

# Antitrust Policy in EHR AI

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## Abstract:

Electronic Health Record (EHR) systems in the United States have gained momentum over the past few years, completely changing the way healthcare providers deliver services and manage patient information. They allowed digitization of patient records thus enabling easier access and better clinical decisions. On the other hand, the integration of cutting, edge technologies such as Artificial Intelligence (AI) and Generative AI (GenAI) in these EHR systems is quite challenging due to monopolistic practices of a few dominant vendors who have medical data of most of the American patients. Such behaviors not only limit interoperability and use of third, party innovative solutions but also artificially inflate the price of administrative and clinical solutions powered by AI thus inconveniencing the end users. Antitrust policies therefore are considered pivotal in resolving such problems as they lead to a competitive market, equal data access conditions, and finally, a more open and accessible healthcare technology environment. This article delves into how the concentration of the EHR market affects the introduction of AI tools, their pricing, as well as the suppression of competition. Through the use of qualitative research methodology in analyzing industry practices, regulatory interventions, and market trends, together with economic understanding of market power and its influence on innovation, the article exposes the deeply ingrained obstacles that new health, tech firms face. The key findings reveal that the consolidated EHR companies not only hinder the integration of AI but also influence the pricing structures in such a way that it discourages competition, thus affecting the efficiency and cost, effectiveness of healthcare. The research emphasizes the need for focused antitrust interventions and interoperability mandates to facilitate fairness in AI adoption, cost reduction, and overall patient care improvement.

**Keywords:** EHR, AI, GenAI tools, antitrust, healthcare interoperability, market consolidation.

## I. INTRODUCTION

### *A. Background*

Electronic Health Records (EHRs) have become the primary instrument for healthcare management in the U.S. They make it possible for patient medical records to be stored, retrieved, and shared in a digital format. For one, they save time, simplify the processes, and reduce the amount of paperwork. In addition, these systems, among other things, are instrumental in delivering a more coordinated and better patient care. Four major EHR vendors, Epic, Cerner, MEDITECH, and Allscripts, dominate in terms of market share, and thus they are constantly handling medical data of no less than millions of U.S. patients. According to a recent industry report, these top four vendors jointly account for over 80 percent of the hospital EHR installations market, hence, the market environment is one of high concentration. EHRs have indeed been a great leap toward the digitalization of healthcare; nevertheless, their proprietary systems are often the main reason why they do not get integrated with other external technologies, for instance, the latest Artificial Intelligence (AI) and Generative AI (GenAI) applications that are being developed to improve administrative efficiency, provide clinical decision support, and offer predictive analytics.

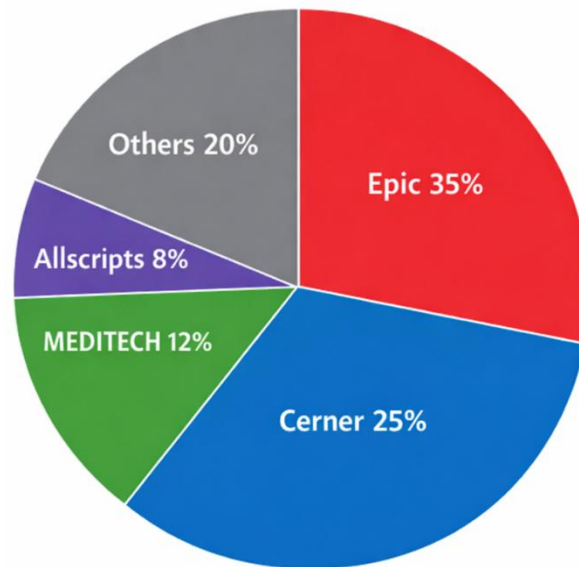


Fig. 1. EHR Market Landscape in the U.S.

This fig 1 highlights the high level of market concentration and potential barriers for new entrants.

### ***B. Motivation***

The fast development of AI technology in healthcare is revealing new opportunities for improved patient outcomes and higher efficiency in the operation of healthcare institutions. AI, driven applications can be a great asset in automating administrative tasks, identifying high, risk patients, optimizing resource use, and assisting in clinical decision, making.

However, integration of such applications with EHR systems is a difficult task that is usually riddled with challenges due to vendor, imposed restrictions. Proprietary interfaces, limited application programming interfaces (APIs), and interoperability issues are some of the obstacles that disallow the seamless integration of third, party AI solutions. This kind of vendor lock, in restricts the ability of healthcare institutions to fully exploit the latest AI tools, thus increasing the cost of operations and slowing down the overall rate of technological advancement.

