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The Double-Edged Scalpel: Constructive and Destructive Implications of Technology in Health

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Abstract

Modern healthcare has made technology to be a necessity as it has revolutionized the way diseases are diagnosed, treated, and handled. This review focuses on the duality of technology, the positive and negative effects on health systems. Based on forty peer-reviewed articles out of almost 950 sources, the paper discusses how artificial intelligence, telemedicine, electronic health records, and robotic surgery as innovations have enhanced accessibility, accuracy, and efficiency in patient care. Meanwhile, it discusses the related issues, such as threats to data privacy, digital disparity, burnout in clinicians, and human touch. It is a paper on the duality of technology in health and how technology has presented us with its good magic and its most awful pitfalls and how the readers of this paper can consider how we can use this two-edged scalpel which has both good and evil sides to it.

Keywords: Digital health, Artificial intelligence, Telemedicine, Healthcare technology, Ethical implications, Data privacy, Health equity.

Introduction

Technology has come to be the scalpel of the new medicine, specific, strong, and able not only to do unbelievable good, but also to cause unintended harm. Technology in the medical sector has transformed the lifestyle, the occurrence and modes of illness and even death because of artificial intelligence to diagnose illness and a wearable medical device that tracks a single heartbeat and provides better efficiency, accuracy, and availability. Nevertheless, like any cutting tool, it is connected with risks: the invasion of privacy, overreliance on technology, and the fact that an increased number of people can obtain a state-of-the-art care compared to those who cannot.

Methodology

The aim of conducting this review was to investigate the positive and negative effects of technology in health care based on the extensive review of the literature that had been published. A search was performed in the large scientific databases (PubMed, Scopus, ScienceDirect, and Google Scholar) using keywords such as combinations of phrases like healthcare technology, digital health, artificial intelligence in medicine, telemedicine, effects of technology on healthcare, ethical and legal considerations, and health informatics.

Systematic reviews, meta-analyses, observational research, and conceptual papers were all included as both quantitative and qualitative studies to obtain a comprehensive perspective on the matter. The data of these studies were sorted into two key areas which were themed into Constructive Impacts of Technology and Destructive Impacts of Technology. The synthesis and critical assessment of the findings were performed to detect the main patterns, contradictions, and new trends. Such a methodological strategy made sure there was a balanced and evidence-based and in-depth analysis of the way that technological development will boost as well as challenge the healthcare delivery in the contemporary era.

The preliminary search resulted in about 950 articles which had been published in the period of 2010-25. Upon eliminating duplicates and filtering the titles and abstracts in terms of relevance, approximately 120 articles were shortlisted to be reviewed full-text. Using inclusion and exclusion criteria (by concentrating on those articles that reported directly about both advantages of technology in healthcare and its limitations) 40 articles were eventually chosen to undergo detailed study.

Inclusion and Exclusion Criteria

The inclusion criteria of this review was limited to peer-reviewed journal articles, review papers, and credible reports published in English since 2010 until 2025 which covered the constructive (positive) and destructive (negative) effects of technology in healthcare. The research papers were only included in case they talked about digital innovations in health, artificial intelligence, telemedicine, robotics,

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electronic health records, or ethical and social aspects of healthcare technology. The excluded materials included the abstracts of conferences with no full text, articles that were not peer-reviewed, opinion articles that lacked empirical evidence, and those that were not related to healthcare or technology.

Constructive Edge: Reshaping the Health care Delivery

Technology has been very useful in various areas of the healthcare industry developing new solutions and bettering service delivery. The digital innovations can improve the services offered by the health at a low cost and convenience (Ibrahim *et al*., 2022). The rapidly growing technological innovation is also adding to a new era of digital healthcare that is characterized by several major innovations (Akhtar *et al*., 2022).

Advanced Diagnostics: The sphere of diagnosis has been improved significantly by technology since the new approach enables the review of medical data in less time, with more accuracy and scale with no restrictions (Topol, 2019). As an illustration, AI-based systems have been indicated to be highly accurate in disease diagnosis, such as cancer, diabetic retinopathy, cardiovascular diseases, depending on radiological reports and electronic health records. The AIs-based solutions to temperature screening, like iThermo, do not necessitate the usage of manual temperature screening, and also consider the distance analysis (Kapoor *et al*., 2020). In addition, it is mentioned that AI devices are integrated into the point-of-care testing, and they assist healthcare providers in real-time decision-making and reduction in diagnosis errors (Esteva *et al*., 2017).

