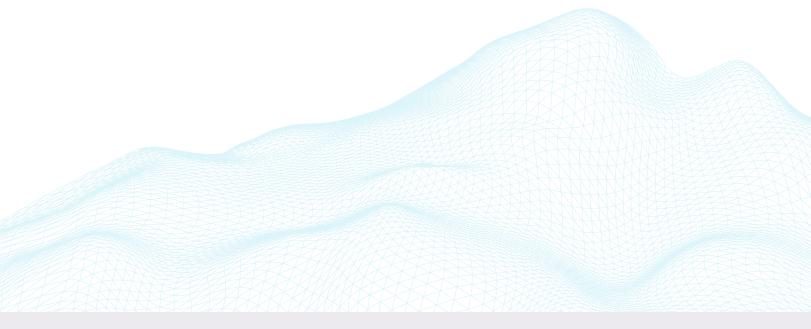


State of the Industry:

Why 2024 is the year to start seeing healthcare differently

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Executive summary

In healthcare, if you aren't innovating, you are being left behind. In today's landscape, that's more evident than ever.

The healthcare labor shortage, which has brought high turnover and skyrocketing contract labor expenses, has compelled hospitals to try new strategies to reduce turnover on limited budgets.^{1,2} Amid the growth of Medicare Advantage and states redetermining Medicaid coverage post-pandemic, healthcare providers face rising administrative costs and complexities and lower patient volumes, which necessitate a new course of action.^{3,4} Further, as inpatient care revenue stalls, hospitals must find ways to meet the growing demand for outpatient care.⁵

While financial distress spurred many mergers and acquisitions (M&As) in the last year, the increased scrutiny surrounding M&As suggests that this approach may be more difficult to implement going forward—pointing to a great need to pursue new strategies for growth.^{6,7}

Hospital and health system leaders have already begun exploring creative solutions to address these challenges and foster growth, whether by investing in new technologies, furthering research, partnering with community leaders, or establishing innovation hubs.⁸ But as leaders navigate today's challenges, it's critical to begin with their most valuable asset: clinical data.

Scattered across EHRs, clinical trials, registry databases, and medical notes, clinical data may start out being disparate, incomplete, inaccurate, and unstructured. But where others see challenges, we at Q-Centrix have always seen a scalable mountainside. With the systems, processes, and partnerships in place to address these challenges, healthcare facilities can arrive atop the mountain and see clinical data clearly: as clean, structured datasets with immense potential to drive innovation. All it takes is a shift in perspective to see the possibilities. Below are just some of the myriad ways to see data differently.



- Centralizing clinical data management paves the way for obtaining a comprehensive view of targeted, purposedriven insights to guide better outcomes.
- Artificial intelligence can revolutionize the way healthcare facilities curate their data but AI models trained on low-quality data pose significant risks. With data integrity processes that combine AI with human expertise, healthcare facilities can eliminate AI's risks and fully harness its capabilities.
- Research networks offer an opportunity for hospitals and health systems to leverage their clinical data to generate new revenue streams and advance medical research.
- Assessing clinical quality data activities and registry participation empowers healthcare leaders to uncover inefficiencies, streamline operations, and cut costs.

As we know from our years of seeing healthcare differently, changing perspectives can be transformative. After all, shifting the perspective on clinical data management by introducing enterprise clinical data management (eCDM) over a decade ago enabled Q-Centrix to transform the market and pioneer new solutions to help healthcare providers unlock the value of their clinical data.

It's time for the industry to see healthcare differently, and that begins with clinical data. When healthcare leaders reimagine what their data can do, the possibilities are limitless.

This State of the Industry report explores how seeing data differently—such as through centralization, AI, research networks, and enterprise assessments—allows healthcare organizations to drive innovation with their clinical data. Additionally, it shares findings from a recent survey, uncovering how hospitals are navigating common industry changes and using clinical data in these efforts.