### ***C. Problem Statement***

Monopolistic practices have become a major barrier to innovation and competition in the Electronic Health Record (EHR) market. Major vendors, by monopolizing patient data and restricting interoperability, are, in fact, disallowing startups and smaller health, tech companies from bringing in cost, efficient AI solutions. Therefore, the innovation gets stifled, the prices of AI tools are artificially inflated, and the benefits of AI in healthcare are not fully exploited. Getting over these obstacles is crucial for giving everyone access to AI, based healthcare solutions and for making healthcare more efficient overall.

### ***D. Research Gap***

There had been studies done on EHR based on general issues of interoperability and the impact of healthcare market consolidation on health outcomes. Nevertheless, the economic literature has only touched the very surface of the potential connections between the concentration of the EHR market and the adoption and pricing of GenAI tools. Among other things, the monopolistic player and their influence on competition, entry, and pricing of AI solutions have been a subject that has not been discussed yet.

The above, mentioned gap can be interpreted as an open door for a detailed investigation of the role of antitrust policies in encouraging innovation and lowering prices.

### E. Objective

This paper aims to:

- Analyze how the concentration of EHRs in the market affects the adoption of AI tools and their pricing.
- Study the ways in which monopolistic behavior limits competition from new health, tech vendors.
- Assess antitrust policies and make proposals for interventions that would facilitate interoperability, innovation, and fair access to AI, based healthcare solutions.

## II. BACKGROUND & LITERATURE REVIEW

### A. EHR Systems Overview

Electronic Health Records (EHRs) refer to computer software that securely keeps, organizes, and exchanges patient medical data among doctors and other healthcare providers. Typical essential modules in EHR systems include identifying data of the patient, health background, results of diagnostic tests, prescribed drugs, and physician's notes. Leading U.S. corporations such as Epic, Cerner, MEDITECH, and Allscripts have carved out substantial shares in the market and collectively hold the records of millions of patients. For the last twenty years, there have been consistent increments in the utilization of records due to governmental stimulus actions, e.g. HITECH Act, which expedited the change from the traditional paper format to electronic records. Present interoperability frameworks, e.g. FHIR (Fast Healthcare Interoperability Resources) and HL7, are characteristic of digital solution providers to assure that EHRs can not only interface with each other but also with external apps thus facilitating data access and patient care continuity. However, the altercations of their proprietary system designs and vendor, specific interfaces will create difficulties for the hospitals and healthcare providers integrating external tools or combining patient information from various systems. Recently, some authors have pointed out the fact that, despite the presence of the technical foundations for interoperability, there is a large degree of inconsistency in their implementation, especially in smaller hospitals or clinics, where a lack of resources is a significant hindering factor [1]. As a result, the degree of market power concentration increases the level of difficulties for third-party developers to offer innovative solutions. Table 1 illustrates key characteristics of major EHR vendors, including market share, interoperability capabilities, and AI integration support.

TABLE. 1. Comparison of Major EHR Vendors

Vendor	Market Share	Interoperability Features	AI Integration Support	Antitrust Cases
Epic	35%	FHIR, HL7, APIs	Limited proprietary AI, third-party integration possible	Ongoing antitrust scrutiny
Cerner	25%	FHIR, HL7, API support	AI modules for predictive analytics	Subject of interoperability lawsuits
MEDITECH	12%	HL7, limited APIs	Minimal AI integration	None reported
Allscripts	8%	FHIR, HL7	Some AI tools for workflow	Minor litigation
Others	20%	Varies	Varies	Varies

### B. AI in Healthcare

Artificial Intelligence (AI), especially Generative AI (GenAI), is already proving to be a game changer in the healthcare sector. The spectrum of AI applications in healthcare runs from automating administrative tasks, to enhancing predictive analytics, from suggesting personalized treatments to aiding clinical decisions. Specifically, GenAI is instrumental in merging patient data, creating prediction models, and streamlining the documentation process, which eventually leads to a lesser burden on healthcare professionals and reduced administrative overhead [2].

