# The Transformational Power of AI in GRC


## *Governance* & *Risk* & *Compliance* Landscape


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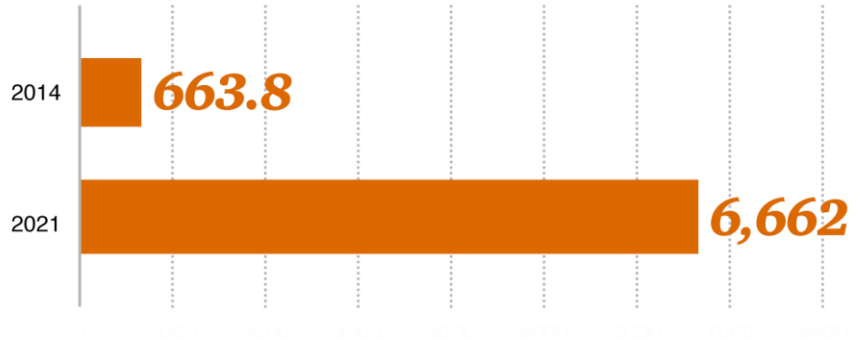
# Five distinct trends are converging

## *AI and robotics will come to define New Health*

**Figure 1: Artificial Intelligence Market for Healthcare Applications, World, 2014, 2021** (in Millions)

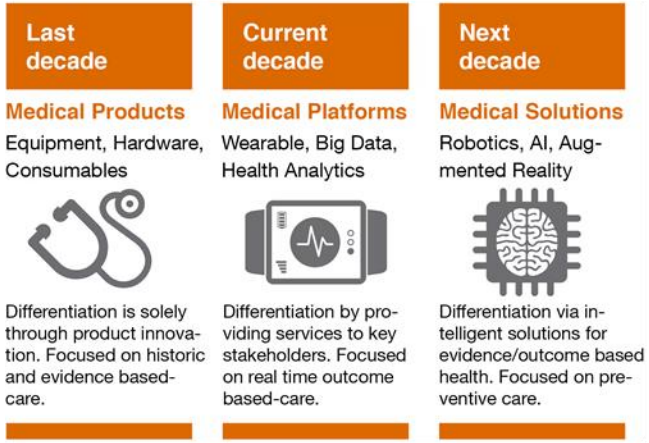



**Source:** Frost & Sullivan 2016 Transforming healthcare through artificial intelligence systems

1.First and foremost is the **value challenge** that all countries across the globe are facing – there is escalating demand from long-term, chronic disease, rising costs, often with an ageing population and limited resources.

2.The past decade has seen an **explosion in the amount of health data** that is now available to us. It was estimated that the volume of health-related data had reached over 4 zettabytes – that's 4 trillion gigabytes ($10^{21}$)

3.**Information technology** development (Frost & Sullivan, 2016).




4.The explosion of technology has created an increasing **democratisation of access** for healthcare.

5.Finally, the **willingness of the general public** to be more active participants in their own health and wellness has now reached critical mass.


[1] The Medical Futurist (2016). http://medicalfuturist.com/artificial-intelligence-will-redesign-healthcare/

[2] Healthcare Data Institute (2015). http://healthcaredatainstitute.com/2015/02/18/big-unstructured-datas-contribution-to-healthcare/

[3] PwC (2016). Care Anywhere: Moving health and wellness out of the hospital and into the hands of the consumer. https://www.pwc.com/m1/en/publications/documents/care-anywhere.pdf (pdf, 1.1mb)

# Four Themes Emerging from AI in the Patient Journey[1]

## Administrative AI is Low-Hanging Fruit

Since 2019, the growth in healthcare AI deals is twice that of tech overall. This initial wave of AI in healthcare is largely focused on streamlining administrative burdens that augment, as opposed to change, physician workflow. This includes tasks like managing revenue cycles, establishing data interoperability and scheduling patients. **Administrative AI accounts for 27% of AI healthcare investment and 42% of deal volume so far in 2024**. Clinical AI faces more scrutiny due to regulatory hurdles and more difficult adoption, often requiring a workflow change to implement. For providers and payers, it's still early days for their AI strategies. Many are targeting administrative AI first since it carries less risk and leads to clear efficiency gains.

