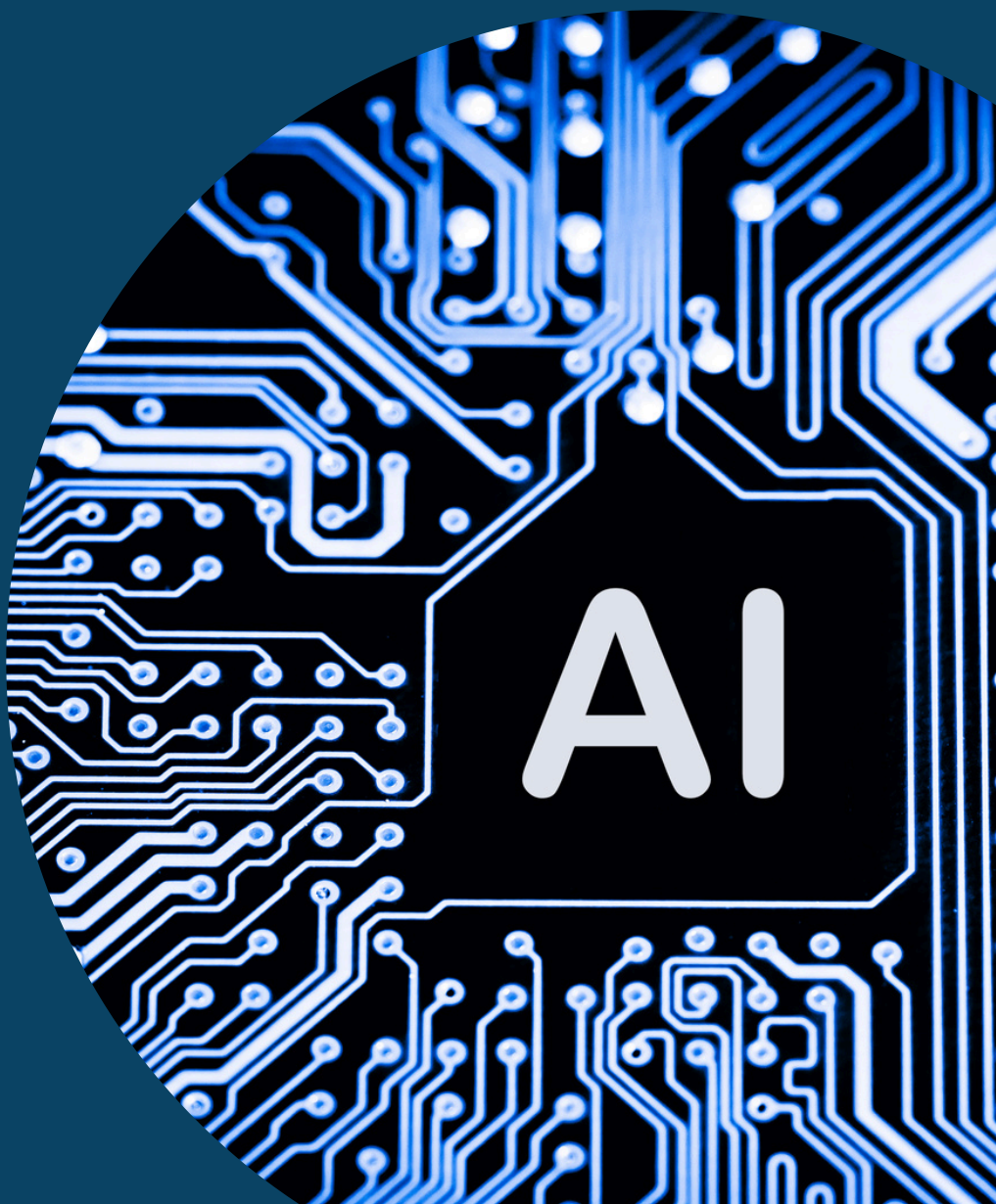MDGuidelines® | The measure of health

RESEARCH BRIEF

Best Practices for Using AI in Healthcare and Disability Management

Gage Koeller, MPH & Kerri Wizner, MPH

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Best Practices for Artificial Intelligence in Health

Artificial intelligence (AI) is transforming the way we work by offering new ways to automate and streamline repetitive or data-intensive processes. In the healthcare and disability management landscape, organizations are already identifying places for AI to make an impact such as:

- Summarizing health information and increasing health literacy for patients [1]
- Improving notetaking for physicians [2]
- Enhancing predictive algorithms for disease identification and disability assessment [3]
- Making it easier for case managers to correctly identify expected return-to-work durations [4]

However, AI may also bring its fair share of concerns. In this report, we identify potential issues and risks that healthcare organizations should consider before using AI in their workflows and offer some best practices towards addressing them.

Types of AI

There are two primary types of AI: predictive and generative. Predictive AI uses sets of algorithms to automate "advice-giving" (predictions) based on past data [5]. This can vary from new ways that advertisements are shown on social media to complex AI models that can help classify and diagnose diseases [6]. Generative AI can create entirely new content based on the data used to train the model. Some generative AI models are built using large language models (LLMs) trained on massive amounts of text data. Advancements over the last few years, such as OpenAI's ChatGPT, have made generative AI a highly discussed topic. However, many people worry that generative AI will outperform workers and impact job stability and unemployment [7].