Examples of AI applications include automated coding, billing, and risk stratification, which are not only cost, saving solutions but also efficient management of hospital workflows with the aid of AI. Besides,

proactive healthcare for the general public can be achieved by precisely recognizing individuals who have a higher chance of getting sick and, hence, providing them with timely interventions [3]. However, converting these glorious prospects into actuality, especially the embedding of AI features in patient record systems, is a thorny path. The integration of third, party AI apps with different EHR systems is usually hindered by vendors' proprietary interfaces and the unavailability of APIs. Besides, the aspects of patient data privacy, security, and algorithmic bias must be given utmost importance to ensure safe and fair health outcomes [4]. Paradigms incorporating AI, federated learning, and digital twins are being conceptualized to overcome such challenges by enabling the training of models on distributed data sources without sacrificing privacy [5]. Overall, the integration of AI into EHRs represents a high-value opportunity for hospitals, but systemic barriers imposed by dominant vendors hinder widespread deployment and innovation.

### ***C. Antitrust Principles in Healthcare***

Antitrust laws are basically there to keep the competition alive, stop monopoly, and make sure consumers are not harmed. In the U.S., the Sherman Act and Clayton Act are the major laws that regulate market behavior, including the healthcare technology markets. The Federal Trade Commission (FTC) keeps an eye on mergers, " After reading the five documents, one of the big issues with your business practice that comes to mind is the potential antitrust violation because of the dominance your company has in the market. Based on the facts available, it seems that your company is engaging in the unlawful practice of 'vendor lock, in, ' where changing the EHR systems becomes" Field experiments often represent a challenge for many scholars in the field of economics and other social sciences as they require the research team to conduct experiments on, site within real, life organizational or community settings. One of the main questions that field experiments pose is whether the results of the experiment can be generalized or replicated in other settings." Antitrust investigations have targeted cases of 'vendor lock, in' where hospitals are unable to switch EHR suppliers without incurring substantial costs or experiencing data migration difficulties. Previous studies have demonstrated that market concentration plays an important role in reducing the incentives for innovation and slowing down the introduction of cost, saving technologies.

## **III. EHR MARKET CONCENTRATION & MONOPOLY PRACTICES**

### ***A. Market Structure and Vendor Dominance***

The private market for electronic health record (EHR) systems in the U.S. is highly concentrated; four major vendors, Epic, Cerner, MEDITECH, and Allscripts, together account for more than 80% of hospital installations. Epic alone dominates almost 35% of the market, with Cerner trailing at 25%, MEDITECH at 12%, and Allscripts at 8%; the remaining market players share 20% of the market [6]. Consequently, these firms have the power to set the prices, decide on interoperability standards, and control the granting of patient data, thus they dictate the market environment not only for themselves but for all competitors as well. The market concentration is assessed by measures like the Herfindahl, Hirschman Index (HHI), which in the instance of EHRs shows a highly consolidated market. The great influence that a limited number of vendors have on the private electronic health record market certainly limits the possibilities of the healthcare sector to innovate, in particular the integration of artificial intelligence (AI) capabilities in their processes. Being at the top in terms of market share allows EHR vendors to create software in a way that privately locks down their system architectures and APIs, such that third, party developers are very restricted in their capability to deliver new AI solutions in fig 1. On the other hand, hospitals that are looking for new tools will be confronted with a long list of technical and monetary obstacles, including exorbitant integration charges or a lack of permission to export data. These practices, collectively known as vendor lock-in, not only inhibit interoperability but also increase the overall cost of adopting AI and other healthcare innovations [6].

### ***B. Monopolistic Practices***

EHR vendors leverage their market dominance through several monopolistic practices:

**Limited interoperability:** Vendors typically restrict data access via their own proprietary APIs which makes it more challenging for hospitals to share patient information with third, party AI applications. This, in turn, limits the freedom of startups and smaller companies to enter the market and offer innovative solutions.

**Exclusive agreements:** Sometimes healthcare vendors enter into long, term contracts with healthcare systems which have exclusivity clauses. These clauses prevent the use of different platforms or integration with external tools.

**Big integration fees:** Vendors might charge hospitals very high fees for giving third, party application access. This, in turn, becomes a financial hurdle for the adoption of AI.

**Vendor monopolization through data control:** Vendors that monopolize patient data have the potential to easily control the markets of predictive analytics and hospital AI solutions. This control can then be leveraged as a tool for market suppression. These strategies collectively reinforce the vendor's market power, inhibit competition, and slow the adoption of cost-saving technologies [7]. For emerging AI health-tech companies, these barriers reduce incentives to innovate, as access to the largest patient datasets is often restricted or prohibitively expensive.