To look back on registry clinical data management benchmarks from the last year, which draw on data from over 1,200 hospital partners, and to see key regulatory reporting updates, please refer to our <u>2023 benchmarks</u> <u>and updates</u>.



Fostering data-driven decision-making with enterprise clinical data management

When navigating the many pressures facing the healthcare industry today, strategy is key. More and more, healthcare leaders are turning to their data to guide strategic decision-making—which requires a systemwide view of clinical data.⁹

But when data are scattered across service lines, information systems, and individual facilities, getting an enterprise-wide view of clinical data can prove nearly impossible. A 2023 survey of healthcare workers found that one of the biggest challenges in becoming more data-driven was disconnected or incompatible systems and data.¹⁰

Taking an enterprise approach to clinical data management solves this problem. Through enterprise clinical data management (eCDM), hospitals and health systems centralize how their clinical data are collected, stored, curated, and managed, streamlining the data management process and giving healthcare staff easy access to the information they need to thrive. eCDM unites disparate clinical data processes with a secure software platform, and facility-wide reporting and analytics tools simplify the process of drawing deep insights from data in real-time. Further, third-party clinical data experts and AI-powered technologies work together to curate data and ensure the highest data integrity standards in the industry. In addition to facilitating a more consistent process systemwide, this approach allows hospital and health system staff to step away from data abstraction duties and spend more time working top-of-license in the areas where they are needed most. With staffing shortages forcing two-thirds of hospitals and health systems to run at less than full capacity, the assistance of third-party clinical data experts to curate hospitals' data is invaluable.¹¹

eCDM offers many benefits, from higher data integrity to increased cost savings.¹² As healthcare facilities contend with rising costs and growing complexities, eCDM serves as a valuable way to standardize practices and operate more efficiently. Above all, eCDM empowers healthcare leaders to align their facility to a broader data strategy and take their quality efforts to the next level.

66%

of hospitals and health systems are running at less than full capacity.



Upholding data integrity to reap the benefits of artificial intelligence

Artificial intelligence has captivated widespread interest in healthcare. Eighty percent of healthcare executives cited AI as the most exciting emerging technology in the industry, and adoption of generative AI solutions is expected to more than double among healthcare organizations in 2024.^{13, 14}

While AI holds great promise in healthcare, it also carries potential risks. If the data used to train AI models are biased or inaccurate, AI could develop incorrect or misleading results, known as hallucinations, which could result in any number of harmful compounding effects.¹⁶ As a result, some healthcare providers view AI with uncertainty, seeing risks rather than possibilities.¹⁷

Q-Centrix sees AI differently. We know that data sets are the training ground for artificial intelligence and that quality AI models start with quality data. Healthcare facilities can prevent concerns about biases by ensuring that the AI tools they use are trained on high-quality data. Before healthcare leaders seek to leverage AI, they should first consider what processes they have in place for ensuring high data integrity. With patient safety on the line, data integrity is critical.

This is where human expertise plays a pivotal role. An AI model may not be able to interpret nuanced clinical terms with consistently high accuracy or identify minute inaccuracies in data—but clinical experts can. By pairing AI with the right expertise, software, and technology, healthcare facilities can benefit from AI's capabilities while removing any risk. The healthcare industry is just getting started with AI adoption. As more organizations look to leverage AI in the coming year, they should ensure that their strategy leaves room for the tools, technologies, workflows, and people who can work in conjunction with AI to uphold the integrity of their data first and foremost. By taking a data-first approach to their AI strategy, organizations can pave the way for advancements that empower them to take quality to the next level.

80%

of healthcare executives cited AI as the most exciting emerging technology in healthcare.



Overcoming common research challenges through research networks

Registry reporting can be time-consuming for busy healthcare providers. While curating, reviewing, and submitting registry data is essential for meeting accreditation standards, benchmarking performance, and identifying gaps in care, this process does require substantial investment in the form of staff time and resources and registry participation fees. With many hospitals facing financial pressures and staffing constraints, clinical and quality leaders have strong motivation to get the most value from what their data have to offer.

