster, Saudi Arabia, Email: realamri@moh.gov.sa

Journal of Ecohumanism
2024
Volume: 3, No: 8, pp. 5129 – 5137
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v3i8.5164

between various professionals developing an EHR are real-time and enhance the coordinated care for the patients. Research has also found that EHR systems can decrease operational costs by other means, such as cutting down on paperwork, Rationalizing administrative procedures and enhancing the delivery of healthcare services.



(Greenhalgh et al., 2018)

Other use, telemedicine has also turned out to be an influential tool that has revolutionized the delivery of healthcare more so to the unserved and rural patients. Telehealth technology brings the healthcare professional to the patient's doorstep through remote consultation, sparing the patient from costly inpatient visits (Mohammad et al., 2024a; Mohammad et al., 2023a; Mohammad et al, 2024b). Such a technology has been essential since social distancing and complete lockdowns have become the new norm due to the Covid-19 pandemic. It has been determined that through telemedicine, wait times are reduced, patients are more conveniently accessed, and continuity of care is maintained, particularly for patients with chronic diseases who do not have to travel great distances to access health facilities, thus incurring many costs. Another research has also revealed that telemedicine can enhance healthcare results through the timely

Journal of Ecohumanism
2024
Volume: 3, No: 8, pp. 5129 – 5137
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v3i8.5164

diagnosis and treatment of a disease (Al-Azzam et al., 2023; Al-Shormana et al., 2022; Al-E'wesat et al., 2024).

One of the newest trends in healthcare technology is the utilization of Artificial Intelligence (AI) for diagnostics and patient care. It has been common to use AI tools to improve the overall diagnostic capability of an organization by detecting disease markers in medical images, lab results, and patient information about the early stages of diseases, including cancers, cardiovascular diseases, and neurological disorders, among others. Additionally, AI-based predictive analysis can help one predict which patients would be prone to developing some particular disease or other complications, which allows one to come in early enough to arrest the situation. In addition, it can also decrease operative costs by allowing doctors to devise unique treatment programs tailored towards patients' DNA, behaviour, and previous ailments and prevent readmissions to healthcare facilities. Finally, we have characteristics such as improving diagnostic capabilities and assisting in patient care by reducing readmissions and improving the general utilization of healthcare resources.

Robotics in surgery has also changed the face of care delivery in that aspect of precision and enhancing the speed of recovery rates. This is made possible by the use of robotic technology that enables a surgeon to perform the surgery using small incisions on the body, reducing the extent of depression the body undergoes during surgery. This leads to decreased time required for recovery, fewer post-operation complications and a decreased likelihood of operation-site infections. Robotic systems also improve the surgeon's accuracy of the movements concerning incisions and in the interventions that are made and consequently benefit patients. For instance, robotic surgeries, particularly in prostate cancer surgeries and spinal surgeries, have been considered to give better results regarding accuracy and length of hospitalization. Moreover, robotic systems increase the surgeon's precision of the instruments used to perform various operations and bring additional possibilities to improve patients' safety(George et al., 2019; Mohammad et al., 2023b; Al-Hawary et al., 2020; Al-Husban et al., 2023).

Patient Empowerment

In this paper, it will be seen that the adoption of technology has impacted the clinical side of the healthcare sector and the patient. We bring forth patient portals, mobile applications, and wearables that create new levels of patient engagement with digital health tools and combined healthcare services. Such as patient portals, people can access patient health information, set appointments, interact with providers or request prescription renewals online from the comfort of their homes. Wearable electronics, for example, smart watches and fitness trackers, measure important health factors, including heartbeat rate, blood pressure, and physical activity, and give users detailed information that can be discussed with their clinicians. The constant access to health information makes patients more active in their health status and the decisions they make in notice.

