

RESEARCH PAPER

Healthcare payers and providers: Lean into data mastery to extend patient-centered care and promote health equity

By Alok Mandal



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Introduction

The healthcare industry is on the cusp of a radical AI-led transformation, but our latest research indicates that healthcare companies must urgently strengthen their data foundations to unlock insights that can drive innovation and transform the patient experience at scale.

The past decade has been a sobering period for the healthcare industry. The pandemic washed away all the customer experience (CX) gains made by the industry, leaving providers and payers struggling to recapture patient trust. Health insurers, for instance, saw their CX ratings decline twice¹ following the pandemic, while providers' CX scores continue to hover below pre-pandemic levels. Profit margins haven't fared any better with [health insurers](#), and [care providers](#) continue to see margins decline over the last five years.

Yet the industry faces an uphill task in collecting, managing, and using patient data. On the one hand, data volumes are surging, fueled by patient-generated data (via wearables and other such devices) that drives proactive care. On the other hand, regulations such as the Centers for Medicare & Medicaid Services' (CMS) health equity mandate, which focuses on accessibility of care, have emerged as a strategic imperative for providers and payers. The regulation requires payers and providers to collect a wide variety of data around social determinants of health (SDoH) and incorporate it into their plans and clinical workflows. This data monitors equity-related performance, identifies at-risk populations, and justifies reimbursements, which means the data needs to be high quality and free of silos.

The mandate for the industry is clear: build the capabilities to gather and analyze these ever-growing volumes of data and establish policies and systems that turn data into insights. These insights should improve compliance and underpin the next generation of health products and service offerings with patient-centricity at the core. So, how prepared are healthcare firms for this new era?

The Virtusa Research Center recently surveyed over 300 US businesses, including 61 healthcare companies (providers and insurers), and found that nearly three-quarters are not doing enough with their customer data. Those who utilize data effectively generate actionable insights to enhance the patient/member experience and boost outcomes. Worryingly, our research reveals that most healthcare companies have not yet developed the capability to turn customer or patient data into a competitive advantage. Major underlying causes include a significant gap between data quantity and quality, an uneasy relationship with AI safety (especially generative AI), and a reluctance to establish a global data office or central data strategy.

Here are the key takeaways for healthcare.

Low data quality undermines attempts to drive patient-centricity

Our research shows that the surge in healthcare data, especially patient-generated data, gives payers and providers access to more and more useful data than ever before. Telehealth visits, for instance, spiked during the pandemic and have remained high ever since. However, the industry’s data foundations have failed to keep pace with the digitization of healthcare channels. Healthcare firms report having sufficient or highly sufficient quantities of structured (66%), internal (61%), and semi-structured (77%) data, yet the quality of this data is sub-optimal. The difference is particularly glaring in structured, semi-structured, and unstructured data (see [Figure 1](#)). These three data types make up the majority of data generated by healthcare firms (via patient records, claims transactions, physician notes, and monitoring devices) and offer great potential for efficiency and innovation.