### ***C. Regulatory Oversight and Legal Challenges***

Federal antitrust authorities have been examining the Electronic Health Record (EHR) market more closely. The Federal Trade Commission (FTC) together with the Department of Justice (DOJ) have looked into the vendor practices related to interoperability and competitive barriers. Some lawsuits claim that Epic and Cerner have violated competition laws by refusing third, party applications access and by imposing very restrictive contracts on hospitals [8]. The regulatory enforcement through the Sherman Act and Clayton Act is directed towards prohibition of monopolistic practices, stimulation of innovation, and consumer welfare protection by means of competition and data portability.

Antitrust investigations have brought the issue of market concentration to the forefront. However, their results have been somewhat contradictory. Vendors usually settle through agreements or implement some limited interoperability, but there is still a long way to the comprehensive reform aimed at opening access for AI developers. There is hardly any factual data demonstrating the impact of the antitrust interventions on AI uptake; hence, the effectiveness of antitrust measures to stimulate innovation is still a topic for research.

### ***D. Implications for AI Integration***

The EHR market concentration has a direct effect on the adoption of AI solutions in hospitals. The monopolistic nature of the EHR market increases the price of AI adoption, limits access to critical patient information, and leads to less competition among vendors, resulting in less innovative solutions for clinical decision support, administrative automation, and predictive analytics. Economic studies suggest that less competition in technology-intensive industries is associated with lower innovation rates, increased prices, and inefficient adoption of cost-saving technologies [9]

To better understand the effects of EHR market concentration on AI adoption, Figure 2 below explains the relationship between EHR market concentration and AI adoption in hospitals. The figure demonstrates how the control of vendors on EHR interoperability and data access influences the adoption of third-party AI solutions in hospitals, ultimately hindering competition and innovation.

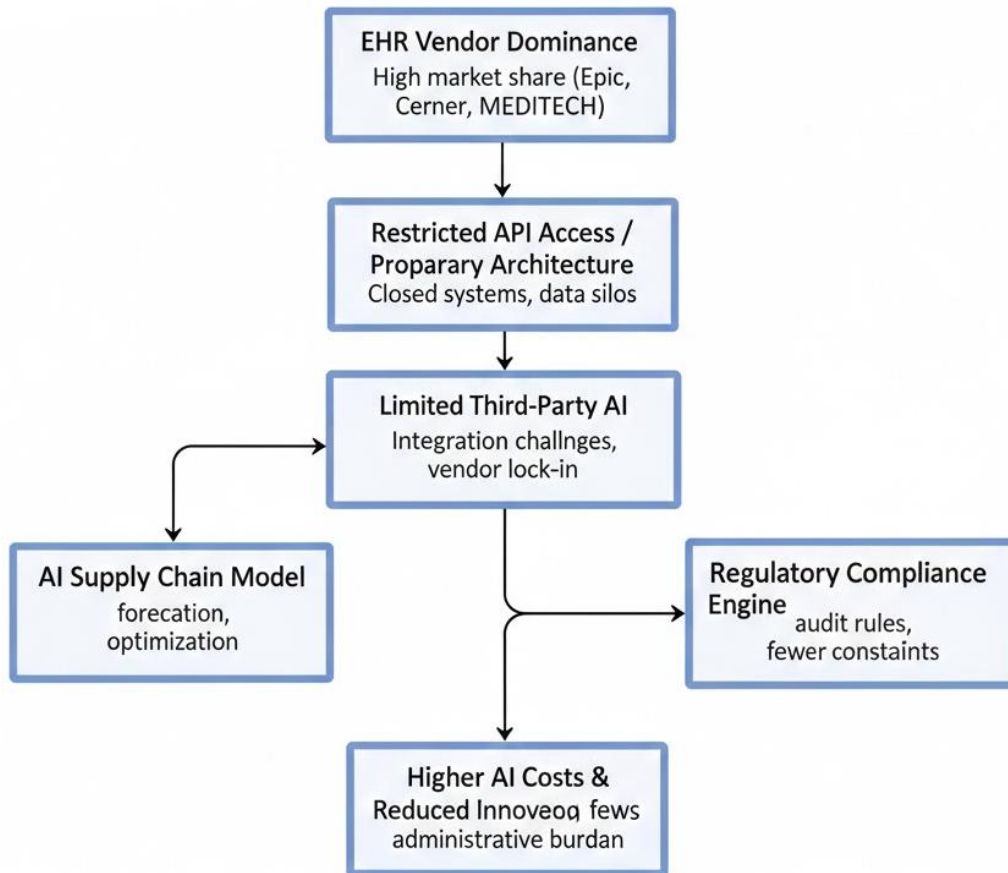


Fig. 2. Impact of EHR Market Concentration on AI Integration

This section establishes a clear link between market concentration, monopolistic practices, and the inhibition of AI innovation, setting the stage for the next section on AI pricing and adoption.