## Doing the Diligence

It's not enough for companies to be the "shiny AI object." Rather, near-term financial validation and **access to quality input data** are crucial. While AI deal activity is relatively resilient compared to the wider ecosystem, investors and buyers are critically evaluating new AI solutions by determining how readily they'll be adopted and how much business value they truly offer. **Companies that can leverage a provider's existing infrastructure in their new product may find preference among venture capitalists (VCs)**. For example, 70% of US providers use EPIC for electronic health records (EHRs)[2] and AI companies in the EHR space may find themselves with a leg up if they establish interoperability with the EPIC system.

## Startups' Flexibility Delivers Value

Organizations often favor established players when purchasing AI solutions. To overcome this hurdle, startups must clearly articulate why they're the better choice compared to larger competitors that organizations may already have as partners. Startups' flexibility is their strength. First, **massive adoption and margins are not as crucial for startups as they are for established big tech**. Also, the bottom-up nature of startups makes them suitable for working closely with physicians. In order to access the necessary data, AI startups often find it beneficial to co-develop features with their customers.

## Patient Diagnostics Face Challenges

Especially with AI-driven diagnostic tests, companies may have a difficult time showing the "juice is worth the squeeze." Challenges abound, from navigating regulatory hoops to managing high costs and securing quality data. For startups, being nimble is important for finding alternative paths, such as risk sharing, monetization and profitability. **We believe the short-term path forward is for companies to understand who is writing the check and where payers define value**. Demonstrating the cost savings for payers may help companies get the revenue to justify costs until payers broaden their perspective on paying for diagnostics.



Notes: 1) Unless otherwise stated, all charts and metrics are referencing US healthcare companies, and the data is up to date through Q1 2024.
2) Definitive Healthcare.
Source: PitchBook Data, Inc., SVB proprietary data and SVB analysis.

# Mapping AI in Healthcare[1]

This report focuses on AI in the patient journey, which is **AI or AI enablement related to patient care and/or provider operations**.
*Since 2021, **patient journey use cases account for 60% of healthcare AI investment** while therapeutics and research account for 40%.*

----- Patient Journey Indications

## Administrative

Total VC Investment[2] in Administrative AI Since 2021: **$6.6B**

| What These Companies Are Working On | Notable Companies | VC Investment Since 2021 |
|---|---|---|
| **Virtual Assistants**<br>Focus on patient engagement, intake, scheduling and medication adherence. They may even help with post-visit follow up. They often take the form of a chatbot or generative AI nurse. | innovaccer, Memora Health, Woebot Health, pager, Hippocratic AI, buoy, IntelyCare, NOOM | $2.6B |
| **Notetaking and EHR Documentation**<br>Transform patient-clinician conversations into clinical notes to assuage the burden of notetaking during clinical encounters. | SpectrumAI, abridge, TRUVETA, CareRev, AUGMEDIX, Syllable, DeepScribe, Rad AI | $1.6B |
| **Revenue Cycle Operations**<br>Facilitate billing, coding, prior authorization or other revenue cycle use cases. These solutions can be leveraged by payers and/or providers. | SmarterDx, cohere, co:helm, FATHOM, notable, atlas | $1.7B |
| **Data Structure, Analytics and Interoperability**<br>Connect, clean, standardize and structure data from many disparate systems like medical documents and claims. This enables users to leverage data to drive healthcare outcomes. | Clarify, CARTA HEALTHCARE, SPARTA SCIENCE, ScienceIO, Farrum, H1, us health | $677M |