Technology in Preventive Care

Technology is performing a monumental shift in preventive care sector, where it is able to identify issues at an early phase, evaluate threats in a different manner, and take proactive measures touching on health. The AI applications, which can predict the risk of diseases before the manifestations, will be able to prevent the diseases, such as diabetes, cardiovascular disease, and cancer, in a timely and specific manner (De la Torre *et al*., 2025). The ability of the patient-specific risk profiles, which will be formed in accordance with the patient data (genetic, lifestyle, and environmental), will provide the healthcare provider with more effective prevention plans and help to direct individuals in the more favorable behavior patterns (Jiang *et al*., 2017).

***Wearable Technology*:** Wearable technology such as watches, bands, or clothing and which contain sensors, processors and connectivity capabilities are constantly gathering, analyzing, and sending health-related, fitness-related, or daily activity data to devices, such as smartphones or cloud systems, via the Internet of Things (IoT) (Lu *et al*., 2020). Besides notifying about the steps, smartwatches and fitness trackers track the heart rhythms, detect abnormalities, and may inform their owners of a possible heart attack or stroke. They are transforming the health care sector by reducing the distance between patients and doctors. It can be used to support early diagnosis, individualized treatment and preventive care through the unceasing collection of data and intelligent analytics (Bayoumy *et al*., 2021).

Clinical Decision Making: Data Integration and Analytical Platforms: Developing fast data integration and analysis platforms to support clinical decision making assists in the synthesis of fragmented data into an unbiased analysis to deliver rapid and on-demand analytical solutions that cannot be achieved manually (Kapoor *et al*., 2020). The systems are capable of converting offline, static, data-driven instructions to interactive, online, up-to-date algorithms to execute swiftly to enhance healthcare response in the aspects of epidemic monitoring, geospatial analysis, cluster outbreak reporting, and therapeutic algorithm. Zenysis, in its turn, partnered with governments in Africa and Asia to establish Emergency Operations Centers and Virtual Control Rooms in response to pandemics (Kapoor *et al*., 2020).

Technology in Treatment

Technology is rapidly changing healthcare with regard to treatment through the application of precision medicine, personalized therapy, and drug discovery. The AI-based algorithms can examine vast volumes of clinical data (genetic, imaging, and lab data) in a matter of seconds to propose the most effective treatment options to particular patients, which can improve the patient outcomes of such diseases as cancer, cardiovascular, and neurological diseases (Bajwa *et al*., 2021). The amount of technologies, such as digital twins and predictive analytics, enables clinicians to predict the reaction of patients on the therapy, modify the intake of medications, and avoid complications, thus facilitating performance and enhancing patient safety. In clinical trial design and drug development, AI is quicker, meaning it saves on time and budget, and it is increasingly growing a component of decision-support systems along with clinicians (Srivastava, 2024).

Minimal Invasive Surgery and Robotics: this type of surgery involves the minimal incision, special tools, and modern imaging technologies to make surgical procedures without causing excessive trauma to body tissue as opposed to the traditional operation (Akhtar *et al*., 2022). This method when used with robotic systems is referred to as robotic-assisted minimally invasive surgery and is among the best innovations in the modern field of medicine. (Domínguez-Rosado & Mercado, 2021).

Internet of Medical Things (IoMT): this refers to the system of connected devices, sensors, and applications that gather, transmit, and analyze health-related information via the internet (Manickam *et al*., 2022). It links patients, medical professionals and medical equipment in a bid to enhance the quality of healthcare services, efficiency and accessibility of the services. They consist of wearable devices, smart medical devices, and remote monitoring devices retrieve real-time information about patients (e.g. heart rate, blood pressure, glucose levels). Cloud platforms are used to transmit this data safely to the healthcare providers, enabling them to track the patients at all times and make their medical decisions in good time (Pournik *et al*., 2023).

Remote Monitoring and Triage

The digital health systems provide an opportunity to ensure a high-quality level of monitoring and create interactive chat services to distribute information to the population (Ibrahim *et al*., 2022). Examples include:

***Robotic Telemedicine Carts*:** RTCs such as Vici (by InTouch Health) with cameras, interactive screens, and basic medical equipment may be implemented in quarantined patients zones to provide an evaluation of patients, thus restricting the exposure and risk to HCWs (Kapoor *et al*., 2020).