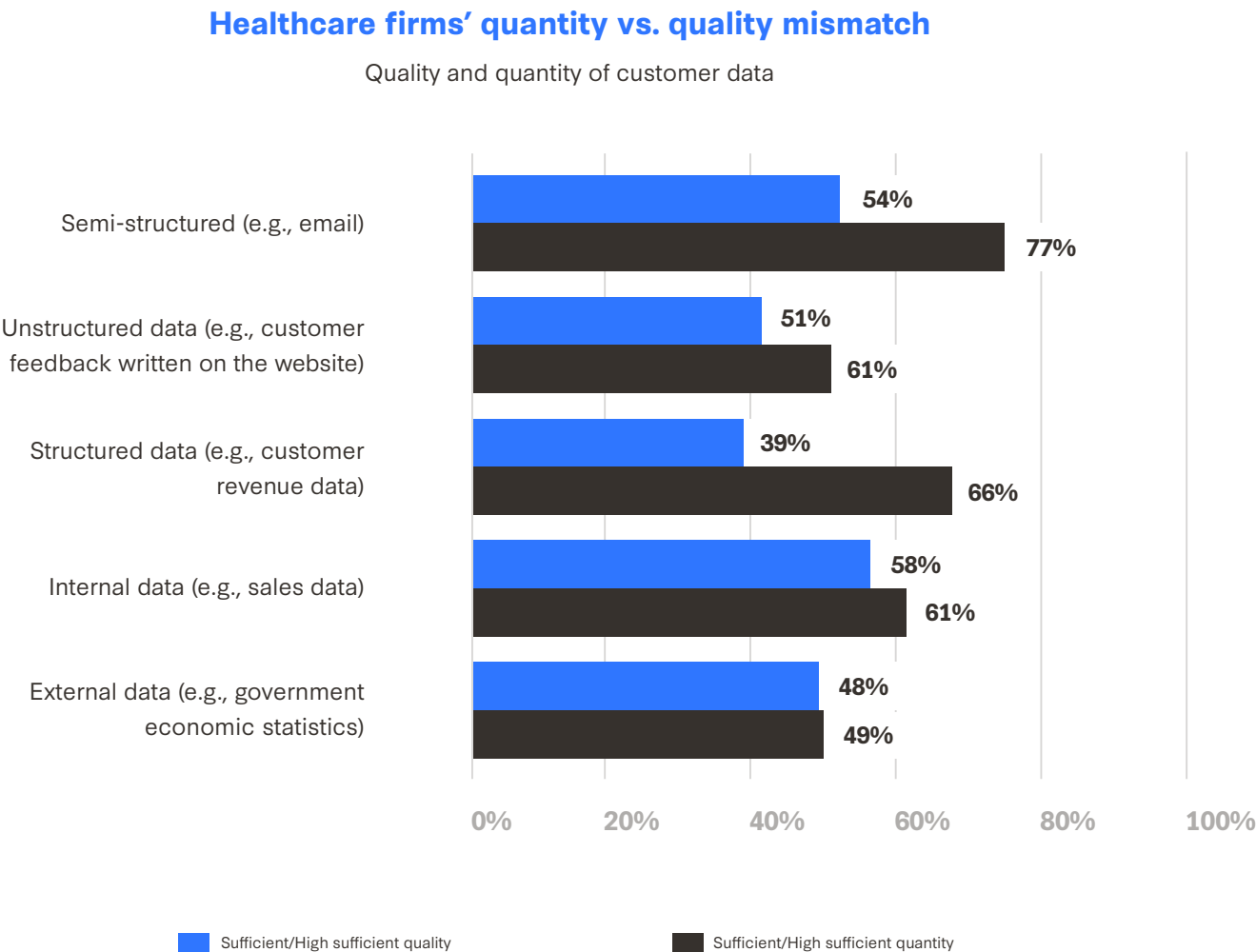


Figure 1

Our research shows a similar story around data usage. Among the five data types we identified, healthcare companies reported effective collection of four types but effective use of only one — customer comments on social media, e-commerce, and product review sites (see [Figure 2](#)). [Our main study](#) showed that what we called “customer-obsessed” and “customer-clairvoyant” firms prioritized all data types, creating a more detailed view of how customers feel and what they want and need.