Journal of Ecohumanism
2024
Volume: 3, No: 8, pp. 5129 – 5137
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v3i8.5164

Knowledge of what is happening to your body, together with control of your own body, is part of patient precaution, especially if one has something like diabetes or hypertension. E-learning sites and health applications inform patients about their ailments, available treatments and how to monitor their health improvement over time. For instance, patients with diabetes can type in their blood sugar levels, record the foods and exercise they consume, and receive personalized comments. Such tools compel patients to take more responsibility for themselves; knowing they are innovatively empowered, they look for information and embrace their treatment roles. All these self-management strategies have been associated with increased compliance with medical recommendations, better control of symptoms, and fewer hospitalizations.

Furthermore, decision-making has been regarded as the key component of patient-centred communication owing to the technological applications with privileged medical data available for patients. In the normal healthcare model of practice, the patients made up their minds and sought the physician's assistance. However, patient involvement in the decision process is highly encouraged in today's medical care, especially on difficult choices such as treatment of chronic diseases or surgery. This role is facilitated by technology in that patients can access their medical conditions, treatment plans, hazards and prognosis records. This approach improves patient satisfaction and enhances treatment adherence, as patients are more likely to follow through with a plan they have helped design.

Cost Efficiency and Healthcare Sustainability

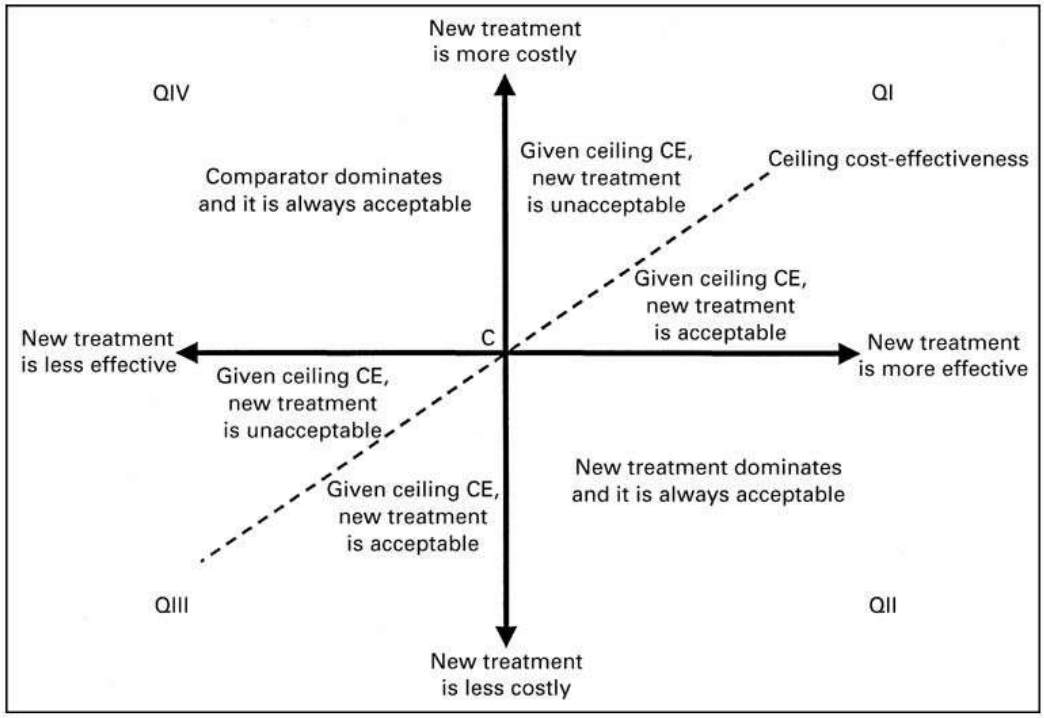
The first benefit healthcare facilities can enjoy from implementing healthcare technologies is the prospect of cost savings. An overwhelming body of research has shown or indicated that applying potentially impactful solutions, including EHRs, Telemedicine, and AI-predictive analytics, results in much cost savings. For instance, telemedicine has been established to have the potential to decrease the frequency of in-person consultations, which is highly beneficial to patients with chronic diseases who need constant check-ups. In the same way, AI in diagnostics decreases diagnostic missteps, and for that reason, patients may not undergo additional tests, procedures or hospitalizations that they do not require. Not only does it contribute to the reduction of waste by mustering monetary value to improve a patient's prognosis, but it also aids in picking out early signs of high-risk potential patients, to whom providers can then provide intercessions rather than waiting for the onset of pricey later treatments. These applications enhance patient care, critically decrease readmission rates, and optimize the healthcare processes to cut costs significantly in the long run.