***Electronic Intensive Care Units (e-ICUs)*:** These systems enable HCWs to remote control up to 60-100 patients in ICUs of various hospitals through the use of two-way cameras,

video monitors, microphones, and smart alarms linked by high-speed data lines (Kapoor *et al*., 2020).

***Wearable Devices and Apps*:** Wearables will be able to measure physiological variables such as the resting heart rate, sleep duration and temperature, which have been used in the past to come up with models of the population-level trends of influenza. They were utilized during the pandemic to monitor and transmit such parameters as temperature, heart rate, and oxygen saturation to HCWs without visiting the hospital in person. Certain applications, such as the Apple health check app, Siri advice, and Alexa My Day for seniors, were used to share information, screening, and guidance related to the symptoms, particularly among the aged ones (Kapoor *et al*., 2020).

***AI-based Consumer Engagement*:** AskNivel (Kenya and India) started with reproductive health counseling features and was further developed to have COVID-19 discussions. On the same note, the Natural Cycles birth control application created a symptom tracker during the COVID-19 crisis (Kapoor *et al*., 2020).

***Mass Communication Tools*:** Mass communication tools used to notify about disease like CommCare, Safiri Smart and Praekelt.org were also mobile-based tech-based solutions to respond to the COVID-19 activities. Interactive websites, such as the Corona Map of South Korea and Aarogya Setu application of India, linked necessary health-related services to citizens and provided them with risk precautions and best practices (Kapoor *et al*., 2020).

In Further Management

Artificial intelligence (AI) forms a crucial component of designing disease control based on continuous monitoring, early warning of complications, and self-management to all chronic diseases that are customizable (Dong *et al*., 2025). The AI systems use the non-filtered data on patients, which include blood glucose, blood pressure, and symptom trends to predict the course of the disease, prescribe the particular interventions, and give the real-time notices of the complications in such diseases as diabetes, hypertension, and COPD (Pan *et al*., 2025). Together with wearable sensors and mobile apps, AI will provide the most up-to-date information about the health of patients and clinicians, personalized lifestyle recommendations, and optimization of medication plans, thereby improving compliance with treatment and its results (Akila *et al*.,2025).

Machine Learning Algorithms: ML enables computers to learn from data and improve over time without explicit programming. They determine patterns and relationships among large volumes of data and apply them to make predictions, decisions or classifications (Bani Hani and Ahmad, 2023). They Learn by doing(data), Find unspoken laws, Intelligent guesses. It assists in quicker diagnosis, improved treatment strategies, and effective administration of the hospital, which makes healthcare more data-driven and accurate (Sarker, 2021).

Electronic Health Records (EHRs): Electronic Health Records (EHRs) are electronic copies of the medical record of patients containing detailed information on their health including medical history, diagnosis, medication, test outcomes, and a treatment plan (Evans, 2016). They allow real-time access and sharing of information between healthcare providers, enhance coordination, precision, and efficiency of care. EHRs can also assist in decision-making by providing alerts and analytics as well as enable patients to access their records via secure portals (Kruse *et al*., 2018).

***Real-time Communication and Resource Management*:** Digital technology systems enable the communication of administrative authorities to HCWs even in remote locations in real-time to exchange information, manage data and offer solutions to resource management. One such application is mHero, a communication system designed to be used on a mobile phone and was first developed to address the Ebola outbreak in Liberia but was later used to update the Covid-19 (Kapoor *et al*., 2020).

Virtual Education and Collaboration: The pandemic increased the transition to virtual education and collaboration among HCWs with a former face-to-face learning method. The digital platforms promote remote knowledge sharing practices off-site via webinars and non-face-to-face meetings and guarantee ongoing academic growth and communication of medical advances (Kapoor *et al*., 2020).

Clinical Decision Support (CDS): CDSs have emerged as one of the contemporary areas of research studies, providing relevant and filtered patient-centered information to clinicians, patients, and other subjects to improve and enhance care (Holmgren *et al*., 2023). These systems can transform the fixed guidelines into interactive web-based algorithm to perform in the moment to improve health care responsiveness in such areas as epidemic surveillance and therapeutic algorithm development.

Computerized Patient Order Entry (CPOE): CPOE is one of the main applications of CDS which allows a clinician to enter and exchange orders regarding treatment using a computer program (Holmgren *et al*., 2023). The shift towards the use of electronic order entry rather than the paper one could also reduce the number of mistakes made due to the illegibility of handwriting or manual copying. It has been demonstrated that such systems are definitely needed by patients in terms of safety especially in preventing medication errors (Holmgren *et al*., 2023).