Registry data hold great potential beyond registry reporting. Up to 80 percent of the abstracted clinical data hospitals submit to registries overlap with primary data sets used for clinical research.

When we see registry data through this lens, they start to resemble something else: an opportunity.

Finding and enrolling patients has been a persistent challenge in clinical research. Two-thirds of clinical trials fail to enroll enough patients for an effective study, which may lead to less reliable results, higher costs, or delays in bringing potentially life-saving treatments to market. Even more studies fail to retain enough patients to complete the trial.¹⁴ Life sciences and pharmaceutical organizations have a great need for real-world patient data to use in observational studies and to enable better interventional studies. And hospitals and health systems have a wealth of patient data at their fingertips, already curated and abstracted for registry submission. Research networks fill a critical gap in this space. By joining a research network, healthcare facilities can be connected to industry-sponsored research opportunities that match their needs. Healthcare facilities also receive access to a broader pool of deidentified patient data, funded services for patient screening, and specialized tools to assess study feasibility and identify suitable patients. Additionally, the network's qualified data experts take on the work of curating hospitals' clinical data and performing quality checks.



of clinical trials fail to enroll enough patients for an effective study, which may lead to less reliable results, higher costs, or delays in bringing potentially life-saving treatments to market.

With the support of a research network to do the heavy lifting, clinical data take on a whole new purpose. Through these data, hospitals and health systems can contribute to life-saving research, help overcome common research challenges, and even expand their revenue streams—all by reimagining what their data can do.



Uncovering efficiencies with enterprise assessments

While hospital operating margins have begun to stabilize, some expect these margins may never return to pre-pandemic levels.¹⁸ Nonprofit hospitals are expected to see only minimal margin improvements in 2024.¹⁹ Further, many hospitals and health systems are still struggling to rebound financially: a 2023 survey found that 40 percent of health system leaders are experiencing margins below 2022 levels.²⁰ In this climate, healthcare leaders must closely scrutinize their facility's spending—which can be challenging when so many costs are spread throughout a health system.

40%

of health system leaders reported experiencing margins below 2022 levels.

The typical 160-bed hospital spends an average of \$500,000 to \$600,000 on clinical quality data each year.²¹ For larger health systems, these costs are drastically higher, veering well into the millions. With disparate technologies, siloed staffing and strategies, and inefficient operations, the true cost of clinical quality data can often go undetected. At a time when margins are persistently thin, it is vital that healthcare leaders maximize the value of their clinical quality data spending. Enterprise assessments empower healthcare leaders to take charge of their data. Through an assessment, a team of experts conducts a qualitative and quantitative analysis to identify a hospital or health system's total cost of ownership, uncover risks and opportunities, and develop a strategic growth plan. In addition, healthcare leaders receive a strategic growth action plan outlining how to achieve greater centralization and utilization of clinical data. By highlighting opportunities for facilities to save costs, manage clinical data more efficiently, and improve data integrity, assessments help healthcare leaders streamline operations and engage more deeply with their data.

Armed with a detailed analysis of clinical quality data activities and a roadmap for the future, healthcare leaders will be better positioned to implement strategic improvements and drive growth going forward—no matter what challenges the market may bring.



Healthcare strategies survey findings

As healthcare leaders navigate the current industry landscape, their approach to strategic planning may shift accordingly. Some have moved away from long-term planning to focus on planning for the more immediate future.²² Others are relying more on their data to guide strategic decision-making.²³ Whatever the approach, leaders may be redefining their strategies to better address the complex demands of the industry.

To understand how the myriad changes and challenges in the healthcare industry have impacted hospital and health system leaders' strategic planning efforts—and how they are leveraging clinical data in the process—Q-Centrix administered a survey in January 2024. The survey, which was fielded to individuals in executive and senior management roles at hospitals and health systems throughout the United States, received 256 complete responses.

