



ARTIFICIAL INTELLIGENCE IN MENTAL HEALTH: BENEFITS AND CHALLENGES OF ELECTRONIC HEALTH RECORDSⁱ

INTELIGÊNCIA ARTIFICIAL NA SAÚDE MENTAL: BENEFÍCIOS E DESAFIOS DOS REGISTROS ELETRÔNICOS DE SAÚDE

Bento Alves da Costa Filho¹

Daniel Sousa Jorge²

Felipe Luiz de Moraes³

ABSTRACT

The incorporation of new artificial intelligence technologies into electronic healthcare records (EHRs) has significantly increased the capacity to accumulate and analyze patient data. The mental health field has been one of the beneficiaries of this potential for improvement, providing its professionals with time savings and increased efficiency in managing medical information. However, there are reports of problems arising as the use of AI technologies intensifies. These include issues related to the management of sensitive patient information, the lack of standardization of mental health data hindering interoperability, concerns that the patient-professional therapeutic relationship may be compromised, and the worry among professionals about the possibility of being replaced by AI technologies. Considering this context, this article aims to identify and analyze the dynamics of the incorporation of AI technologies into the mental health field. To achieve this objective, a literature review was conducted involving publications on the subject from the last six years. Finally, some suggestions are offered for the development of future research that can explore more possible solutions to the problems identified, throughout the ongoing process of adopting new AI technologies in the field of mental health.

Keywords: Electronic Health Records; HER; Artificial Intelligence in Healthcare; Artificial Intelligence in Mental Health

RESUMO

A incorporação de novas tecnologias de inteligência artificial aos *electronic healthcare records* (EHRs) tem proporcionado um forte aumento na capacidade de acumular e analisar dados dos pacientes. E a área de saúde mental tem sido uma das beneficiárias deste potencial de melhorias, proporcionando aos seus profissionais ganhos de tempo e eficiência na gestão de informações médicas. Entretanto, há relatos de problemas que estão surgindo na medida em que a utilização das tecnologias de IA se intensifica. Este quadro inclui questões referentes à gestão de informações sensíveis dos pacientes, à falta de padronização dos dados de saúde mental, prejudicando a interoperabilidade dos mesmos, o receio de que o relacionamento terapêutico paciente-profissional seja prejudicado, além da preocupação que os profissionais estão tendo pela possibilidade de serem substituídos pelas tecnologias de IA. Considerando este contexto, o presente artigo tem por objetivo identificar e analisar a dinâmica de incorporação das tecnologias de IA à área de saúde mental. Para realizar este objetivo, foi realizada uma revisão de literatura envolvendo publicações sobre o tema dos últimos seis anos. Ao final, são oferecidas algumas sugestões para desenvolvimento de futuras pesquisas que possam explorar mais possíveis soluções para os problemas identificados, ao longo do processo de adoção de novas tecnologias de IA na área de saúde mental que está em curso.

¹ Faculty Researcher at Centro Universitario Alves Faria; PhD in Administration from the University of São Paulo; researcher in the field of innovation adoption and diffusion; bento.filho@unialfa.com.br

² Psychology undergraduate student at Centro Universitario Alves Faria; daniel.jorge@unialfa.com.br

³ Psychology undergraduate student at Centro Universitario Alves Faria; felipe.morais.00866@alunos.unialfa.com.br





Palavras-chave: Prontuário Eletrônico de Pacientes (EHR); Inteligência Artificial na Saúde; Inteligência Artificial na Saúde Mental

The idea that supports the concept of electronic health records (EHRs) involves recording the patient's life, with notes on the main events that can contribute to understanding their health status, reporting identified problems, and recommended treatment options. As defined by Zanaboni et al. (2022), an EHR is a collection of clinical data, which may include clinical assessments, nursing documents, laboratory and radiology test results, information on medications and possible allergies. The electronic patient record is one of the main tools that medical professionals have for cooperation and communication with patients. Online access to patient information has the potential to improve the connection between the patient and healthcare providers. The record in EHR format enables patient-centered treatment, making it easier for those involved to understand the patient's health status (Zanaboni et al., 2022).