## Clinical

Total VC Investment in Clinical AI Since 2021: **$12.5B**

| What These Companies Are Working On | Notable Companies | VC Investment Since 2021 |
|---|---|---|
| **Patient Stratification**<br>Perform patient risk assessment and identify potential care needs for patients. They may also triage patients based on a risk assessment to provide the right level of care. | Health Rhythms, CLINICOM, ScriptChain, monogram health | $687M |
| **Patient Diagnostics: Analytics and Tests**<br>Focus on diagnostic tests, diagnostic analytics and personalized medicine. In addition, these companies may deliver treatment plans, risk screenings, diagnoses based on EHR and other clinical decision support tools requiring FDA approval. | DELFI, TEMPUS, INTERVENN, freenome, KINTSUGI | $5.3B |
| **Patient Diagnostics: Imaging**<br>Concentrate on imaging and imaging analysis. Some of these companies are also, based on the imaging, giving an analysis of patient risk. This is leading to more targeted treatment for patients. | iTERATIVE HEALTH, HeartFlow, Ezra, AI Optics, clearly, ACTIV SURGICAL, isono health, VIDEA HEALTH, EXO | $1.4B |
| **Remote Monitoring**<br>Engage in monitoring patient biomarkers or treatment-related variables outside of the clinic. | Biofourmis, sword, CarePredict | $1.3B |

## Therapeutics and Research

| Therapeutics and Drug Discovery | Clinical Trial Enablement | R&D Tools | |
|---|---|---|---|
| Biopharma use cases that focus on drug discovery and development. | Includes companies that are leveraging AI for patient recruitment, workflow operations for clinical trials and mobile trials. | Any AI used to assist with life science research and development. | **$12.9B[3]**<br>**VC Investment Since 2021** |

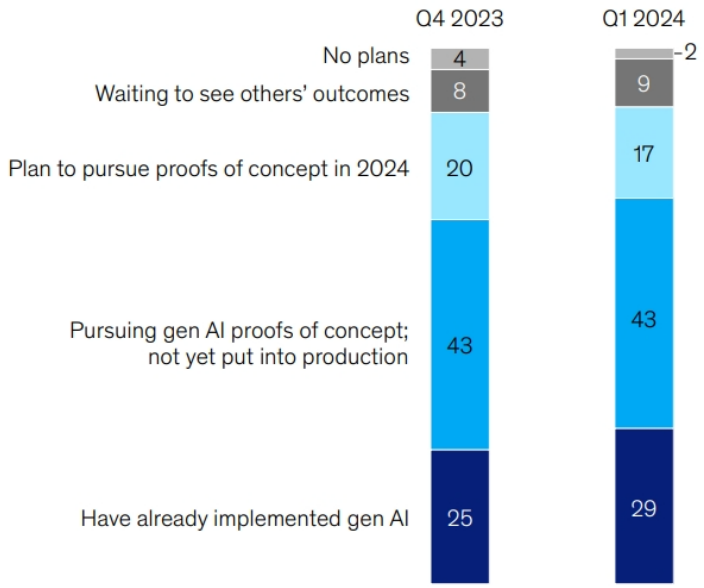
svb Silicon Valley Bank
A Division of First Citizens Bank

Notes: 1) Non-exhaustive examples. 2) All investment figures are based on investment in VC-backed, US companies. 3) Does not include Q2 and the $1B Series A for Xaira.
Source: PitchBook Data, Inc., SVB proprietary data and SVB analysis.

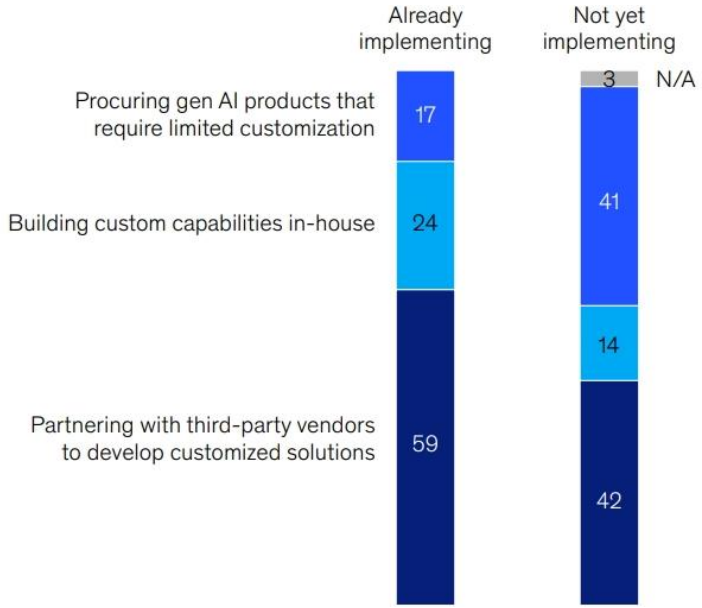
# Generative AI in healthcare: Adoption trends and what's next