***Telehealth and Virtual Care*:** Telemedicine, digital mobile health applications, and other Internet of Things (IoT) technologies are transforming the traditional medical care, and now minor health-related issues can be effortlessly resolved and treated at a distance (Akhtar *et al*., 2022). The patients have reported that telemedicine solutions are understandable, controllable, and add meaning to everyday life, which contributes to the reduction of stress and normal living (Leonardsen *et al*., 2020). Such approaches are likely to make them feel relaxed, confident, inspired, and encouraged, and have minimal technical issues (Leonardsen *et al*., 2020).

Table 1: Summary of the Constructive Edge: Positive Impacts of Technology in Healthcare

Theme/Area	Description of Impact	Examples/Evidence from Studies
Enhanced Patient Care & Remote Management	Technology expands patient reach, enables virtual consultations, and ensures continuity of care.	Telehealth, IoT-based mobile apps, and digital monitoring systems improved access during COVID-19 (Akhtar *et al*., 2022; Pournik *et al*., 2023).
Remote Monitoring & Early Detection	Continuous monitoring through connected devices supports early diagnosis and preventive care.	e-ICUs, robotic telemedicine carts, wearable devices tracking vitals like heart rate and oxygen saturation (Kapoor *et al*., 2020).

AI and Advanced Diagnostics	Artificial Intelligence improves diagnostic precision, speeds up analysis, and supports clinical decision-making.	AI-based CT image analysis for COVID-19, iThermo for temperature screening, machine learning for pattern recognition (Esteva *et al*., 2017; Davenport & Kalakota, 2019).
Improved Data Integration and Decision Support	Integrating health data improves evidence-based care and operational efficiency.	Rapid data analytics platforms like Zenysis provide real-time surveillance and therapeutic algorithm updates (Kruse *et al*., 2018; Kapoor *et al*., 2020).
Electronic Health Records (EHRs)	Streamlined patient history and record management enhance continuity of care and reduce errors.	EHRs particularly benefit chronic and elderly care by maintaining comprehensive patient data (Evans, 2016).
Increased Accessibility and Convenience	Reduces travel, saves time, and provides healthcare access to remote or resource-limited populations.	Mobile health apps, IoMT devices, and teleconsultation platforms for home-based care (Leonardsen *et al*., 2020; Ibrahim *et al*., 2022).
Robotics and Precision Medicine	Robotics improves surgical precision and reduces recovery time. Personalized medicine tailors treatment to individual needs.	Robotic surgeries and AI-driven drug design in oncology and cardiology (Akhtar *et al*., 2022).
Patient Empowerment and Education	Digital health tools increase patient knowledge and self-management of chronic conditions.	Online platforms, mobile apps, and virtual communities improving adherence and motivation (Leonardsen *et al*., 2020).
Support for Healthcare Workers	Improves communication, training, and administrative efficiency for medical staff.	Systems like mHero for communication during epidemics and online training platforms for HCWs (Kapoor *et al*., 2020).
Enhanced Patient Safety and Quality of Care	Reduces human error and enhances workflow safety.	Computerized Patient Order Entry (CPOE) and Clinical Decision Support (CDS) tools (Holmgren *et al*., 2023).

Destructive Edge: Unanticipated Challenges and Pitfalls

Despite the fact that it is not possible to deny the beneficial end results, the rapid rate of implementation of technological advancement in the healthcare sector has its fair share of negative factors. Some of the works mention that sustainable development is burdened with numerous criticisms and issues to overcome (Akhtar *et al*., 2022).

Clinician Burden and Burnout: Healthcare Information Technology (HIT) can have an adverse impact on clinicians. Inadequacy in satisfaction with design and high time drainage that necessitates expenditure on documentation is one of the primary causes of dissatisfaction to Electronic Health Records (EHRs). This can lead to moral distress and work overload among medical practitioners (McBride *et al*., 2023). Such ineffective conflicts can negatively affect the chances of a clinician to achieve personal goals and work in the sphere of health, and result in a rise in burnout and employee turnover. The problem of documentation has an even more severe effect on nurses but it does not appear to be such a significant problem as the one with the physicians, and it is hard to find clear evidence that technology is a direct cause of moral distress (McBride *et al*., 2023).