#### IV. IMPACT ON AI TOOL PRICING AND ADOPTION

##### A. Pricing Implications of Market Concentration

The monopolistic structure of the U.S. EHR industry has a direct impact on the pricing of AI solutions that are integrated into the hospital systems.

The dominant players in the industry, including Epic and Cerner, have a stranglehold on large patient datasets, which are required for training AI models and predictive analytics [10]. This makes it difficult for third-party AI solution developers to integrate their solutions into the hospital systems without the approval of the dominant players. This gives the dominant players a stranglehold on third-party AI solution developers, who are forced to pay a premium for the privilege of integrating their solutions into the hospital systems. This, in turn, has a direct impact on the pricing of AI solutions, which are higher than they would be in a more competitive market structure. For instance, a predictive analytics module or an automated documentation module may cost a hospital 20-40% more if it has to be integrated into the hospital systems by only one vendor, while interoperability between multiple vendors could lower the cost of implementation [11].

In addition to the direct costs, the monopolistic nature of the industry also imposes hidden costs on the healthcare system, such as the cost of training employees on vendor-specific AI solutions, the delay in

adopting AI solutions because of the long approval process, and the inefficiency of using AI solutions that have limited integration capabilities with existing systems in the hospital. This not only hinders the adoption of AI solutions but also makes it difficult for small health-tech startups to enter the market.

### ***B. Barriers to Entry for Startups and Third-Party Developers***

Start-up AI health-tech firms are faced with systemic challenges in implementing innovative solutions in EHR systems. This is due to the lack of access to APIs, poor documentation, and restrictive licensing terms that hinder the efficient scaling of solutions by start-up firms. Moreover, hospitals are also averse to using innovative solutions from start-ups due to possible integration challenges and compliance issues with vendors, thereby further solidifying the competitive advantage of established EHR system vendors [12] The net result of restricted access and high integration costs creates a vicious cycle in which monopolistic firms continue to enjoy a competitive advantage, while third-party developers find it difficult to compete, and hospitals have limited access to affordable AI solutions.

### ***C. Economic and Clinical Implications***

According to economic studies, lower competition is associated with slower innovation, higher prices, and fewer quality or efficiency enhancements [13] In the healthcare sector, these factors have immediate clinical implications, including the impact of delayed adoption of AI predictive analytics on patient outcomes, early identification of high-risk patients, and increased efficiency of hospital operations. Administrative automation, including AI-assisted coding and scheduling, is also adversely affected by monopolies, with sustained higher costs of staffing and administration.

Looking at it from the hospital perspective, the use of AI technology is a strategic investment decision, along with clinical effectiveness, they also base their decision on market accessibility restrictions imposed by the dominant EHR vendors. New entrants get less innovation rewards if the biggest potential market of customers (hospitals using the dominant EHR systems) is either inaccessible or they have to bear higher costs.

### ***D. Visual Presentation of Pricing Impact***

Figure 3 illustrates the price comparison of AI tools in a monopolized versus competitive EHR market visually. The graph shows:

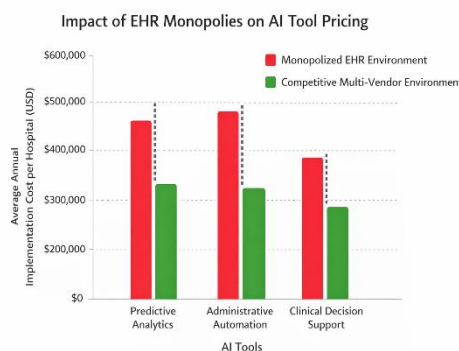


Fig. 3. Impact a HER Monopolies on AI Tool Pricing

### ***E. Summary***

The dominance of a few key players in the U.S. EHR market has an overwhelming impact on the utilization and pricing of AI, based solutions. The monopolistic market situation has been a significant barrier to interoperability, increased integration costs, and limited access for third, party developers, which in turn has led to.

