Governing Healthcare's AI Transformation: Leadership Insights from U.S. Health System Executives

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Introduction

- Following the proliferation of artificial intelligence (AI) and large language models (LLMs) in healthcare, few studies have characterized how health systems in the United States have adapted to this rapidly evolving technological landscape.
- While regulatory bodies are central to guiding the appropriate use of AI tools, health systems must also define their guiding principles to optimize implementations while anticipating and minimizing risk.
- This study aims to illustrate perspectives and trends from health system leaders on the governance of AI and LLM implementation across the US healthcare landscape. (Guleria, 2024; Rojas, 2022)

Methodology

- Healthcare executives were recruited from the Scottsdale Institute
- 27 invited, 10 participated, 9 completed recorded interviews
- Participants invited included academic, community, and hybrid healthcare systems across multiple US regions
- From March 19 to July 5, 2024, semi-structured interviews were transcribed and analyzed using ATLAS.ti software.
- The interview guide addressed four domains: governance structures and functions, large language model use cases, health equity integration, and clinician trust/adoption strategies.
- Keywords were extracted from transcripts and grouped into contextually significant themes by two independent reviewers. (Naeem et al., 2023)

Results

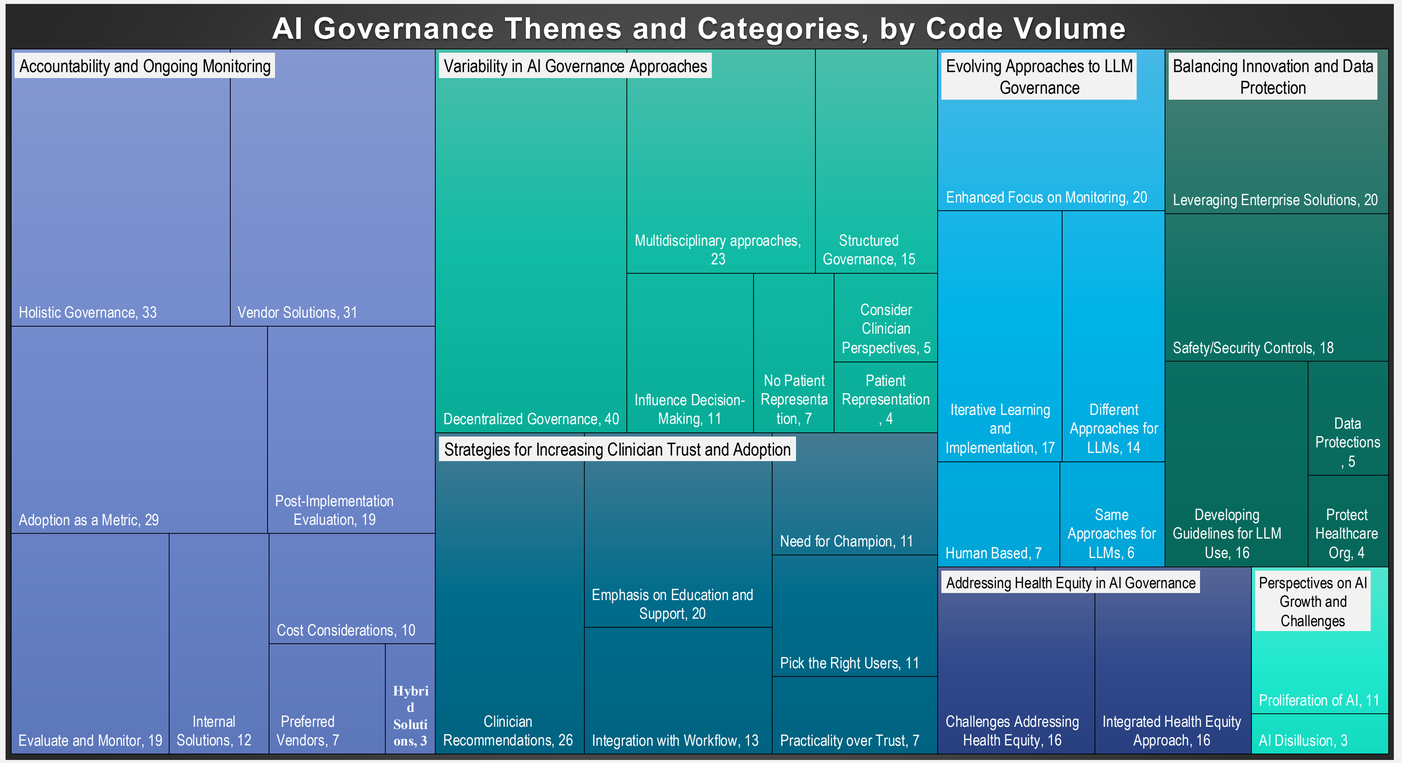
Our analysis produced **7 predominant themes**, each of which were further divided into subcategories that highlighted the concerns and perspectives of interviewees:

1. **Variability in AI Governance Approaches and Functions:** AI governance structures vary widely across organizations, from centralized authorities to distributed roles, with differing levels of multidisciplinary involvement and minimal patient representation.

- *"We have a governance structure in process. It's cross-functional, multidisciplinary and includes people from clinical operations and includes technical experts"*
- *"Every department- clinical, operational, or otherwise, is represented in the Governance Council"*
- *"When [patients] request a medical record, they're lucky if they can read two-thirds of it. They see something they don't understand. They're not going to know whether it's AI or something else."*
- *"The vast majority of clinicians just want to get through the day."*

2) **Accountability and Ongoing Monitoring:** Accountability mechanisms are essential for evaluating AI tools across their lifecycle, from measuring adoption through post-implementation monitoring, and from internal development to vendor selection. Organizations must establish systems for assessing AI tools, measuring their impacts, and continuing evaluation post-implementation.