Technology in general plays a fundamental role in enhancing what an EHR can do for medicine. However, one group deserves special mention: artificial intelligence technologies. The contributions of these technologies to mental health are placing these techniques at the center of attention for everyone involved in the field, such as professionals, patients, participating institutions, both from the private and government sectors, and non-profit entities. There are important reports in the literature highlighting the role of AI technologies such as Machine Learning (ML) and Deep Learning in assisting medical professionals to identify early signs of diseases such as Alzheimer's and related dementias (Li et

al., 2022; Lee et al., 2021). There are also studies showing the contribution of machine learning to the identification of patients at high risk of suicide (Nock et al., 2022).

Although there is some consensus on the benefits that AI technologies are providing to mental health, there are criticisms about the use

of these techniques. There is concern about the fact that electronic healthcare records (EHRs) process sensitive information about the patient's life (Kariotis et al., 2022). To deal with potential exposures of this type of information, healthcare professionals avoid entering important data in EHR records, opting instead to make notes in separate files (Zanaboni et al., 2022). Another problem presented in the literature is the lack of standardization of mental health data, which hinders the interoperability of patient information among professionals and institutions involved (Kariotis et al., 2022). In addition, there is also the concern that EHRs may somehow harm the professional-patient therapeutic relationship. Professionals are also concerned about being replaced by technology. In this sense, the importance of approaching AI technologies as collaborators and not as substitutes for the work of professionals is emphasized (Sun et al., 2025).

In view of these issues raised regarding the benefits and challenges of incorporating AI technologies into medicine in general, and in particular into the area of mental health, this study aims to identify and analyze positive and negative aspects of this technological transition through a literature review. The selection of publications for analysis was based on the Google Scholar database, using keywords such as "artificial intelligence and healthcare," "artificial intelligence and mental health," and "electronic health records and mental health." The criterion for recency was selecting works published in the last six years – from 2020 onwards. The analyses sought to identify the high potential of AI technologies when used in mental health, but at the same time, they aimed to highlight the problems being encountered and possible solutions presented by researchers and professionals in this segment of medicine. Finally, some suggestions for future studies are listed that allow for further exploration and a deeper understanding of the problems faced by



the mental health field throughout the adoption of new AI technologies.

2. LITERATURE REVIEW

The literature review was conducted based on four main themes, involving (item 2.1) the importance of artificial intelligence for the healthcare field in general and (item 2.2) for the field of mental health in particular, (item 2.3) highlighting the uses of AI in the construction and operation of electronic health records – EHRs, and finally (item 2.4) the role of EHRs in the field of mental health. It is hoped that the research reports presented here can contribute to a better understanding that artificial intelligence technologies are bringing to this segment of health. Table 1 presents the structure of the four pillars being addressed in this literature review section.

2.1. Artificial Intelligence Technologies in Healthcare

Artificial Intelligence (AI) has high potential to transform the healthcare field, both in technical and patient-focused aspects, as well as in administrative and management issues. Artificial intelligence does not involve just one technology, but rather a group of techniques, each with a more specific type of contribution, as presented by Davenport and Kalakota (2019): machine learning (ML) / neural networks / deep learning (DL); natural language processing (NLP); rule-based expert systems; physical robots; robotic process automation.

Starting with machine learning, in the healthcare field, this technique often underpins precision medicine, predicting which treatment protocols would be most appropriate, based on the patient's history. Neural networks, which emerged in the 1960s, have been used primarily in predictions about the likelihood of a patient acquiring a particular disease. Deep learning, the most complex mode of machine learning, has an important application in the medical field in the recognition, through radiological images, of possible cancerous lesions. This is a very refined type of recognition, far beyond the perception

capabilities of the human eye (Davenport & Kalakota, 2019).