*By Jessica Lamb*
*with Greg Israelstam, Rahul Agarwal, and Shashank Bhasker*

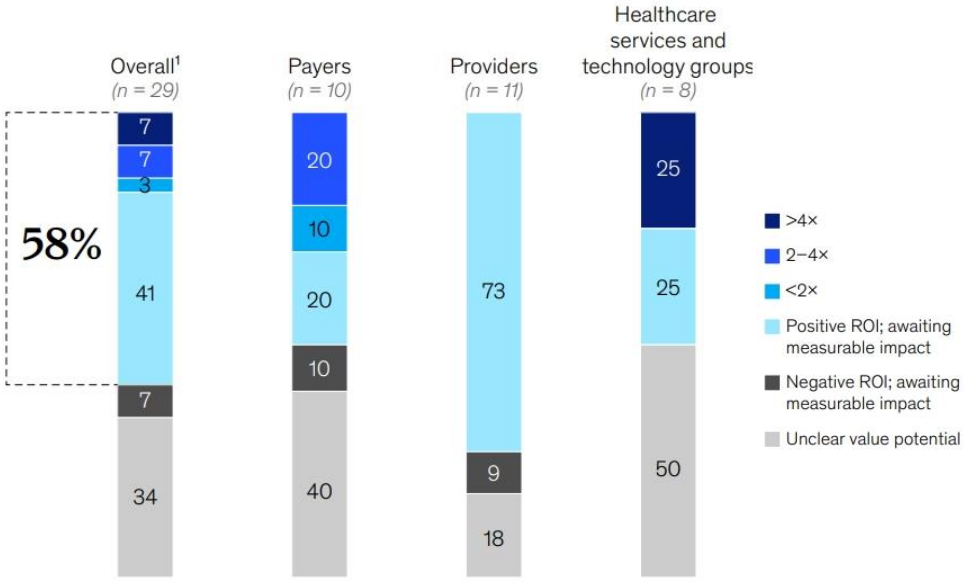
**Healthcare organizations' plans to use generative AI (gen AI),** % of respondents (n = 100)[1]




**Healthcare organizations' plans for generative AI (gen AI) adoption, by implementation level,** % of respondents (n = 100)



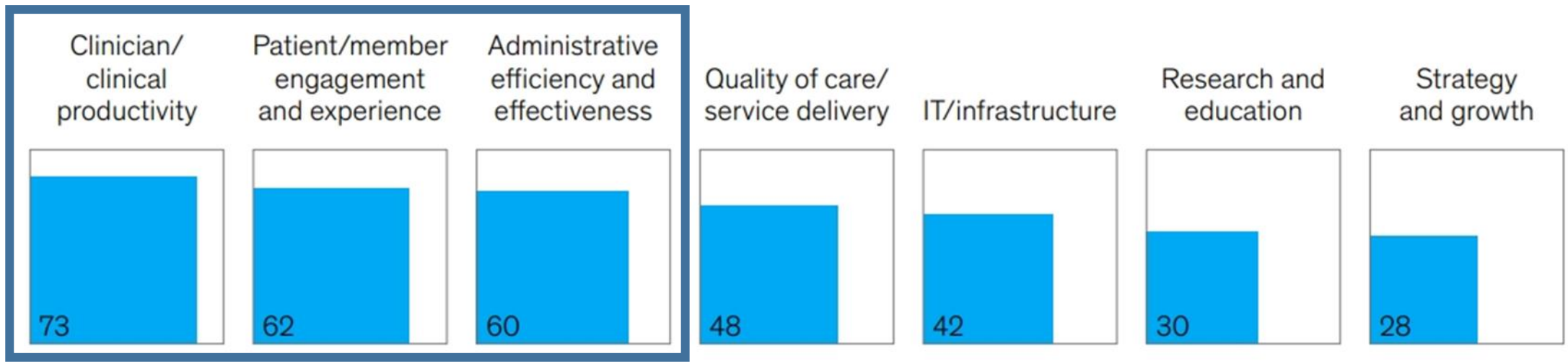

**ROI of use cases for healthcare organizations implementing generative AI (gen AI), by organization type,** % of respondents




Source: McKinsey US survey on gen AI in healthcare, Mar 11–13, 2024

# Generative AI is thought to hold the highest potential value in improving clinical productivity as well as patient engagement and experience.