- *"Vendors feel that how the sausage is made and how well their AI performs is their proprietary information and competitive advantage, and they are reluctant to share it... it is important for the health system to know whether it's leading to better decision making, or making patient's or clinician's lives better.*
- *"Especially when it goes into a clinical workflow. I don't think (our system) wants to take that level of risk on themselves"*



Results, continued:

(2 Continued)

- *"Downstream accountability is by default absent [in IT governance] just because of the way IT is structured"*
- *"It's really an Epic-first strategy. I've been doing this for fifteen years. A start-up is faster, but we have wasted millions of dollars and thousands of hours of IT and other people's time for other things that really just don't pan out but divert us for years."*
- *"[Value is] not all money, right? There's value in financial & business cases. But how else will it help? Is it for enhanced triple (aim), patient experience, relieving clinical burden? That's how we define value. Is there a business case tied to those things?"*

3) **Evolving Approaches to LLM Governance:** Large Language Models require additional governance strategies that enable rigorous validation, iterative monitoring, and human oversight.

- *"Large language models generate language in a slightly unpredictable way, and language drives a lot of thinking and workflow. There's some learning that needs to take place, you need to have an early iterative phase for understanding how large language models would work in your environment"*
- *"because the output of large language models is language, the metrics of evaluation are going to be different. It's going to be more human-based"*
- *"Anything clinical that we do with Gen AI and LLM, there's a human in the loop validation for extended periods of time"*

Results, continued:

4) **Balancing Innovation and Data Protection:** Success requires robust security measures, tailored governance guidelines, and trusted enterprise partnerships to mitigate risks and maintain compliance.

- *"Our IT governance enterprise-wide has lots of sub-governances. We cross pollinate those executive teams that run governance with data safety and sharing groups, so that they have an understanding of what the data structures, EMR processes, and what safety issues we're worried about with data sharing."*
- *"Managing decision trees is a whole lot different than machine learning, and those processes are managed differently. I'm not sure that we're gonna govern [chat bots] in the same way"*
- *"We don't really want to be running this algorithm with our data somewhere else that we don't know about it"*
- *"If you're sending data out to an AI system, or if it's still inside your environment, we want to make certain that we still own the data. Some vendors have written contracts where they want to own everything in the past. We have seen that burn us in the past."*
- *"Can you turn this off in the tool? Is it part of an upgrade, is it not? We want the upgrade because we need the security side. But we don't necessarily want to turn on the AI functions of it, because there's no background information on how they built their models"*
- *"My biggest concern is keeping us out of jail and out of the newspapers"*

Results, continued:

5) **Addressing Health Equity in AI Governance:** For many organizations, equity serves as an organizational pillar embedded in all decision-making, including AI governance. There remains high variability in how and where systems embed equity into governance processes, as well as how expertise is leveraged to identify and mitigate disparities.

- *"Equity is something that all of us are taking into concern. I don't think we have anyone who focuses particularly on that"*
- *"We don't have specific AI governance members looking at equity"*
- *"I know disparities are, differences based on characteristics, but what characteristics are we even trying to look at?"*
- *"We build that (equity) into everything that we do. It's actually one of our strategic pillars for the organization."*
- *"Every checkpoint that you see in a governance process actually asks questions about health equity"*
- *"I think the vendor is most responsible for [checks and balances related to equity and biases]."*

5) **Strategies for Increasing Clinician Trust and Adoption:** Healthcare systems recognize that successful widespread deployment requires leveraging project champions, educating staff, and intentionally allocating access to AI tools.

- *"Clinician feedback is really essential with all the technology that we are rolling out. That's built in and hardwired into to the system"*
- *"We will never work on a particular project or a use case that doesn't have a direct sponsor. Someone, preferably relatively senior, to say this is mine, I am the user."*
- *"When solutions do get turned on, we do an incredible amount of education, lots of handouts and table tents, you name it, trying to make sure they're (clinicians) properly trained"*
- *"Trust is fundamental, but trust doesn't make you use it if it doesn't fit into your workflow"*

5) **Perspectives on AI Growth and Challenges:** The overwhelming proliferation of AI tools in recent years, coupled with disillusionment regarding AI vendors, has resulted in many institutions preferring legacy vendors.

- *"Because the AI field is has exploded so quickly, and these vendors are so new, we have to be extra careful in there, and that extra bit of caution is where things have changed for us"*
- *"Everyone's saying, we've got AI this and that. What we are doing is trying to distinguish what's truly AI"*
- *"Some of these solutions, I'm not sure they've identified the right problem yet"*
- *"What I'm seeing is more promises of, 'we will develop that with you, we'll solve that with you,' that's always a red flag for us."*

Conclusion

- In this first structured qualitative assessment of AI governance in United States healthcare systems, we found significant variability in approaches to the implementation and monitoring of AI models, as well as in the integration of equity.
- Organizations continue to struggle in balancing innovation with trust, security, and adoption, processes that are complicated by a proliferation of vendor offerings where evaluation methodologies and performance of proclaimed AI products lack transparency.
- These findings highlight the need for standardized governance frameworks that can adapt to emerging technologies while maintaining robust accountability measures.