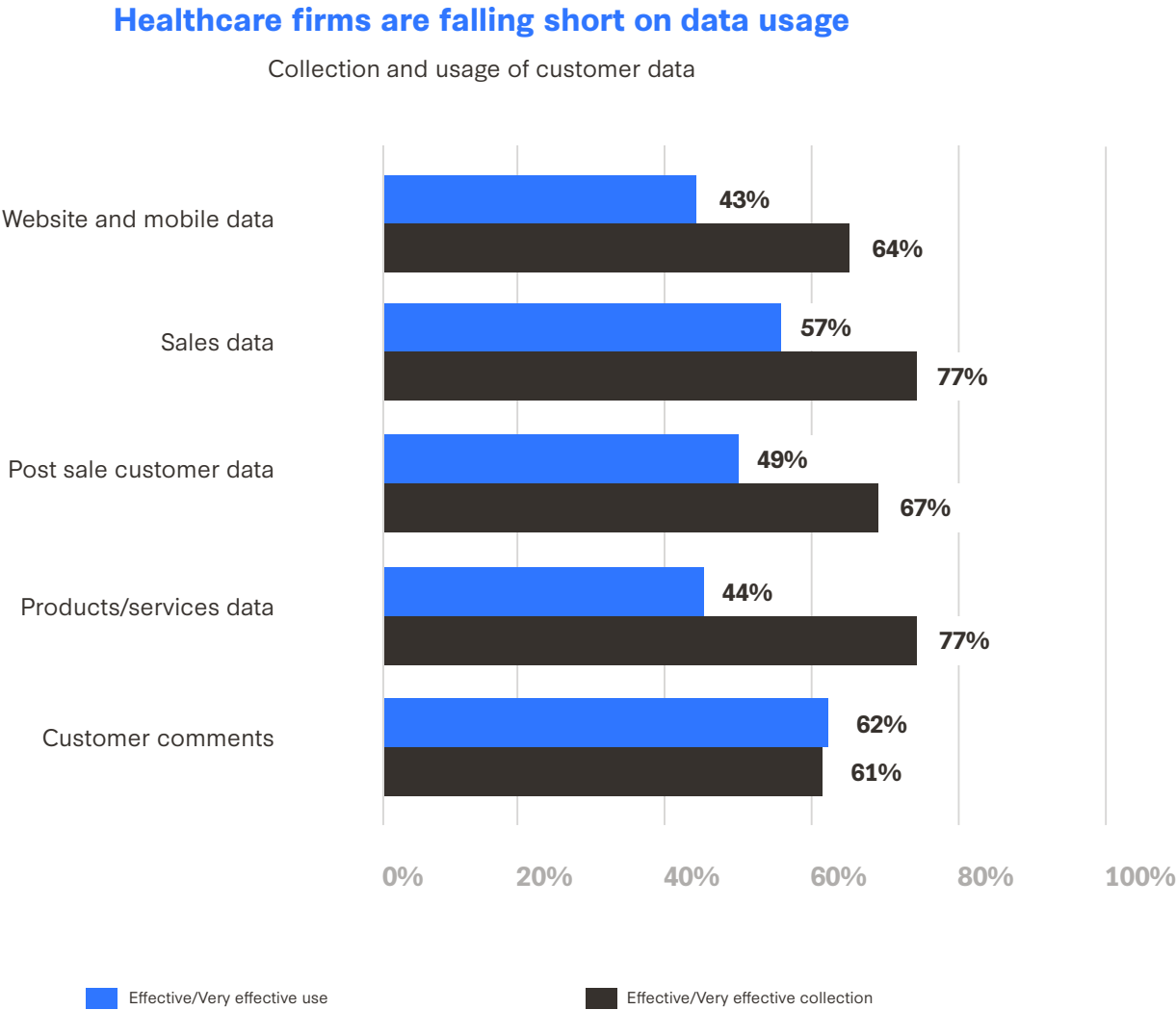


Figure 2



The imbalance between the quantity, quality, and usage of customer data affects the ability to generate useful insights and, in turn, undermines the ability to improve patient experience and R&D efforts to experiment and innovate with new products and services. In fact, 54% of healthcare respondents ranked insufficient data quality or availability as the top barrier to deriving value from AI. Improving data quality can also be challenging for providers in areas such as compliance with the CMS's health equity regulations for Medicaid and Medicare programs. For instance, a US-based health insurance company we work with has maintained a high star rating by ensuring that the quality of SDoH data it collects (housing, food, and travel data of members) meets the standards set by CMS.

Another area where healthcare firms are falling short is in the use of metadata—the properly labeled digital information that adds meaning to high-level data. Ninety percent of customer-clairvoyant firms and 69% of customer-obsessed firms use metadata extensively. However, only 54% of healthcare respondents say they use metadata (compared to 60% for all respondents and 63% for life sciences), although 69% say their metadata is of high or very high quality.

Virtusa believes that building a strong data foundation addresses these shortcomings, and healthcare firms share this view — 57% of their investments in customer data management over the past 24 months went toward building a data foundation. Strong foundations enable healthcare firms to face urgent challenges today, including rising patient volumes and demands for improved treatments. For example, Providence St. Joseph's [2019 initiative](#) to strengthen its data foundation helped it launch [virtual healthcare solutions](#) during the pandemic and later adopt artificial intelligence (AI) and machine learning (ML) to [improve patient outcomes](#) in areas such as cancer diagnostics and broader biomedical use cases in the future.