Another AI technology, based on language, and which has been researched since the 1950s, is natural language processing (NLP), a technique that in the healthcare field works to understand and classify clinical documents and patient data (electronic health records), producing reports and transcribing interactions with them. Expert systems, whose first works emerged in the 1980s, are commonly used in healthcare for clinical decision support, with data that can be provided by electronic health records (ERH), for example. Surgical robots, capable of performing high-precision surgeries in a minimally invasive way in terms of incisions, also deserve mention. Finally, robotic process automation, which is not actually a "robot," but rather computer programs that work with workflows and business rules, is commonly used in the administrative area for authorizations, updating patient data, and billing (Davenport & Kalakota, 2019).

The use of artificial intelligence in various areas of healthcare is corroborated in recent literature. Alowais et al. (2023) present AI applications in disease diagnosis, treatment selection, and clinical laboratory testing, improving accuracy, reducing costs, and saving time. Alhejaily (2024) highlights the use of AI in medical imaging, accurate diagnosis, personalized therapies, and electronic health records. Olawade et al. (2024) emphasize the role of AI in precision diagnoses, personalized treatments, predictive analytics, and patient data analysis. However, these authors highlight some limitations to be considered, mainly related to ethics, legal aspects, and potential intrinsic restrictions of the technology itself. Alhejaily (2024) draws attention to the ethical problems that may arise in cases of violation of patient data privacy. Furthermore, these authors emphasize that artificial intelligence algorithms often depend on large amounts of high-quality data; nevertheless, it is known that in healthcare data is most commonly fragmented with low interoperability possibilities (Alhejaily, 2024). Alowais et al. (2023) also point out the

importance of ethical issues regarding data privacy and the limitations of the technology itself. Artificial intelligence works with statistical logic: it is very important that the data that underlies the analyses are complete and comprehensive, otherwise there is a risk of biased assessments.

2.2. AI Technologies in Mental Health

Artificial intelligence makes many contributions to the field of mental health, especially in psychology and psychiatry. Technologies like generative AI (supporting chatbots), machine learning (ML), deep learning (DP), natural language processing (NLP) are common technical support for artificial intelligence tools in healthcare. In their research, Boucher et al. (2021) present the use of chatbots as conversational agents or relational agents, which can participate in so-called digital mental health interventions (DMHI), interacting with human users. According to these authors, chatbots can contribute to functions such as assistance, triage, psychoeducation, therapeutic intervention, monitoring of behavioral changes, and relapse prevention.

Chatbots can collaborate in various ways in the field of mental health, providing support to autistic patients, people at risk of suicide, assisting those with substance abuse problems, those suffering from stress, dementia, acrophobia, and also supporting positive psychological structures, psychological well-being, and quality of life. Boucher et al. (2021) argue that chatbots can reduce the workload of mental health professionals. These authors also mention that initial research indicates that these professionals have a good impression of this technology.

Dehbozorgi et al. (2025) present several studies on the role of chatbots in mental health. These studies used generative AI applications to deal with depressed patients, showing that the use of this technology provided significant improvement for those who participated in the experiments. It is interesting to note that in these experiments there was positive feedback regarding the chatbot's abilities, which

highlights the patient experience in this type of application focused on mental health. Dehbozorgi et al. (2025) emphasize the benefits of AI technologies in this field of medicine, assisting in early detection and intervention in mental health, improving patient engagement, and personalizing interactions. On the other hand, these authors draw attention to ethical issues regarding data privacy and algorithm transparency, recommending that stakeholders get involved in the creation of AI technologies aimed at building trust, opening space for addressing ethical issues.

In the area of clinical practice, there are interesting reports on the use of AI technologies supporting mental health professionals. Tambo et al. (2025) provides an important testimony of the use of Generative AI in the daily lives of psychologists. This technology can assist professionals by automating administrative work, contributing to data analysis, supporting clinical decision-making, which can free the psychologist from time-consuming tasks such as note-taking in medical records, questionnaire analysis, and report preparation. Tambo et al. (2025) summarize the challenges to the adoption of Generative AI in clinical psychology, with barriers being the lack of understanding of what AI is, and concerns about the confidentiality and privacy of information, and facilitators, such as training in AI skills, and the possibility of having access to a digital assistant.