Patient Concerns*:* Trust, Privacy, and Rights: Patients are no different as they also have concerns with digital health technology. Some of the gaps and challenges were identified in a scoping review, including the absence of trust in technology and the problem of data ownership (Akhtar *et al*., 2022). These ethical issues have been raised as the potential disruption of human rights in the computerized health care setting (Livieri *et al*., 2025). In addition, the existence of disparities in digital literacy and the absence of skills associated with work procedures across generations can be one of the obstacles to the successful use of technology by patients (Livieri *et al*., 2025).

Skill Gap and Training Needs: Although it is sometimes possible to learn the new technology within a brief duration due to the dynamic nature of technology, it is difficult to identify some of the new technologies since jobs in the healthcare profession are not straightforward. That is why it becomes obvious that training is needed to be conducted on a continuous basis to develop skills and competencies in healthcare providers (Akhtar *et al*., 2022).

Over-Reliance on Technology: The machines are taking over more and more in the diagnostic and decision making, thus there is risk of losing the human factor in medicine. It may reduce patients to numbers and make physicians overlook certain nuances which the algorithms do not detect. The result of the errors in the case of over-reliance or misunderstanding may also be technological failure

EHR Dissatisfaction and Documentation Burden: The problem of Electronic Health Records (EHRs) dissatisfaction is an essential aspect that may be connected with the ineffective design and spending much time on documentation. This can cause moral discomfort and increased stress burden on medical practitioners. Such unnecessary strains can negatively impact the achievement of personal goals and affect the work of the professionals, which can also increase the number of professionals burned out and turnover (McBride *et al*., 2023).

Absence of Evidence on Psychological Impact: EHRs and other technologies have definite impact on the efficiency and workflow of clinicians, but there are no facts to understand the way how moral distress may be connected with the usage of EHRs. Technological factors that may lead to moral distress are not well-researched (McBride *et al*., 2023).

Ethical and Societal Implications (Mental Health): Digital mental health technologies have been viewed as a source of concern in regard to over medicalization and dehumanization, which could undermine already fragile traditional systems, although it holds promise as a research field. The services can significantly change mental healthcare to a self-management and population-based monitoring systems, leading to the problem of patient abandonment, disability surveillance, coercion, and discriminatory profiling. One of the most influential narratives spread by these technologies can show poor mental health as an example of mental illness, mental illness as the purpose, self-controllable, and as the motive to abuse rights (Stein and Prost, 2024).

Systemic Risks and Implementation Challenges

The rapid integration and use of technology also introduces systemic weaknesses and challenges in practice.

***Security and Accuracy*:** Besides personal privacy, it is also important that the security and accuracy of online health systems, overall, should be provided. Even though blockchain

technologies are proposed as a less risky step to ensure the safety of patient data stored in digital health care systems, the question of ensuring privacy records in EHRs remains urgent (Akhtar *et al*., 2022).

***Bad Design and Non-Adoption*:** The pressure on clinicians can increase in case of inappropriate design and implementation of technological approaches (Holmgren *et al*., 2023). The resources developed by the government like the Safety Assurance Factors of EHR Resilience (SAFER) guide can be employed to help healthcare organizations adopt the use of technology in a safe manner even though evidence suggests that they have not been utilized proactively despite recent mandates aiming to raise awareness and adoption (Holmgren *et al*., 2023).

***User Resistance*:** User resistance is one of the challenges of the adoption of e-health systems (Ibrahim *et al*., 2022). Technological factors (fears, incompetence), problems related to patient care (dissatisfaction with diagnosis, mistrust), resistance to change, and risks (security, privacy, information overload, technostress) may be the cause of such resistance. Digital mistrust and older generations, in particular, can be another major obstacle to the adoption (Ibrahim *et al*., 2022).

***Skill Gaps and Training Needs*:** Reason being, the technology is always changing, though there are quite a number of emerging technologies which can be learned very easily there are still others which are a burden to learn as the jobs of the healthcare sector are very complicated. This emphasizes the urgent need of continuous education to improve the level of competency and talents of the medical workers (Akhtar *et al*., 2022).