These findings reveal that the healthcare labor shortage had the most significant impact on healthcare facilities' strategic planning compared to other factors. Despite this, respondents remained largely positive about their organization's ability to adapt to the industry challenges.



The survey results highlight the pivotal role of clinical data in organizational strategy, with 99 percent of respondents

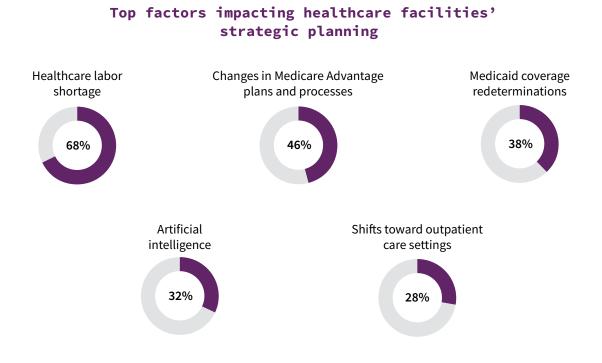
sharing that clinical data influences their strategic decision-making. This underscores the importance of having the tools, expertise, and systems in place for healthcare leaders and staff alike to draw meaningful insights from their data.

Strategic planning

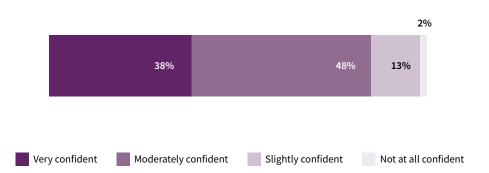
The healthcare labor shortage, cited by two-thirds of respondents, was decidedly the top factor impacting hospital and health system strategic planning efforts. This has been an ongoing challenge in the last several years, and it is expected to persist. With the cost of contract labor remaining high compared to pre-pandemic levels, many organizations must find ways to mitigate the shortage while reducing reliance on contract labor.²⁴

Nearly half of respondents identified changes in Medicare Advantage plans and processes as a major impact. Indeed, Medicare Advantage has had a considerable effect on healthcare facilities, including increased administrative burden, a rise in payment denials, and declining cash reserves.^{25, 26} Medicaid redetermination, another top impact survey respondents reported, also poses a financial challenge for healthcare organizations. With an estimated 15 million people expected to lose Medicaid coverage, providers are likely to see lower reimbursements.^{27, 28}





Most respondents were optimistic about their organization's ability to adapt to the changes impacting the healthcare industry, suggesting a positive outlook for 2024. More than a third shared that they were very confident, while nearly half were moderately confident. Far fewer were slightly confident (13 percent) or not at all confident (two percent).



How confident are you in your facility or health system's ability to adapt to the challenges impacting the healthcare industry?



When asked what factors contributed to their level of confidence, about half of respondents indicated effectiveness of organizational leadership (52 percent) and/or level of ability to recruit and retain skilled staff (49 percent).