Sensitive aspects such as the role of professionals vis-à-vis artificial intelligence are also receiving considerable attention in the literature. Wagner and Schwind (2025), addressing psychotherapists' attitudes towards artificial intelligence in psychotherapy, emphasize that the professionals' predisposition (good or bad) plays a significant role in the adoption of this type of innovation. However, there is a fear of these professionals being replaced by these technologies, which generates a negative attitude among them. As a recommendation, Wagner and Schwind (2025) suggest that the irreplaceable human qualities of psychotherapists be emphasized, and that there be investment in AI education to mitigate the

fear of being replaced by algorithms. In this sense, Sun et al. (2025) also agree on the potential of AI in healthcare by enhancing the processing capacity of large amounts of multimodal data, allowing the identification of latent patterns that are not easily perceived by humans. However, these authors suggest that the technology should be used to complement, not replace, mental health professionals.

2.3. AI Contribution to Electronic Health Records (EHRs)

A particularly special application of artificial intelligence technologies in healthcare is directed towards electronic healthcare records, an area undergoing significant digital transformation (Karri et al., 2024). Electronic health records are ceasing to be mere static repositories of patient data and are becoming interactive and dynamic systems (Karri et al., 2024; Alanazi, 2023). AI-powered systems are capable of organizing and analyzing large amounts of patient data using sophisticated algorithms. These systems can improve accuracy and compliance by scanning and identifying important records for evaluation, as well as enabling future data retrieval needs, improving workflow, and enhancing the use of patient data. Artificial intelligence technologies enable the automatic organization and categorization of record information within pre-established rules, improving access to and navigation of medical databases. The integration of technologies such as natural language processing (NLP) with electronic healthcare records (EHR) provides healthcare professionals with easy access and accurate data retrieval.

The relevance of artificial intelligence in electronic patient records is corroborated in publications on the subject. Silva et al. (2025) argue that the integration of AI into electronic patient records (EHR) represents a high-potential alternative, as it allows for the analysis of high volumes of data, enabling the visualization of complex patterns that cannot be identified by humans. The connection of artificial intelligence with electronic records can, for example, enable an accurate diagnosis

of chikungunya (Silva et al., 2024), or reduce hospitalization time for problems such as Chronic Obstructive Pulmonary Disease, facilitating the detection of risk factors (Silva et al., 2025). However, these authors draw attention to prerequisites such as adequate technological infrastructure, professional training, and adaptation to regional demands. Similarly, Alanazi (2023) highlights the potential of artificial intelligence to revolutionize healthcare when integrated into electronic healthcare records. However, these authors draw attention to some important points: (a) the system must be designed with a focus on human beings, establishing a high standard of performance quality; (b) special care must be taken with medico-legal issues; and (c) physicians and healthcare professionals in general need to be familiar with artificial intelligence technologies. Research shows professionals who are favorable to AI-based technologies, but poorly skilled in using them (Alanazi, 2023).

2.4. Electronic Health Records (EHRs) in Mental Health

Specifically in the area of mental health, electronic healthcare records (EHRs) have been used intensively. The successful use of electronic health records and other means of medical information, such as brain imaging and sensor-based systems, has allowed for the prediction and classification of mental illnesses, including problems such as suicide (Lee et al., 2021). Information emanating from EHRs data can feed deep learning algorithms that assist, for example, in the diagnosis of dementia. Nock et al. (2022) reinforce that data from electronic health records combined with patient self-reports have increased the ability of mental health professionals, with the aid of machine learning (ML) techniques, to identify people at high risk of suicide. Similarly, Li et al. (2022) also corroborate the feasibility of using machine learning (ML) approaches to make initial predictions for Alzheimer's and related dementias, based on data provided by EHRs. Early identification of this disease, before the



first symptoms appear, is necessary since, after these symptoms emerge, there is currently no effective treatment available.

Although there is recognition that the information recorded in EHRs systems has great potential to contribute to AI tools (machine learning, deep learning, generative AI), which allow addressing challenging illnesses in the area of mental health, there is still much criticism about the use of electronic health records, mainly regarding their underutilization. Kariotis et al. (2022) argue that the adoption of electronic healthcare records (EHRs) has been low, largely due to concerns about sensitive patient information, the diversity of standardization of mental health information, and the risk that these problems will affect the therapeutic relationship with the patient. Although Kariotis et al. (2022) acknowledge that EHRs have improved the documentation of information when compared to the paper era, these authors point out that electronic health records could be better utilized. This is because there is a fear on the part of healthcare professionals to put all patient information in EHRs, since this information is considered "sensitive." It is common for sensitive information to be included preventively by the professionals in separate devices to avoid eventual problems.