Another proposed area that delivers improved cost efficiency is the use of integrated and preventive care. AppState technologies for these models, including telehealth and Artificial Intelligence, assist in

Journal of Ecohumanism
2024
Volume: 3, No: 8, pp. 5129 – 5137
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v3i8.5164

coordinating care and do not allow patients to access services they do not require. For example, patients with chronic illness could have a history check through consultative telemedicine that keeps them away from expensive emergency visits or hospitalization(George et al., 2019; Al-Nawafah et al., 2022; Alolayyan et al., 2018; Eldahamsheh, 2021). Other technologies, including mobile health applications that monitor lifestyle parameters, enable the patient to keep off diseases, reducing the costs of treating them in the future.

However, there are considerable obstacles in attaining improved longer-term financial viability, even when costs may be lower. The business case of healthcare technologies is also often obvious; a health organization can incur many initial costs when implementing technologies such as new systems, staff training, etc. Also, there would be opposition from healthcare workers who have embraced conventional practice techniques. Solving these issues needs proper strategizing and resource dedication, which can make technologies cost-effective, available and promising enough to change the healthcare sector. Policymakers must enable technology assets within care delivery systems with affordable and sustainable solutions, especially in areas with limited resources.



(Car et al., 2017)

Consequently, healthcare technology, patient-centred care and cost management are revolutionizing the healthcare sector. Using technologies, EHRs, telemedicine, AI, robotics, and other outcomes that occur in clinical practice, patient engagement and cost savings. Nevertheless, an increase in adoption and guaranteeing the effectiveness and sustainability of such technologies continues to be an issue. With the technological progression, the healthcare sector must embrace technological changes and improve patient healthcare delivery to develop a sustainable, cost-effective, and efficient healthcare system.

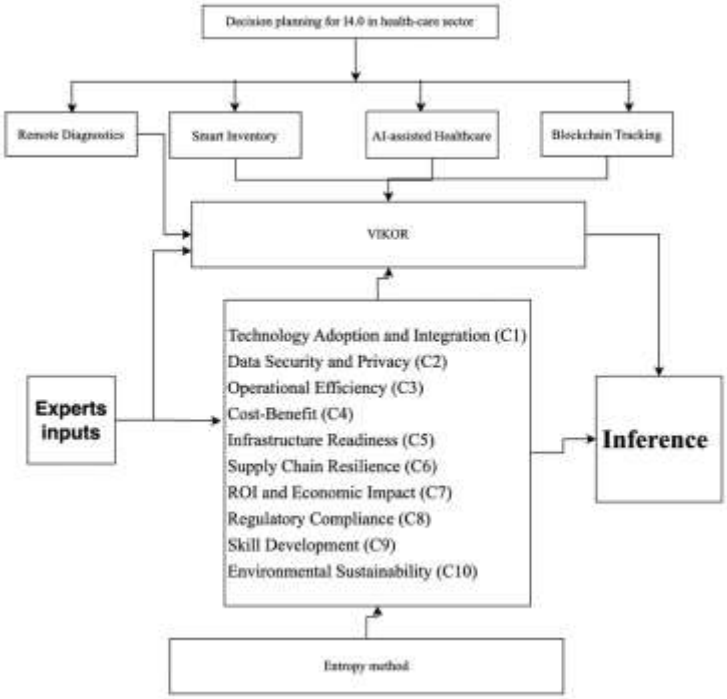
Results and Findings

Effect of Adopting Integrated Healthcare Technology

The effective incorporation of technology into the various healthcare systems resulted in better patient outcomes, more patient access to good facilities and tremendous financial savings. Perhaps one of the biggest strides in the field is the customary usage of Electronic Health Records (EHRs). The studies performed to date have all emphasized a significant decrease in the rate of medication errors in hospitals