Hospitals facing higher costs of AI technologies. Clinical and administrative fields experiencing a delay in the introduction of new AI solutions. Health tech sector experiencing a decline in competition and innovation. It is of utmost importance to address these challenges through the implementation of regulatory measures, antitrust laws, and interoperability standards that will not only ensure fair adoption of AI but also lead to cost savings in the healthcare sector. The next section will shed light on the policies and antitrust challenges that should be addressed to tackle these market failures.

## **V. POLICY ANALYSIS & ANTITRUST CONSIDERATIONS**

### ***A. Regulatory Framework and Enforcement Trends***

The antitrust laws of the United States of America basically serve as the legal basis for the promotion of competition, the prohibition of monopolistic activities, and the enhancement of market performance. Among the most important laws that apply to EHR systems are the Sherman Act, which aims to prevent monopolization and the attempt to monopolize, and the Clayton Act, which prohibits mergers and acquisitions that could lead to a significant reduction of competition. The Federal Trade Commission (FTC) and the Department of Justice (DOJ) are carefully monitoring the healthcare technology industry to detect anti-competitive practices such as a lack of interoperability, exclusive contracts, and vendor lock, in [14].

Recent years have seen enforcement efforts increasingly targeted at large-scale EHR system vendors. Lawsuits and investigations have uncovered instances in which hospitals have been prohibited from accessing third-party AI systems because of intellectual property rights or the high cost of integration. In some of these instances, vendors have agreed to change contractual language or grant limited API access, but a full solution to the problem of open interoperability and fair access to AI systems has not yet been determined. Thus, antitrust enforcement acts as a key mechanism for curbing the adverse consequences of market concentration on healthcare innovation [15-18].

### ***B. Policy Interventions for Improving AI Adoption***

Policy interventions can help break down monopolistic barriers and foster the integration of AI tools into EHR systems. These interventions include:

1. **Forcing Interoperability Standards:** The enforcement of standards like FHIR, HL7, and SMART on FHIR will ensure that third-party AI systems can easily interact with EHRs.
2. **Open APIs:** The enforcement of open APIs will ensure that innovation by small developers is encouraged.
3. **Encouraging Data Sharing:** Policies that encourage secure data sharing for research and training AI models will improve competition while protecting privacy.
4. **Monitoring Market Consolidation:** Antitrust policies that strengthen review of mergers and acquisitions will ensure that hospitals are not limited to one vendor.
5. **Transparency in Pricing:** Transparency in the cost of AI integration and access will ensure that hospitals do not pay exploitative prices and opt for cost-effective AI solutions.

### ***C. Economic and Innovation Impacts***

Economic studies have shown that these measures can greatly enhance the efficiency of markets and facilitate innovation. Open APIs and data sharing standards make it easier for start-ups and smaller companies, promoting competitive pricing of AI software and encouraging its adoption. Lower integration costs enable hospitals to adopt predictive analytics, automated administrative solutions, and clinical decision support systems faster, and this improves patient outcomes and efficiency.

In addition, transparency and competition limit the monopolistic pricing power of the leading companies, and this encourages innovation. Economic research in digital healthcare markets shows that the

enforcement of interoperability and antitrust rules is associated with the adoption of AI solutions and improved productivity in healthcare [19-20].

#### D. Flow Diagram of Policy Interventions

Figure 4 illustrates a flow diagram of policy interventions designed to improve AI adoption in healthcare. The diagram emphasizes the sequential impact of antitrust and interoperability policies on market conditions and innovation:

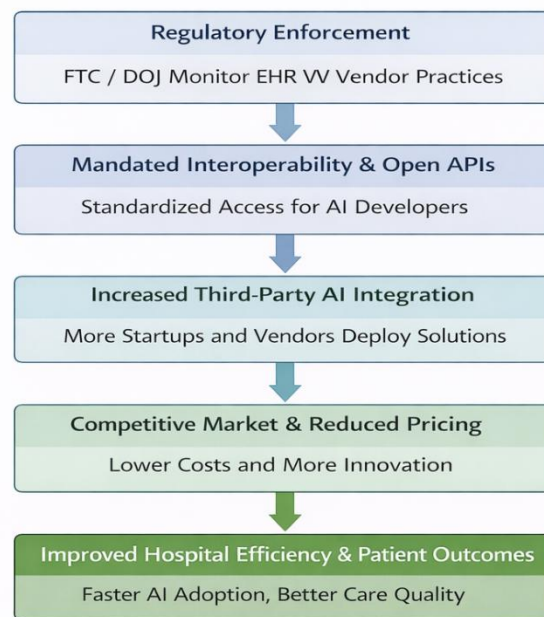


Fig. 4. Policy Interventions to Enhance AI Integration in EHR Systems

This structured approach highlights how policy measures can systematically mitigate monopolistic barriers, enabling widespread deployment of AI in healthcare while protecting competition and patient interests.