There are more optimistic reports regarding the limitations of electronic records in patient charts. Zanaboni et al. (2022) admit that there is missing information in EHRs, but that these are restricted to special situations such as patients with very serious mental conditions, child protection services when parents access these children's diaries, or for patients with abusive partners. Except for these situations, Zanaboni et al. (2022) consider that electronic healthcare records (EHRs) can increase the power of patients by providing access to their own data. In any case, these authors emphasize that mental health professionals have concerns when recording their notes, always keeping in mind that the patients themselves may have access to this recorded information. Therefore, it is very important to avoid language that could

cause interpretation problems for those interested in the medical records.



Table 1 – Adoption and Use of New Technologies in Healthcare: Artificial Intelligence in Medical Records Management

Theme	Theme – Concept	Healthcare Context	Technological Context	Method	Results	Authors
2.1 AI TECHNOLOGIES IN HEALTHCARE	The potential for artificial intelligence in healthcare	The exponential growth of health data, the increase in clinical complexity, and the pressure for more efficient systems	Machine Learning, neural networks, and Deep Learning. NLP for clinical documentation and dialogues. Rule-based expert systems.	Synthesis of literature, reports, case studies and market analyses.	AI increases diagnostic accuracy, improves engagement, and can automate administrative tasks	Davenport & Kalakota (2019)
	Revolutionizing healthcare: the role of artificial intelligence in clinical practice	AI Assistance in Treatment Precision medicine and clinical decision support / In population health management/ Predictive analysis and risk assessment /	Machine Learning (ML)/ Natural Language Processing (NLP)/ . Speech-to-Text (Reconhecimento automático de fala)/ Computational structure based on big data	Narrative Review	AI is capable of automating significant portions of clinical documentation, improving information extraction, and increasing the efficiency of healthcare services	Alowais et al (2023)
	Artificial intelligence in healthcare delivery: Prospects and pitfalls	Shortage of healthcare professionals. Overburdened hospital systems. Need for faster and more accurate diagnoses.	AI, Machine Learning, and Deep Learning. Computer vision models for image diagnosis. Clinical decision systems. NLP tools for record and chart analysis	Discussion of applications, opportunities, risks, and limitations. Critical analysis of studies and future directions	AI improves early detection of prevalent diseases (such as HIV, tuberculosis, and malaria). Screening algorithms can reduce hospital overload.	Olawade (2024)
	Artificial intelligence in healthcare (Review)	AI solutions in the healthcare sector.	Medical imaging, digitized data collection, and electronic health records	Systematic Review	Healthcare data are often present in a fragmented manner, lacking interoperability and consistency, which leads to potential issues of completeness and accuracy	Abdul-Mohsen (2024)
2.2 AI TECHNOLOGIES IN MENTAL HEALTH	Artificial Intelligence in Healthcare	Electronic Health Records (EHR)	Predictive analysis, decision support systems, data visualization, natural language processing (NLP), mobile technology	Qualitative methodology: Focus group interviews, with clinicians	AI technology has potential to revolutionize healthcare through integration with EHRs and other existing technologies.	Alanazi (2023)
	Chikungunya diagnosis using artificial intelligence and medical record data	The overburdening of health systems during outbreaks.	Classification algorithms: Naive Bayes, Net Bayes, J48, Random Tree, Random Forest, MLP, SVM.	Database, Preprocessing, Balancing, Modeling, Evaluation	EHRs has strong ability to distinguish between chikungunya, dengue, and discarded cases.	Silva Et Al (2024)
	Artificial Intelligence in Medical Records Management	Medical Records Management	AI in Predictive Analytics, Data Extraction, Decision Support Systems, Privacy and Security	Literature Review	Predictive analytics by AI enables proactive intervention and resource allocation, enhancing healthcare efficiency.	Karri et al. (2024)