Journal of Ecohumanism
2024
Volume: 3, No: 8, pp. 5129 – 5137
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v3i8.5164

and other healthcare settings where EHR systems have been adopted and an enhancement to the general safety status of the patients. For example, St systematically reviewed the research and compared the results of 6 hospitals after the installation of EHRs, and the study in the Journal of the American Medical Informatics Association reported a decrease in medication errors by 10-15% if caused by increased prescription accuracy and automated alerts for possible drug interactions. Furthermore, reduction in health disparities has been realized through more effective care through integrating EHRs for better care coordination, enhancement of decision-making through super-utilization of EHRs and ensuring that providers can access the records of the patient's first health encounters to ensure proper interventions are made.



(Adler-Milstein & Huckman, 2018)

Telemedicine has also delivered a significant input toward improving healthcare access, especially in hard-to-reach regions. American Telemedicine Association data shows that telemedicine consultations in the United States increased in excess of 50% from 2019 to 2023 and increased in the rural areas where access to a doctor and medical care is scarce. Through the telemedicine approach, it has been possible to explain how patients such as those found in the Veterans Affairs Telehealth Services and Project ECHO in New Mexico can receive special care when they would otherwise be forced to cover long distances in search of healthcare services. Telemedicine has also played a tremendous role during the COVID-19 pandemic because people can receive care without physical contact. This access has enhanced patients' health, reduced waiting for their diagnosis and treatment, and ensured patients with diseases requiring management over long periods maintain coherent, consecutive care.

Today, it is impossible to conceive of a healthcare system that does not rely upon Artificial Intelligence (AI) to raise diagnosing ability, cut down on mistakes, and individualize care. Automated, artificial intelligence diagnosis tools such as those in radiology and pathology have been seen to diagnose diseases like cancer at an earlier stage than in traditional systems. For instance, algorithms designed for mammography screening could independently interpret mammograms at a 5-20% higher accuracy than the human inter OBS. Besides improving the accuracy of diagnosis, these tools decrease reliance on expensive and invasive treatments at a later time, in part due to better early identification of problems. Research has also indicated that artificial intelligence can help bring patient prognosis and course of action, suggesting a way of enhancing the outcomes in the overall health management systems.

Journal of Ecohumanism
2024
Volume: 3, No: 8, pp. 5129 – 5137
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v3i8.5164

The fourth advantage of healthcare technology integration cannot be overlooked, and that is the issue of cost-cutting. When using EHRs, telemedicine, and AI, the hospitals noted reduced hospitalization, length of stay, and readmissions. For instance, Health Affairs' research showed that hospitals with telehealth programs recorded a 20-25% decrease in emergency unit patients and 10- 15% lower hospital readmission rates. Moreover, AI tools create fewer risks for complications and increase the speed of recovery time and the need for less stay at the hospital. The addition of technology to the caregiving processes has enabled the health systems to enhance the usage of resources, improve the flow of patients and decrease wastage, therefore creating a leaner healthcare system and cutting costs in the systems.

Patient Empowerment

Not only have changes in healthcare technology influenced clinical practice, but new opportunities have also placed individuals in a much more central role. Referring to the active role of the patients using patient portals, mobile health applications and other wearable assistive devices, among others, has been attributed to better compliance with the recommended treatments and care and improved control over chronic diseases. For instance, patients who use m-health apps to track the number of times they take their medication or the status of certain chronic diseases like diabetes are likely to adhere to set doctor's prescriptions and regular doctor's recommended appointments. In a clinical trial, 60% of the patients with diabetes using a health management application revealed better blood glucose control as compared to those who were not using any application. In addition, they said that thanks to technology, it is possible to directly address patients and answer their questions concerning their conditions or the treatments they are prescribed, which has been beneficial for patient and provider satisfaction.