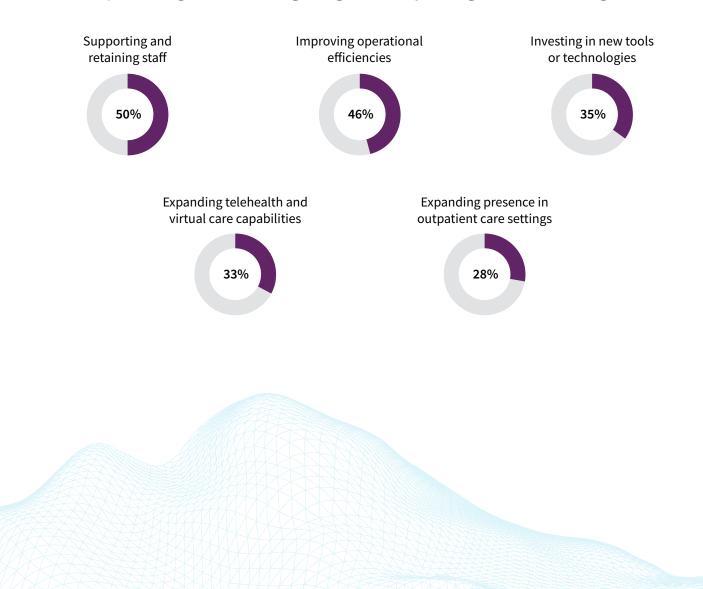
When examining responses by confidence level, analyses revealed that respondents who were very confident in their facility's ability to adapt were most likely to cite effectiveness of organizational leadership as a key factor for their confidence level. However, among respondents who were moderately, slightly, or not at all confident, the top response they pointed to was their organization's level of ability to recruit and retain skilled staff, emphasizing just how critical it is for organizations to have strategies for addressing the labor shortage.





Supporting and retaining staff was the top strategy respondents identified as essential for navigating industry changes and challenges in the next year. This is consistent with the fact that respondents considered the healthcare labor shortage the biggest factor impacting strategic planning. Another top strategy also serves to mitigate the effects of the labor shortage: nearly half of respondents cited improving operational efficiencies as an essential strategy. This approach may help healthcare workers minimize the time spent on unnecessary tasks and inefficient processes, making it easier for busy staff to focus on the most critical areas of their work.

Other top responses pointed to the growing role of technology in healthcare, which is not surprising given the industry's significant focus on AI. About a third of respondents identified investing in new tools or technologies and expanding telehealth and virtual care capabilities as essential strategies for the next year ahead.

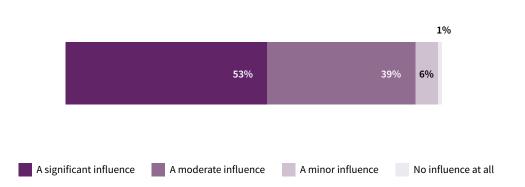


Top strategies for navigating industry changes and challenges



Leveraging clinical data

Healthcare organizations are overwhelmingly relying on clinical data in strategic decision-making, underscoring the important role these data play for healthcare leaders. More than nine in 10 respondents said clinical data had a significant (53 percent) or moderate (38 percent) influence in shaping strategic decision-making for their facility or health system. This heavy reliance on data reinforces the need for healthcare facilities to ensure that their data are easily accessible and of the highest quality, such as by implementing centralization strategies or improving data integrity processes.



How influential are clinical data in shaping strategic decision-making for your facility or health system?

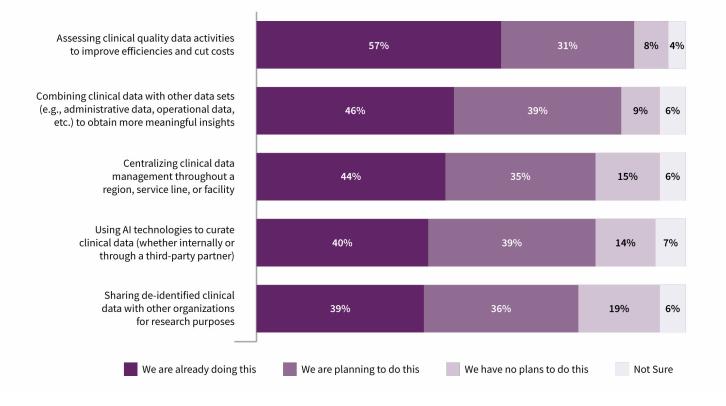
To understand how healthcare facilities are seeing their data differently, Q-Centrix asked about specific strategies facilities have implemented. A majority of respondents (57 percent) said their facility is currently assessing clinical quality data activities to improve efficiencies and cut costs, and another three in 10 have plans to start doing this. At a time when hospitals and health systems are under great financial strain, healthcare leaders evidently see great value in assessments. Assessments enable facilities to capture the true cost of clinical quality data spending—which is spread across different departments and service lines and thus typically goes unknown—and uncover ways to streamline processes and identify cost savings.