	The Application of Machine Learning Algorithms Integrated into EHRs	Technologies that support early diagnosis, ongoing management, and monitoring of chronic diseases.	Integration of Artificial Intelligence (AI) into PEPs.	Bibliographic review	Diseases predicted by AI, Types of AI used, Advantages identified, Disadvantages observed.	Silva Et Al (2025)
2.3 AI CONTRIBUTION TO EHR	AI-powered chatbots in digital mental health interventions	Diagnosis, Content delivery, Symptom management and triage	Chatbots with Neurolinguistic Programming (PNL)	Narrative Review	The availability of effective AI-supported interventions is an important way to reduce the long-standing burden on professionals and improve the growing shortage of mental health professionals	Boucher et al (2021)
	Practical application of AI in psychiatry	Diagnosis in Psychiatry, Prognosis and Prediction of Clinical Evolution, Personalized Treatment Selection, Continuous Mental Health Monitoring, Digital Interv.in Mental Health	Machine Learning (ML), Deep Learning, Natural Language Processing (NLP), Large Language Models (LLMs), Digital Phenotyping	Historic Review	AI presents significant potential to transform psychiatric practice	Sun et al (2025)
	Investigating psychotherapists' attitudes towards artificial intelligence in psychotherapy	The rise in mental health disorders, the lack of psychotherapists, and the need for complementary solutions	Artificial Intelligence and Machine Learning in psychotherapeutic tasks, such as diagnosis, outcome prediction, personalized plans, VR, patient information analysis, and chatbots.	A questionnaire based on the TAM (Technological Assessment Model) was used to evaluate attitudes, technical affinity, and perceived usefulness.	Positive attitudes were predicted primarily by the perceived usefulness of AI in diagnosis and treatment planning.	Wagner & Schwind (2025).
2.3 AI CONTRIBUTION TO EHR	Applications of Artificial Intelligence in Psychiatry and Psychology Education - A Scoping Review	Improvement of clinical reasoning, personalization of content delivery, and support for professional development.	AI Tools for Clinical Decision Support, Creation and Enhancement of Educational Content, Student/Candidate Support, Therapeutic Tools and Mental Health Monitoring, Admin. and Research Assistance,	Scoping Review	AI tools with a transformative educational role that can support adaptive learning, promote efficiency, and broaden access to mental health training	Pregent et al. (2025)
	Barriers and enablers for generative artificial intelligence in clinical psychology: qualitative study based on the COM-B and heoretical domains framework (TDF) models	How clinical psychologists cope with high workloads. Use of generative AI (GenAI) to reduce administrative tasks..	Chatbots, virtual assistants, and language tools. Recorders and automated medical record management systems	Qualitative method. In-depth semi-structured interviews	Lack of knowledge about AI. Fear of privacy/confidentiality breaches. Lack of regulation. Implementation costs	Tambo et al. (2025)