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AI struggles to gain traction despite the benefits

AI continues to open up new frontiers in healthcare. From chatbots that improve claims processing to helping patients with queries and appointments, the technology has significantly improved patient experience and quality of care. Expanding the use of AI, especially generative AI (genAI) and now agentic AI, will ensure healthcare firms create improvements in key areas such as clinical productivity, member engagement, and administrative tasks.

However, our research found that genAI is yet to gain traction in key customer-facing activities. GenAI is perceived to be risky, largely because of a lack of capabilities and unclear value². Our survey found a similar dynamic in those customer-facing activities. For instance, just 39% said they plan to use genAI for new product development over the next two to three years. They are, however, deploying traditional and genAI (exclusively or in combination) to enhance some customer-facing functions, such as using chatbots to answer customer queries (see Figure 3). This also applies to other critical areas, such as helping R&D teams improve and innovate product and service offerings and improve the overall customer experience.

Traditional AI dominates AI implementation

AI implementation at healthcare firms

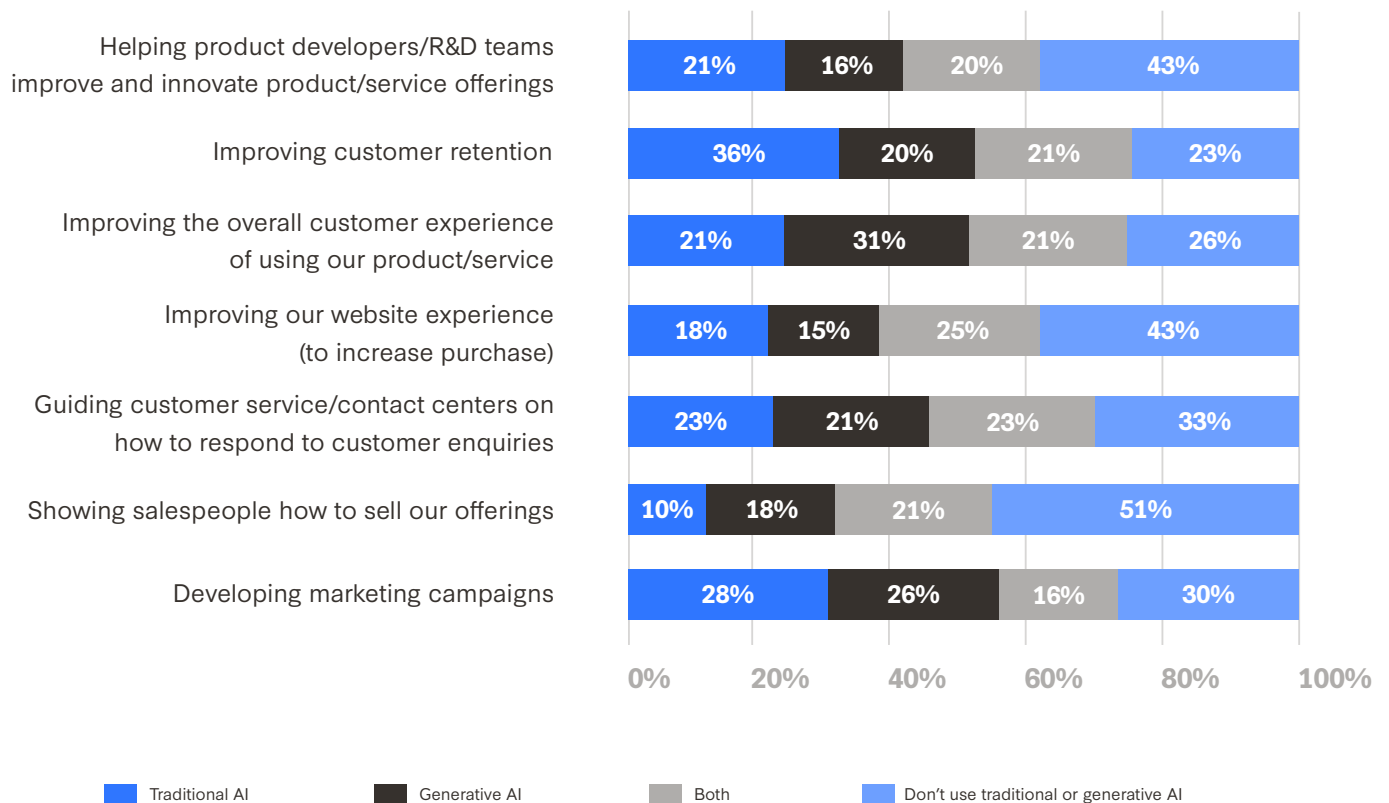


Figure 3