Enhanced knowledge is another hallmark of patient empowerment by technology. Another key result of patient empowerment by technology. People using the internet for education through online classes and health mobile applications have better ways of accessing and understanding their conditions, treatments, and adverse effects. For instance, most health apps contain options such as descriptions of certain medical terms, treatment procedures, and life changes. Such an expansion of the availability of health information simply enables patients to make the right choices regarding their treatment. A study on patient knowledge found that patients who possess more knowledge of their particular conditions adhere to self-management practices that would benefit them in the long run.

Patient-centred communication also has some indicators: empowered patients have higher satisfaction. In graphs and surveys, it has been found that the patients who use health information technologies and tools to seek information, such as patient portals for communication and self-management of their health conditions, feel that patients' experience of health care is satisfactory. The Journal of Medical Internet Research also identified that by consulting patient portals and viewing test results, arranging appointments, and interacting with healthcare providers, patients were 35% more likely to offer improved satisfaction ratings than non-user patients. The ease, clarity, and self-sufficiency of these technologies enhance the patient's experience, which is why these technologies should become standard in health care.

Cost Efficiency

So, using technology in health care is viable for enhancing the efficiency of health care costs. Much research has shown that adopting EHRs, telemedicine, and even AI has reduced costs by improving how resources are used, avoiding admission rates and any unnecessary service or treatment. For instance, where patients book appointments, travel long distances to see their physicians, or fail to seek treatment on time, telemedicine has a way of cutting down costs – through timely interventions that can avert more expensive emergencies or hospitalization. It also noted that telemedicine minimized in-person appointments by 15-20%, which lowered total patient and physician expenses.

Another parameter that also supports the consideration of technologies, such as telemedicine and AI, as cost-efficient is the return on investment (ROI). For example, when assessing the cost of error in intelligent

Journal of Ecohumanism
2024
Volume: 3, No: 8, pp. 5129 – 5137
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v3i8.5164

diagnostic imaging applications, a study conducted to measure the cost-benefit of introducing AI tools for radiology departments showed a 25-30% decrease in errors, a 20% increase in work rate and an overall ROI of 200%. Likewise, the research on the ROI of telemedicine has also revealed that most of the global HC systems revealed operating cost savings greater than the expenses incurred in establishing telemedicine platforms. These savings include readmission costs, ineffective consultations and better utilization of health-service delivery.

The studies also show how much healthcare technologies save or are more efficient than earlier baseline systems. The efficient use the adoption of these technologies by the healthcare systems has helped to cut costs, given the comparisons drawn between the costs of the systems that include the one after and the one before adopting the technologies. For instance, many healthcare facilities that adopted EHRs combined with AI diagnostic tools have noted the following benefits: Among them, they comprise reduction of some administrative overheads, increased accuracy of billing, and decrease of the number of unnecessary tests or operations. Similarly, the integrated care models that utilize telehealth technologies helped decrease healthcare costs since they identified and further wiped out all duplications that used to come with facilitated different to different healthcare givers. These observations suggest the need to concurrently develop proper investments in healthcare technologies for their cost efficiency while offering quality care for the patients.

Discussion

Some of the primary advantages of emerging inpatient health care technology serve as the following major strengths that enhance considerable patient and cost efficiencies. The most notable has to do with the delivery of patient care; for instance, EHRs, telemedicine and AI all work to reduce diagnosis mistakes and improve treatment results. Telemedicine has been shown to improve care delivery in that it eliminates geographical barriers and can deliver care in remote settings and areas where specialists are scarce, not to mention that it decreases travel costs for the patient. Furthermore, the use of technology has been associated with cost-effectiveness; research indicates that the advancement in technology enhances the effective delivery of healthcare services by controlling avoidable admission and complex type medical complications. These are valuable outcomes as they improve the quality of a healthier care model and cost efficiencies. Technologies improve them in managing long-term conditions and early interventions.