	15) The application of artificial intelligence in the field of mental health: a systematic review.	Real-time monitoring, preventive care, personalized interventions, and predictive modeling.	Chatbots, predictive models, and wearable technologies	Systematic review	TAI enhances early detection and intervention in mental health conditions. Studies have highlighted the effectiveness of AI-based tools, such as chatbots and predictive modeling, in patient engagement and personalizing interventions	Dehbozorgi et al (2025)
2.4 EHR IN MENTAL HEALTH	Artificial Intelligence for Mental Health: Clinical Practice Applications, Barriers, Facilitators, and Artificial Wisdom	Clinical Diagnosis, Prognosis and Treatment	Machine Learning (ML), Deep Learning (DL), Transfer learning and Natural Language Processing (NLP)	Narrative Review	Artificial intelligence has potential to improve diagnosis, treatment, monitoring, and prognosis in mental health, especially by automating and analyzing medical records and unstructured data, but adoption depends on overcoming ethical, technical, and validation challenges	Lee et al (2021)
	Early prediction of Alzheimer's disease and related dementias using real-world electronic health records	Artificial Intelligence for Mental Health Applications	Electronic Healthcare Records (EHRs)	Literature Review	Successful examples of the use of AI with electronic health records, brain imaging, sensor-based monitoring systems, and social media platforms to predict, classify, or subgroup mental illnesses,	Li et al. (2022)
	Electronic Health Records on Information Practices in Mental Health Contexts: Scoping Review	Adoption of electronic health records (EHRs) and electronic medical records (EMRs)	Electronic Health Records	Systematic Literature Review	EHRs improved the amount of information documented compared with paper. However, mental health-related information was regularly missing from EHRs, especially sensitive information.	Kariotis et al. (2022)
	Patient-provider relationship and documentation practices: electronic health records online context	Patient-provider relationship and documentation practices	Electronic Health Records	Research Paper - Survey	AEHR negative consequences only in limited situations, as for patients with severe mental conditions, for child protective services when parents access their children's journal, or for patients with abusive partners	Zanaboni et al. (2022)
	Prediction of Suicide Attempts Using Clinician Assessment, Patient Self-report, and Electronic Health Records	Prediction of Suicide Attempts Using Clinician Assessment	Electronic Health Records / Machine Learning helping to prevent suicide	Research Paper - Survey	The results suggest that suicide risk assessments made using EHR-based and self-report-based risk scores may yield relatively accurate and clinically actionable predictions about the risk of suicide attempts by patients	Nock et al. (2022)

3. CHALLENGES AND FUTURE RESEARCH

Artificial intelligence is making a significant impact in healthcare, providing agility and precision to medicine. Specifically, in the field of mental health, the contributions are numerous and can enable professional support worthy of a new paradigm in medical practice. The ability of algorithms to process information and identify anomalies, often in advance, is making new AI technologies a benchmark for the healthcare community. Problems such as autism spectrum disorder, anxiety, depression, substance abuse, dementia, and phobias, which have been major challenges to mental health for decades, can see significant progress in terms of detection, assessment, and medical intervention. In this sense, important AI technologies such as machine learning, neural networks, deep learning, natural language processing, ruled-based expert systems, and robotic process automation can all benefit from patient information organized in electronic healthcare records (EHRs).

Although there is recognition that new AI technologies are already making significant contributions to medicine in general and mental health in particular, there are issues that deserve attention. Prerequisites are necessary for technologies to function satisfactorily, and these are linked to an adequate technological infrastructure, training and qualification of professionals, and controlled medico-legal issues (Silva et al., 2025). Also, problems with the standardization of information included in EHRs are motive of concerns by medical personnel (Kariotis et al., 2022). Sensitive issues also need to be addressed, such as the fear that professionals, especially those in mental health, have of recording all information in electronic health records (Kariotis et al., 2022). Concerns exist about harming the doctor-patient relationship if notes relating to the patient are openly disclosed. To avoid potential problems of this nature, it is not uncommon for mental health professionals to use separate devices to record aspects considered confidential regarding

the patient. This practice, justified by the sensitive issues involved, leads to the underutilization of the full potential that AI technologies offer. And no less important than the aspects raised is the fear professionals have of being replaced by technology (Wagner & Schwind, 2025). In this sense, Sun et al. (2025) emphasize the importance of valuing the professional, looking to guide them in a way that the AI technology will cooperate with, and not replace people.

Because it is a recent topic with many areas to be explored, there are many avenues for future research that can open up for researchers. Below are some suggestions:

- Research on electronic healthcare records (EHRs) from the perspective of service users, which may suggest future adjustments that benefit patients and healthcare professionals;

- Investigations that assess the degree or stage of maturity in which the use of EHRs is found; the results could indicate how much has evolved and what still needs to be learned and incorporated into the daily routine of clinical practices in mental health;

- Exploring the topic of document standardization and interoperability; Equipment manufacturers still work with proprietary solutions that do not necessarily "communicate" with data and information from mental health systems. The adoption of solutions such as the Fast Healthcare Interoperability Standard, as well as the Systematized Nomenclature of Medicine, could be on the agenda for future research (Kariotis et al., 2022; Zanaboni et al., 2022).

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