But, the industry's uneasy relationship with genAI has deeper implications. Their spending on genAI was the second-lowest across all industries, with \$9.96 million spent on average till date on various customer-facing initiatives, ahead only of life sciences, which spent \$8.49 million. Remarkably, 75% of respondents identified cultural resistance to adoption as the top barrier to generating returns from AI. Yet, the industry reported significant benefits from the technology. Respondents cited a 42% reduction in the time required to add new data and a 29% reduction in costs of their data foundations because of genAI (the highest across all industries surveyed alongside telcos), highlighting its potential to transform the way data is turned into insights. Healthcare's ROI expectations from genAI align with the rest of the industries. By 2027, they expect an ROI of 5.02 times, close to the number for all industries combined (see [Figure 4](#)).

Healthcare firms are optimistic about genAI

Expected ROI from genAI investments (2027)

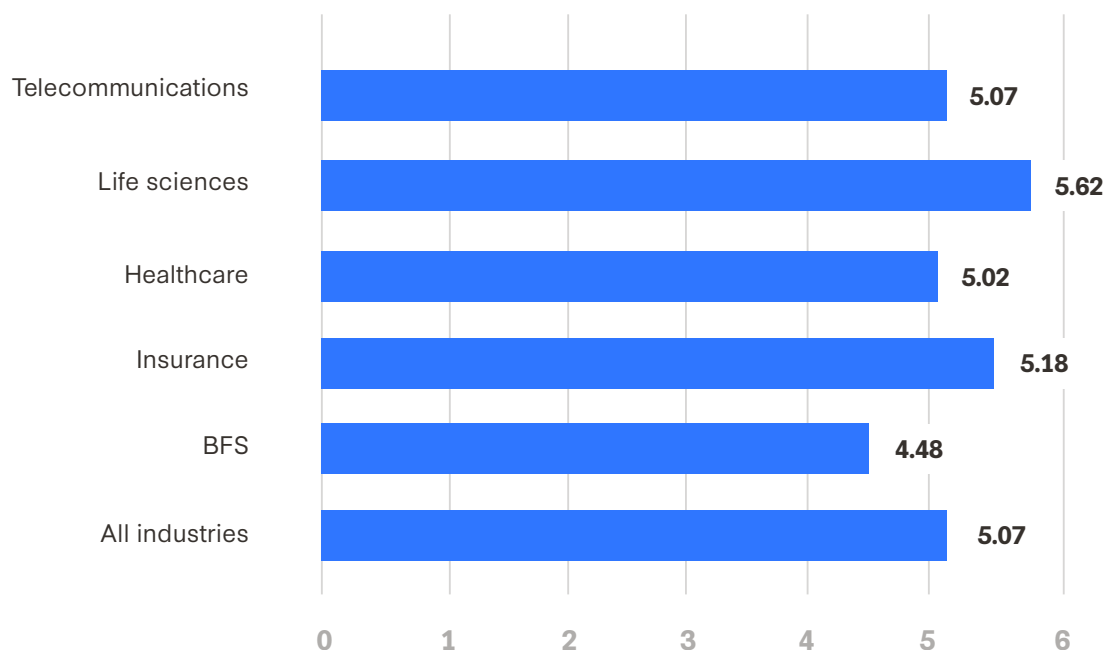


Figure 4

The success of their genAI ambitions will depend heavily on strong data foundations. Crucially, they could deploy genAI to overcome current challenges in transforming data into insights. Our survey, for instance, found that customer-clairvoyant and obsessed firms achieved 68% and 82% reductions, respectively, in the time needed to add new customer data with genAI. Additionally, genAI could make healthcare firms' structured data more usable (only 39% say it's of high quality) by applying metadata and simplifying interpretation.