Although AI is being considered across nearly every industry, regulations are still in their infancy. On October 4, 2022, the White House released the blueprint for an AI Bill of Rights, which outlined five common sense protections for the American public: Data Privacy and Security, Algorithmic Discrimination Protections, Safe and Effective Systems, Notice and Explanation, and Human Alternatives, Consideration, and Fallback [8]. This blueprint lays the groundwork for AI legislation, but it is very difficult to address every issue that may arise in each industry. Therefore, employers within the insurance and healthcare sectors must monitor their own usage of AI. Many companies have already voluntarily committed to following these standards, including Amazon, Anthropic, Inflection, Meta, Microsoft, and OpenAI [9]. Here we will review each of the five common sense protections in the landscape of healthcare and disability management and provide ways to address them.

Data Privacy & Security

Predictive AI systems rely on large datasets for training and decision-making. Because healthcare and disability management protocols involve handling sensitive personal and medical information, there are valid concerns about data privacy and potential breaches of the Health Insurance Portability and Accountability Act (HIPAA). Whereas trained AI algorithms may improve efficiency and health outcomes, it is important to ensure that they are trained using the minimum amount of protected health information (PHI) required to prevent data overreach and decentralized data sharing and to provide robust encryption and anonymization [1]. Failing to do so may result in breaches of privacy for patients and subsequent litigation. When using AI, HIPAA recommends implementing policies and procedures to protect data privacy that include creating an AI governance team for continual oversight, updating contracts with business associates, training users on PHI and non-compliance issues, conducting risk assessments, and continually providing transparency of its use of PHI [10].

Algorithmic Discrimination Protections:

Another concern about predictive AI models is how they may perpetuate biases. AI systems are only as unbiased as the data used to train them. For example, there have been many instances of AI hiring algorithms favoring white male candidates [11]. In healthcare and disability management, AI models may be trained using biased historical data that do not take structural inequality, medical racism, access to healthcare, and socioeconomic pressures into account when predicting health outcomes and recovery times. This may cause an increase in already existing inequalities. It is important for organizations to consistently evaluate patient outcomes and respond to feedback. If AI algorithms are perpetuating bias, the model should incorporate diverse, representative datasets and be recalibrated as necessary [1]. Physicians, nurses, and case managers should also monitor and verify results to ensure that bias does not occur. Transparency in AI decision-making can be vital for identifying and preventing further bias.

Safe, Effective Systems:

Perhaps the largest potential for generative AI is its ability to summarize complicated information and personalize it for patients and non-clinicians. This can help patients to better understand and participate in their treatment plans. However, the possibility of incorrect, misinformed, or even malicious information that could be upsetting and possibly dangerous to the patient makes this an area of concern as well. Poorly summarized information may result in the patient pursuing incorrect or harmful medication, ignoring physician recommendations, or stopping treatment altogether [12]. While generative AI has the potential to be transformative for patient health literacy and education, there is also a potential for worsened health outcomes and legal implications if errors occur. There have been cases of summative AI providing blatantly incorrect information, such as when Google's AI bot, originally released in May 2024, would occasionally reference jokes and sarcasm as fact or cite poor sources [13]. Therefore, consistent oversight, testing, and governance over generative AI will be vital in maintaining its credibility and helping patients. Organizations should set protocols for employee oversight, obtain patient and user feedback, and regularly perform risk assessments.

Notice & Explanation

An important aspect of using AI in disability management and healthcare is transparency. Organizations need to provide information on how their algorithms work and whether generative AI is used in its algorithm and search methods, especially when it drives decision-making that affects health outcomes. For example, a class-action lawsuit was filed on December 12, 2023, against health insurer Humana and its AI model nHPredict, which was found to wrongfully deny medical care for some elderly and disabled patients [14]. Not only did this tool perpetuate an algorithmic bias, but its website also claimed that it was "not used to deny care or make coverage determinations". A lack of transparency surrounding the use of AI does not allow for partners and employees to make informed decisions that are best for the patient. As AI evolves in the health and insurance landscape, more issues like this will follow until best practices and adequate regulations are formed. Again, this highlights the importance of maintaining transparency, continuously monitoring AI usage, and following industry and legal best practices.

Human Alternatives, Consideration, & Fallback:

While the automation that predictive and generative AI provides can be essential in reducing costs and improving quality, consistency, and processes, it is important that human oversight is provided. This can involve doctors having the final say on treatment recommendations, case managers advising patients on predicted recovery durations, or patients asking to speak to humans if they disagree with AI decision-making. One of the major concerns of AI across all industries is how it may replace human jobs. According to an American Psychological Association study, nearly two out of every five workers are concerned about their jobs being taken by AI [15]. Whether this is realistic or not may depend on an employee's position and field; however, human alternatives and oversight will always be needed. AI monitoring and governance teams have and will continue to grow within organizations. For instance, Alight Solutions developed an AI governance board that regularly meets to review new and existing AI technology, examining data value, output quality, bias, data privacy, and more [16].

The potential for AI to improve healthcare and disability management is real and significant. AI may not only streamline organizational processes and increase the return on investment (ROI), but it may also help improve health outcomes. As organizations increasingly turn to AI, it is essential to address the significant logistical risks and ensure that protections are in place. At its core, organization leaders need to implement data safety and transparency measures and continuously engage in employee training. Employees themselves must also contribute by monitoring outcomes generated by AI and ensuring that unbiased and appropriate care results.

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