## VI. CHALLENGES & LIMITATIONS

Nevertheless, apart from the myriad of ways AI can potentially transform healthcare processes, there are still a few challenges and limitations which hinder the smooth implementation of AI in EHR systems.

One of the problems with data availability and transparency is that a lot of data is scattered and stored in closed electronic health record systems, thus making it a challenge for AI developers to access data to train better AI models. Moreover, the inconsistencies in data quality, incompleteness of patient data, and varying coding standards in hospitals make this problem even worse. Resistance from Existing Vendors: Major EHR system vendors may oppose any such steps, like open APIs and interoperability standards, that could disclose their market dominance to other players. Vendors can resist integration in several ways such as making it costly to integrate with their systems, providing scant documentation, and arbitrarily holding up the approval of third, party AI software for hospital usage.

Technical Interoperability Challenges: In addition to the implementation of standards like FHIR and HL7, the adoption of AI is hindered by the differences in system architecture, vendor, specific adaptations and the constraints of the hospital IT infrastructure

Potential Unintended Consequences of Regulation: The implementation of antitrust policies and the imposition of interoperability rules by advanced competitiveness are the primary aims of regulatory bodies, however, the risk of an increase in compliance costs, system upgrade speeds, or security loopholes if sharing data structures are not carefully managed is real with poorly designed policies. The combination

of proprietary control, technical complexity, and regulatory issues hampers large, scale AI adoption, hence the necessity for carefully crafted interventions.

## VII. FUTURE DIRECTIONS

To solve the challenges outlined above, collective research, technology development, and collaboration activities are necessary.

**Research:** Next research is advised to be focused on the economic modeling of AI adoption in monopolized markets of EHRs with the aim of predicting how market concentration will affect innovation, pricing, and healthcare efficiency. Simulation models may be a useful tool for policymakers to develop appropriate strategies for intervention and the promotion of competition.

**Technology:** Open source AI development will limit vendor lock, in, and as a result, hospitals will have the freedom to use AI tools without being restricted by EHR vendors. Federated learning and secure data sharing models could also help in encouraging innovation at the same time protecting patient privacy.

**Policy:** Antitrust compliance and enforcement of interoperability standards continue to be major challenges. Besides, lawmakers need to keep an eye on the vendors' activities, foster transparency in the pricing of AI integration, and provide support in the creation of the frameworks for market access that essentially are fair.

**Collaboration:** The collaboration between startups, hospitals, and policymakers is certainly a key factor in enabling the quicker implementation of AI. Joint efforts in piloting projects, sharing data, and regulatory sandboxes will allow them to overcome the challenges, simplify tool validation, and gain the different stakeholders' trust. These directions for the future aim at establishing a healthcare technology ecosystem that is competitive, innovative, and efficient, thus capable of fully harnessing AI for patient care.

## VIII. CASE STUDIES OF AI INTEGRATION IN EHR SYSTEMS

Several hospitals and AI vendors have managed to incorporate AI tools into EHR systems, despite the challenges caused by market concentration and proprietary architectures. Examining these examples of implementation helps to understand the adoption process and reveals insights into regulatory, technical, and economic factors.

**Epic's Limited AI Modules:** As the largest U.S. EHR vendor, Epic offers a few proprietary AI modules mainly concentrating on predictive analytics, e.g., readmission risk prediction and sepsis alerts. These tools are examples of the clinical promise of AI, however, their usage is generally limited to hospitals with substantial Epic installations and well, established IT infrastructure. The integration of third, party AI solutions is constrained due to proprietary APIs, which means slower progress in innovation and higher costs of implementation for smaller hospitals or specialty clinics. The experience gained from the Epic implementation reveals that even large vendors with built, in AI struggle to scale predictive tools to different hospital workflows.

**Startups Leveraging Open APIs:** Several AI startups have managed to bypass these limits by associating hospitals with open, access API or interoperability, focused EHR platforms. For instance, AI, based diagnostic imaging, and workflow automation have found their way in hospitals with FHIR compliant systems. Such cases demonstrate that regulatory compliance with interoperability standards and accommodating data, sharing agreements may notwithstanding a monopolized vendor scenario facilitate AI integration (Ali, 2025; Bright & Norris, 2025).