Central data strategies fall short

Both customer-obsessed and clairvoyant firms strengthen their global data offices by staffing them appropriately and creating common data strategies that promote data sharing. Their global data offices have evolved with the changing needs of the business. They are no longer just custodians of data policies and standards but have become centers of excellence that establish guidelines and oversee architecture, platforms, governance, and the enterprise-wide coordination of data and AI. Healthcare firms fall short in this area: only 41% report having established a global data office, the lowest among all industries surveyed. Just 21% say they have a common data strategy in place, while 34% are in the process of implementing one (see [Figure 5](#)).

Another key area where healthcare companies fall short is in data sharing. Only 26% reported high or very high levels of data sharing between essential functions such as marketing, sales, service, and R&D. Our survey found that 65% of obsessed firms and 78% of clairvoyant firms actively encourage sharing customer data and insights across functions. In contrast, just 6% of customer indifferent firms and none of the customer ignorant firms said the same. Extensive data sharing is vital for compliance with health equity mandates, which require addressing data disparities across systems and coordinating care among different teams.

Most healthcare firms lack a common data strategy

Percentage of firms with a common data strategy

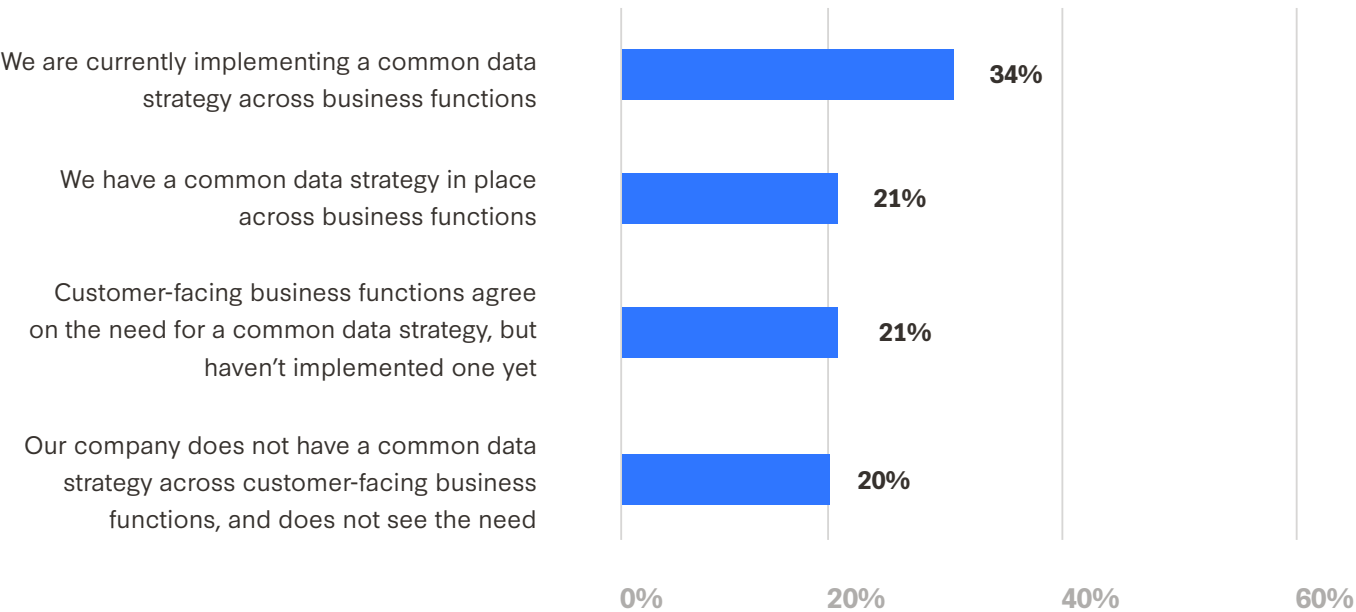


Figure 5

Organizations with a global data office typically have a strong team, averaging 75 employees, which is significantly higher than industries like banking and financial services (42), insurance (46), and life sciences (53). The influence of the global data office is also clear: 72% of respondents view it as somewhat or highly effective in enforcing customer data policies, and 60% see it as effective in highlighting data-driven trends and insights about customers. These offices can further improve data product management by applying product management principles to data collection and usage — detailed in [our main report](#). However, there is room for progress: only 28% believe their global data office is effective or highly effective in helping functions adopt new technologies for analyzing customer data, posing a challenge amid rapid advances in this area.