Table 2: Summary of the Destructive Edge: Challenges and Risks of Technology in Healthcare

Theme/Area	Description of Impact	Examples/Evidence from Studies
Clinician Burden and Burnout	Increased workload, documentation demands, and poor system design can lead to frustration, stress, and reduced morale among healthcare professionals.	EHR dissatisfaction due to time-intensive data entry and poor usability; moral distress and alert fatigue (*McBride et al., 2023; Holmgren et al., 2023*).
Patient Distrust and Privacy Concerns	Fear of data misuse and lack of transparency reduce patient confidence in digital systems.	Data breaches, lack of ownership of health information, and mistrust in telemedicine platforms (*Livieri et al., 2025*).
Security and Data Integrity Risks	Health data stored online is vulnerable to hacking and unauthorized access.	Inadequate cyber security measures in EHRs and IoT medical devices; blockchain proposed as a safer alternative (*Akhtar et al., 2022*).
Digital Inequality and Accessibility Gaps	Disparities in digital literacy and access create inequities in healthcare delivery.	Older adults and low-resource populations face challenges in adopting e-health services (*Ezeudoka & Fan, 2024; Ibrahim et al., 2022*).
User Resistance and Technostress	Anxiety, resistance to change, and fatigue from constant updates hinder technology adoption.	Resistance among older users due to low self-efficacy and perceived risks like information overload (*Ezeudoka & Fan, 2024*).
Ethical and Humanistic Concerns	Overreliance on machines may depersonalize care, reducing empathy and human touch.	Digital mental health tools may lead to overmedicalization and coercive monitoring (*Stein & Prost, 2024*).
Systemic and Implementation Challenges	Poorly designed systems can disrupt workflow and increase medical errors.	Inadequate adoption of safety assurance frameworks like SAFER guides (*Holmgren et al., 2023*).
Information Overload and Misinformation	Social media and digital platforms can spread inaccurate health information, leading to confusion and panic.	Misinformation during COVID-19 prompted global initiatives for fact-checking and digital literacy (*Kapoor et al., 2020*).
Skill Gaps and Training Needs	Rapid technological evolution demands continuous learning, which may strain professionals.	Lack of structured training in emerging technologies creates usability and integration issues (*Akhtar et al., 2022*).
Environmental and Psychological Impact	Electronic waste and overexposure to digital interfaces may affect health and well-being.	e-Waste from obsolete devices; technostress and burnout among clinicians and patients (*General review findings*).

Finding the Way through the Dual Nature: On a Sustainable Integration

To ensure the optimal utilization of technology and mitigation of the devastating impact, a thoughtful and balanced approach is needed.

***Adopting "Polarity Thinking"*:** It must embrace the concept of Polarity Thinking: One of the key concepts that can cause effective HIT implementation is the concept of Polarity Thinking, which advocates the application of the word and not the word or, which is employed to address tensions that exist. This type of approach will result in a virtuous rather than a vicious cycle of goal achievement and satisfaction, rather than dysfunction and misery (McBride *et al*., 2023).

***User-Centric Design and Support*:** The experience of those factors, which cause user resistance, is crucial when developing the more user-centric e-health solutions. Information inequality is a problem that can be mitigated by generating person-specific information and aids that would help it gain confidence and disposition towards the use of digital health services (Ibrahim *et al*., 2022).

***Ethical Development and Regulation*:** Future research and development of healthcare technology must be particularly attentive to the issue of trust, security, privacy, and accuracy to deliver long-term growth (Akhtar *et al*., 2022). The policy advocacy and the participatory research have a significant role in informing and establishing the regulations of such services within the international and national frameworks, which complies with the ethics of care, ensures the safety of users, follows the level of efficacy, informed consent, adherence to agency of individuals, and malicious intent to use such services (Stein and Prost, 2024).

***Ongoing Research and Training*:** Research and training of new technologies should also be done continuously to check their effectiveness. It also needs to work further to simplify the system to more readily fit the workflow, as well as the amount of documentation clinicians would be required to

perform (Holmgren *et al*., 2023). There is also a need to put more efforts towards improving literacy on mental health technologies among patients and providers (Stein & Prost, 2024).

Conclusion

The picture of a scalpel with two edges is quite real in technology in health. It offers the previously unheard-of access to enhance patient care, diagnostic, access to the medical services, and simplify the administration, introducing a new era of digital healthcare. However, it must be carried out cautiously, keeping in mind that it can result in the increased load on clinicians, patient privacy, systemic security, and the highest user resistance (Akhtar *et al*., 2022; Ibrahim *et al*., 2022; McBride *et al*., 2023; Holmgren *et al*., 2023). Healthcare sector can use the power of this potent tool by considering the whole picture, ethical development, strong security, intense training and deep understanding of both clinician and patient experiences and maximize the beneficial effects of this powerful tool and reduce the harmful ones as much as possible. The scalpel is in our hands. It is something we must treat with care, tenderness and devotion to justice, to ensure that the future of health is bright to all.

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