**Lessons Learned:** Three factors consistently turn out to be the most important for successful AI deployment when conducting an in, depth study of the case studies: 1) regulatory compliance guarantees that AI applications adhere to privacy and security regulations; 2) facilitating data, sharing practices

minimize the integration expenses and open wider access to patient data for model training; and 3) other cost considerations, such as vendor integration fees and the hospital's internal IT expenses, are equally significant in adoption decisions. Hospitals that carefully deal with these matters, on the one hand, by utilizing open API infrastructures, and on the other, by collaborating with vendors who are inclined to AI integration, thereby fast track implementation and yield better clinical outcomes.

**TABLE. 2. AI Deployment in EHR Systems**

EHR Vendor/System	AI Tool Type	Deployment Status	Key Enablers	Barriers
Epic	Predictive Analytics	Partial/limited	In-house modules	Proprietary API, high fees
Cerner	Workflow Automation	Pilot	Vendor partnership	Integration complexity
FHIR-compliant Startups	Imaging Analysis / Admin AI	Successful	Open API access, interoperability	None / minor
MEDITECH	Clinical Decision Support	Blocked	N/A	Closed system, limited data

These case studies demonstrate that while monopolistic practices impose significant barriers, careful alignment with interoperability standards, strategic partnerships, and regulatory compliance can enable effective AI adoption in healthcare environments.

**IX. ETHICAL CONSIDERATIONS IN AI AND EHRs**

The integration of AI in Electronic Health Records (EHRs) is associated with the whole range of ethical issues, particularly with the case of monopolized vendor environments. Among the most important issues are those of equity and fairness. The major EHR vendors, by controlling access to their proprietary platforms and APIs, in effect exclude smaller hospitals and rural healthcare facilities from accessing state-of-the-art AI technology. This lack of equity in access could further widen the disparity in the level of quality of healthcare, as large hospital chains can take advantage of the benefits of predictive analytics, workflow management, and decision support, while smaller ones may be left out of the action (Shen, Yu, Zhou, & Hu, 2025; Holmgren, Apathy, & Kanter, 2025).

Another major issue that concerns bias in AI models. If AI tools are only trained from datasets of a few major vendors, the resulting models from such training would most probably mirror the demographics and patient attributes of the institutions involved. Therefore, minority populations or smaller community health systems are at risk of being inadequately represented. Therefore, it may result in faulty predictions, erroneous diagnoses, and disparities in treatment outcomes, all of which are contrary to the ethical precept of justice in healthcare (Bright & Norris, 2025; Chinta et al., 2025).

Another essential ethical concern is patient privacy. Enabling AI integration by widening interoperability and data, sharing increases the possibility of unauthorized access, data breaches, and misuse of sensitive medical information. Besides, even if there are regulatory safeguards, hospitals and vendors have to create and maintain very strong security frameworks in order to protect patient confidentiality while at the same time not hindering AI development (Hemdan & Sayed, 2025).

In summary, the ethical issues that monopolized AI access to EHRs are finding a balance between providing access to all, fairness in predictive analytics, and patient confidentiality. To address these issues, there is a need to develop guidelines, employ diverse data, and ensure ethical regulation to ensure that the integration of AI leads to improved healthcare behaviors without widening the gap or breaching confidentiality.

## X. CONCLUSION

The study presented in this paper has explored the influence of market concentration in the U.S. Electronic Health Record (EHR) market on the implementation and pricing of AI solutions. The top EHR vendors like Epic and Cerner employ monopolistic strategies such as proprietary systems, closed APIs, and high integration costs, which hinder third, party developers from innovating and therefore, raise the price of AI solutions for hospitals.

The economic and qualitative research presented points out the necessity of introducing antitrust policies and interoperability regulations to establish a competitive market that encourages the adoption AI solutions. Antitrust policies and regulations like open APIs, price transparency, and market leaders' scrutiny can help to systematically diminish monopolistic market issues and make it easier for hospitals to get access to innovative AI solutions.

The EHR marketplace monopolies should be tackled through a mix of regulatory policies, technological innovation, and inter, sector collaboration that would allow the whole spectrum of AI, based healthcare benefits, lower the expenses for implementation, and support the continuous innovation in the U.S. healthcare system.

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