Future-proof patient-centricity

The rapid growth of healthcare data offers a vital opportunity for healthcare firms to create better offerings for patients. However, our research indicates that these firms must urgently transform the increasing amounts of customer and patient data into actionable insights by addressing key gaps in their methods of collecting, analyzing, and sharing data and insights across their organizations. Virtusa recommends healthcare leaders:

See a strong data foundation as integral to future performance

Take wearables as an example, which greatly aid in the early detection of diseases like inflammatory bowel disease, diabetes, and heart disease. They represent a shift from reactive to proactive care and heighten the need for a solid data foundation to turn insights into treatments and personalized insurance plans. Check out [Mayo Clinic's](#) data platform, originally launched to harness AI and data analytics, which has now evolved to include connected devices paired with advanced analytics, generating new clinical insights. The platform is now enabled to support early-stage health technology startups.

Adopt “Global Data Office (GDO)” best practices to prepare for what’s next

Only four in ten healthcare firms have embraced GDOs as critical enablers for sharing data and insights across functional silos. Our research shows that establishing a GDO plays a central role in building data literacy and fostering cross-company data ownership as organizations begin actively tracking new and emerging technologies. Learn how the top firms set up their global data offices in our infographic [here](#).

Give genAI a boost

The benefits around cost matter, but unlocking the transformative impact of the technology means solving cultural and trust issues. Healthcare firms that have overcome these challenges use the tools to build credibility among staff by addressing staff burnout and removing the tyranny of automating manual tasks. Check out Kaiser Permanente [deploying genAI](#) to reduce clinical documentation workloads, administrative burdens, and staff burnout. GenAI also helped the early detection of at-risk patients by alerting care teams for the necessary interventions, potentially saving as many as [500 lives per year](#). Improving data quality and availability (while ensuring privacy) are critical enablers to generative AI success.

Mastering data for healthcare's future

Our survey highlights how healthcare firms are adapting to the demands of a rapidly changing industry landscape. They recognize that customer data is critical to understanding, meeting, and exceeding patients' expectations for better, equitable, and timely treatments, along with increased transparency and personalization. The survey also highlights the urgent need to address critical bottlenecks that hinder their data collection, analysis, and insight dissemination. Healthcare firms face unique challenges, from regulators to their role in society's well-being. Strengthening their data foundations to address issues around data quality and usability and enacting policies that remove barriers to the free flow of data and insights, will help them fulfill their mission.

Read the [full report here](#).

To learn more about our work with payers, providers, and the healthcare ecosystem, visit the [Healthcare section](#) of our website.

About the authors



Alok Mandal

Global Head - HLS Consulting

Alok is a distinguished leader in developing enterprise business solutions with expertise in AI, genAI, and digital-first strategies. With over two decades of industry experience, he drives transformation through strategic advisory and innovation. His expertise in digital process automation has led to groundbreaking initiatives that have redefined payer and provider ecosystems.

References

Judy Weader, Arielle Trzcinski, et al. "The US Health Insurers Customer Experience Index Rankings, 2024." Forrester. Published June 17, 2024. <https://www.forrester.com/report/the-us-health-insurers-customer-experience-index-rankings-2024/RES181035>

Jessica Lamb, et al. "Generative AI in healthcare: Adoption trends and what's next." McKinsey & Company. Published July 25, 2024. <https://www.mckinsey.com/industries/healthcare/our-insights/generative-ai-in-healthcare-adoption-trends-and-whats-next>

About Virtusa

Virtusa Corporation is a global provider of digital engineering and technology services and solutions for Forbes Global 2000 companies in the financial services, healthcare, communications, media, entertainment, travel, manufacturing, and technology industries worldwide. At Virtusa, digital engineering is at the heart of everything we do. We are 27,000 builders, makers, and doers that partner with customers to reimagine enterprises and creatively build solutions to the most pressing business challenges that move them to the forefront of their industries.

Virtusa's unique Engineering First approach means never presenting an idea we can't execute. With deep industry expertise and empowered agile teams made up of world-class talent, we think about execution early in the process, because the earlier you think about execution the earlier an idea can have an impact. Solving from the inside out enables businesses to respond swiftly to changing needs with improved quality, lower costs, and lasting results.

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