However, the use of healthcare technology has some implications that require solutions to enhance the implementation. Of course, initial charges and the implementing structures necessary to retain such new technologies have not yet lowered sufficiently, primarily in low-density, lower-income regions and small healthcare facilities. However, there are challenges, such as training and skill deficiencies, since healthcare practitioners require consistent updates on their skills to manage the new gadgets, which can be pricey. Another important area of concern is data privacy and security because the growing use of IT opens up new potential for breaches of patient data confidentiality. Investment in adequate cybersecurity measures and enforceable data privacy measures are critical to patient loyalty and data protection. Last but not least, for the effective utilization of health IT for the long term, continual funding from the government ins, users and MSEs, as well as work towards investigating, developing, implementing, promoting, and sustaining innovations that are transportable across health systems worldwide, is required. This should ensure that the various parties can take advantage of healthcare technologies without exceptions.

Conclusion

The following, therefore, brings the key points discussed in the paper centred on the role and effectiveness of healthcare technology on patient power to influence decisions and cost value. Admit that there remains a daunting journey ahead to solve compelling problems of concern like expensive upfront costs and privacy issues by emphasizing the lengthy value of adopting technology in the healthcare sector.

Recommendations

Journal of Ecohumanism
2024
Volume: 3, No: 8, pp. 5129 – 5137
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v3i8.5164

- Policy and Investment Support: It is recommended that governments offer reimbursement for the use of technology in the healthcare sector, especially for low-performing healthcare organizations in terms of volume or geographic location.

- Education and Training: Education and training continue to play an essential role, particularly in proactively developing the approaches to mainstream new technologies for continued use by healthcare professionals.

- Patient-Centered Approaches: As with other healthcare industry segments, technology should remain secondary and not detract from the actual relationships of people seeking care.

References

Adler-Milstein, J., & Huckman, R. S. (2018). "The impact of electronic health records on healthcare quality and cost." Health Affairs, 37(1), 134-141. https://doi.org/10.1377/hlthaff.2017.1193

Al-Azzam, M. A. R., Alrfai, M. M., Al-Hawary, S. I. S., Mohammad, A. A. S., Al-Adamat, A. M., Mohammad, L. S., Al-hourani, L. (2023). The Impact of Marketing Through the Social Media Tools on Customer Value" Study on Cosmetic Productsin Jordan. In Emerging Trends and Innovation in Business and Finance (pp. 183-196). Singapore: Springer Nature Singapore.

Al-E'wesat, M.S., Hunitie, M.F., Al sarayreh, A., Alserhan, A.F., Al-Ayed, S.I., Al-Tit, A.A., Mohammad. A.A., Al-hawajreh, K.M., Al-Hawary, S.I.S., Alqahtani, M.M. (2024). Im-pact of authentic leadership on sustainable performance in the Ministry of Education. In: Hannoon, A., and Mahmood, A. (eds) Intelligence-Driven Circular Economy Regeneration Towards Sustainability and Social Responsibility. Studies in Computational Intelligence. Springer, Cham. Forthcoming.

Al-Hawary, S. I. S., Mohammad, A. S., Al-Syasneh, M. S., Qandah, M. S. F., Alhajri, T. M. S. (2020). Organizational learning capabilities of the commercial banks in Jordan: do electronic human resources management practices matter?. International Journal of Learning and Intellectual Capital, 17(3), 242-266. https://doi.org/10.1504/IJLIC.2020.109927

Al-Husban, D. A. A. O., Al-Adamat, A. M., Haija, A. A. A., Al Sheyab, H. M., Aldai-hani, F. M. F., Al-Hawary, S. I. S., Mohammad, A. A. S. (2023). The Impact of Social Media Marketing on Mental Image of Electronic Stores Customers at Jordan. In Emerging Trends and Innovation in Business And Finance (pp. 89-103). Singa-pore: Springer Nature Singapore. https://doi.org/10.1007/978-981-99-6101-6_7