**Areas believed to benefit the most from generative AI (gen AI),** % of respondents (n = 100)




Source: McKinsey US survey on gen AI in healthcare, Mar 11–13, 2024

# Risk concerns and considerations was the top challenge among healthcare organizations pursuing generative AI.

**Biggest challenges for organizations implementing or pursuing generative AI,** % of respondents


Source: McKinsey US survey on gen AI in healthcare, Mar 11–13, 2024

# Real World Used Cases

## Mass General Brigham CMIO on AI: 'exciting, but a little anxiety-provoking'

For the newest in our interview series with IT leaders about artificial intelligence's potential, Dr. Rebecca Mishuris shows where MGB is getting results, from clinician burnout to patient experience – and she stresses the need for responsible AI.

By **Bill Siwicki** | January 09, 2024 | 12:16 PM

## Cleveland Clinic's advice for AI success: democratizing innovation, upskilling talent and more

The health system's chief analytics officer discusses creating a rigorous data quality program for reliable and actionable insights, and the importance of developing an innovation ecosystem.

By **Bill Siwicki** | March 22, 2024 | 11:56 AM

## Johns Hopkins has big plans for AI in Epic chart summarization

Meanwhile, it's already finding success with AI-enabled patient portals – and ambient scribing is showing big promise too. The Baltimore health system's digital health physician leader explains.

By **Bill Siwicki** | April 05, 2024 | 12:59 PM

## Mayo Clinic perspective on building AI models

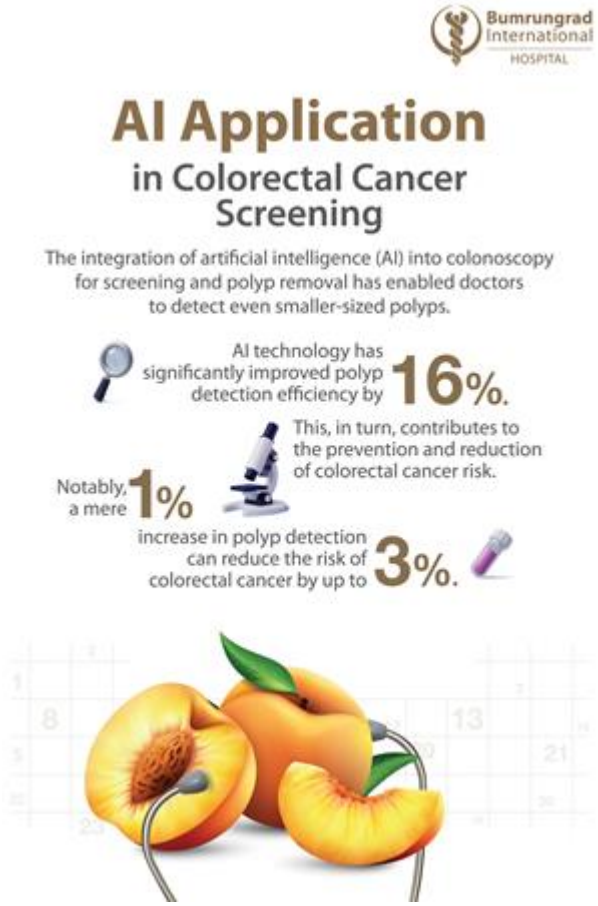
Research teams work to prevent bias in algorithms by involving clinicians and partnering with established AI companies, says Dr. Alexander Ryu, vice chair of AI and innovation at Mayo Clinic.

By **HIMSS TV** | June 20, 2024 | 06:00 AM


## Bangkok Hospital streamlines patient flow with AI

It recently digitised its registration and patient management systems.

By **Adam Ang** | July 16, 2024 | 08:13 PM



# *sharing*

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# *thank you*