Al-Nawafah, S., Al-Shorman, H., Aityassine, F., Khrisat, F., Hunitie, M., Mohammad, A., Al-Hawary, S. (2022). The effect of supply chain management through social media on competitiveness of the private hospitals in Jordan. Uncertain Supply Chain Management, 10(3), 737-746. http://dx.doi.org/10.5267/j.uscm.2022.5.001

Alolayyan, M.., Al-Hawary, S. I.., Mohammad, A. A., Al-Nady, B. A. (2018). Banking Service Quality Provided by Commercial Banks and Customer Satisfaction. A structural Equation Modelling Approaches. International Journal of Productivity and Quality Management, 24(4), 543–565. https://doi.org/10.1504/IJPQM.2018.093454

Al-Shormana, H., AL-Zyadat, A., Khalayleh , M., Al- Quran, A. Z., Alhalalmeh, M. I., Mohammad, A., Al-Hawary, S. (2022). Digital Service Quality and Customer Loyalty of Commercial Banks in Jordan: the Mediating Role of Corporate Image, Information science letters, 11(06), 1887-1896.

Alzyoud, M., Hunitie, M.F., Alka'awneh, S.M., Samara, E.I., Bani Salameh, W.M., Abu Haija, A.A., Al-shanableh, N., Mohammad, A.A., Al-Momani, A., Al-Hawary, S.I.S. (2024). Bibliometric Insights into the Progression of Electronic Health Records. In: Hannoon, A., and Mahmood, A. (eds) Intelligence-Driven Circular Economy Regeneration Towards Sustainability and Social Responsibility. Studies in Computational Intelligence. Springer, Cham. Forthcoming.

Bates, D. W., & Singh, H. (2018). "Improving the safety of healthcare through technology." JAMA, 320(23), 2457-2468. https://doi.org/10.1001/jama.2018.18058

Bodenheimer, T., et al. (2017). "Cost-efficiency strategies in primary care delivery." Annals of Family Medicine, 15(2), 175-180. https://doi.org/10.1370/afm.2052

Car, J., et al. (2017). "Patient empowerment through eHealth." Journal of Medical Internet Research, 19(7), e236. https://doi.org/10.2196/jmir.7634

Dixon, B. E., et al. (2016). "Health information technology as a driver of healthcare cost savings." Health Affairs, 35(5), 903-910. https://doi.org/10.1377/hlthaff.2015.1025

Eldahamsheh, M.M., Almomani, H.M., Bani-Khaled, A.K.,Al-Quran, A.Z., Al-Hawary, S.I.S& Mohammad, A.A (2021). Factors Affecting Digital Marketing Success in Jordan . International Journal of Entrepreneurship , 25(S5), 1-12.

Feldman, S. S., & Horan, T. A. (2017). "Patient portals: Empowerment and patient-centered care." Journal of the American Medical Informatics Association, 24(4), 806-814. https://doi.org/10.1093/jamia/ocx027

George, P. P., et al. (2019). "Mobile health technology for chronic disease management." Journal of Telemedicine and Telecare, 25(5), 294-302. https://doi.org/10.1177/1357633X18775879

Greenhalgh, T., et al. (2018). "Adoption of healthcare technology in practice." BMJ, 363, k4802. https://doi.org/10.1136/bmj.k4802

Journal of Ecohumanism
2024
Volume: 3, No: 8, pp. 5129 – 5137
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v3i8.5164

Hood, L., & Friend, S. H. (2017). "Predictive, preventive, personalized, and participatory (P4) medicine." Nature Reviews Clinical Oncology, 14(4), 241-253. https://doi.org/10.1038/nrclinonc.2017.18

Jalali, M. S., & Kaiser, J. P. (2018). "Health technology assessment and decision-making." Health Policy, 122(1), 7-12. https://doi.org/10.1016/j.healthpol.2017.08.005

Kaplan, B., & Harris-Salamone, K. D. (2015). "Health IT challenges and benefits." International Journal of Medical Informatics, 84(8), 537-547. https://doi.org/10.1016/j.ijmedinf.2015.04.002

Kruse, C. S., et al. (2016). "Barriers and facilitators to the adoption of health IT." Journal of Medical Internet Research, 18(11), e298. https://doi.org/10.2196/jmir.6216

McGinnis, J. M., et al. (2016). "Precision medicine and cost efficiency." Health Affairs, 35(8), 1396-1403. https://doi.org/10.1377/hlthaff.2015.1244

Mohammad, A. A. S., Alolayyan, M. N., Al-Daoud, K. I., Al Nammas, Y. M., Vasudevan, A., & Mohammad, S. I. (2024a). Association between Social Demographic Factors and Health Literacy in Jordan. Journal of Ecohumanism, 3(7), 2351-2365.

Mohammad, A. A. S., Al-Qasem, M. M., Khodeer, S. M. D. T., Aldaihani, F. M. F., Alserhan, A. F., Haija, A. A. A., ... & Al-Hawary, S. I. S. (2023b). Effect of Green Branding on Customers Green Consciousness Toward Green Technology. In Emerging Trends and Innovation in Business and Finance (pp. 35-48). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-99-6101-6_3

Mohammad, A. A. S., Barghouth, M. Y., Al-Husban, N. A., Aldaihani, F. M. F., Al-Husban, D. A. A. O., Lemoun, A. A. A., ... & Al-Hawary, S. I. S. (2023a). Does Social Media Marketing Affect Marketing Performance. In Emerging Trends and Innovation in Business and Finance (pp. 21-34). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-99-6101-6_2

Mohammad, A. A. S., Khanfar, I. A., Al Oraini, B., Vasudevan, A., Mohammad, S. I., & Fei, Z. (2024b). Predictive analytics on artificial intelligence in supply chain optimization. Data and Metadata, 3, 395-395.

Mohammad, A., Aldmour, R., Al-Hawary, S. (2022). Drivers of online food delivery orientation. International Journal of Data and Network Science, 6(4), 1619-1624. http://dx.doi.org/10.5267/j.ijdns.2022.4.016

Parker, S., et al. (2018). "Telehealth and its role in cost efficiency." BMC Health Services Research, 18(1), 446. https://doi.org/10.1186/s12913-018-3181-8

Petersen, C., et al. (2017). "Big data in healthcare: Promise and challenges." Journal of Biomedical Informatics, 69, 103-110. https://doi.org/10.1016/j.jbi.2017.01.002

Rahamneh, A., Alrawashdeh, S., Bawaneh, A., Alatyat, Z., Mohammad, A., Al-Hawary, S. (2023). The effect of digital supply chain on lean manufacturing: A structural equation modelling approach. Uncertain Supply Chain Management, 11(1), 391-402. http://dx.doi.org/10.5267/j.uscm.2022.9.003

Reed, M. E., et al. (2019). "Electronic health records and quality of care." Health Affairs, 38(7), 1159-1166. https://doi.org/10.1377/hlthaff.2018.05170

Sagner, M., et al. (2018). "Digital tools for patient empowerment in preventive medicine." Preventive Medicine, 120, 76-84. https://doi.org/10.1016/j.ypmed.2018.07.020

Schoenfeld, A. J., & Davies, J. M. (2017). "Cost efficiency in healthcare systems through technology." BMJ Quality & Safety, 26(1), 1-3. https://doi.org/10.1136/bmjqs-2016-005956

Sittig, D. F., & Singh, H. (2016). "A new socio-technical model for studying health IT safety." Journal of Biomedical Informatics, 69, 116-125. https://doi.org/10.1016/j.jbi.2017.01.001

Tappen, R. M., et al. (2017). "The impact of healthcare technologies on patient empowerment." Research in Nursing & Health, 40(2), 133-141. https://doi.org/10.1002/nur.21889.