Just under half of respondents said their facility has implemented strategies that involve merging data sets or data efforts in some way, whether by combining clinical data with other data sets (46 percent) or centralizing clinical data management processes (44 percent). Given the influential role clinical data play in shaping strategic decision-making, it follows that healthcare leaders would be motivated to improve their ability to access and draw meaningful insights from their data.

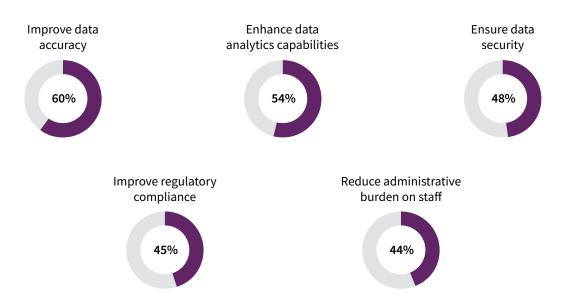
Using AI technologies to curate clinical data and sharing de-identified clinical data with other organizations for research purposes rounded out the list, with about four in 10 respondents reporting that their facility is currently engaging in these activities. As more healthcare organizations explore ways to see their data differently, this number is sure to grow.



Has your facility or health system implemented any of the following strategies?



When asked about their facility's primary goals for using AI technologies to curate clinical data, the most common response (cited by six in 10 respondents whose facility currently uses or plans to use AI for this purpose) was to improve data accuracy. Enhancing data analytics capabilities (54 percent) and ensuring data security (48 percent) were also common goals. This speaks to the wide range of benefits AI offers healthcare facilities. While AI also carries potential risks, organizations can minimize these risks by pairing AI with the optimized processes, software, and human expertise needed to ensure the integrity of their data.



Primary goals for using AI technologies to curate clinical data



Among respondents whose facilities are currently sharing or planning to share de-identified clinical data with other organizations for research, their primary goal was participating in research more targeted to their patient population (61 percent), followed by collaborating with a broader scope of research partners (53 percent) and participating in more research opportunities (50 percent).

As these responses show, sharing data for clinical research has far-reaching benefits for patients and hospitals alike. Further, the organizations that receive these data—such as those in the life sciences industry—gain access to high-quality, real-world data sets, enabling them to overcome common research barriers and get treatments to market more quickly. For hospitals that lack the time or resources to prepare research-ready data sets to share with other organizations, joining a research network allows them to leverage their data for research without constraining resources.



Primary goals for sharing de-identified clinical data for research



Summary

As hospitals and health systems continue exploring new ways to adapt, leveraging clinical data will be increasingly essential for driving growth and innovation. The vast majority of healthcare leaders are already relying on clinical data to shape strategic decision-making, but many untapped opportunities remain. Shifting their perspective about what their data can do opens up a world of possibilities.

Data may begin as a jumble of unstructured information scattered across different systems, but this view can be limiting. At Q-Centrix, we see clinical data for what they can be: a clean, cohesive data set with unlimited potential. Once equipped with the systems and partnerships to curate their data more efficiently, healthcare facilities can overcome common data curation hurdles and truly benefit from all their data have to offer. At least three-quarters of healthcare leaders are either already exploring or have plans to explore ways to do more with their data, from centralizing clinical data management to sharing deidentified data with other organizations to advance medical research. Whether hospitals and health systems are striving to cut costs, explore new revenue streams, improve efficiencies, avoid common AI risks, or obtain deeper insights, their data are central to achieving these goals and more.

When armed with strategies for not just responding to industry challenges but also leveraging their data to drive transformative improvements, hospital and health system leaders will be better prepared to overcome these challenges and spark innovation in 2024 and beyond.

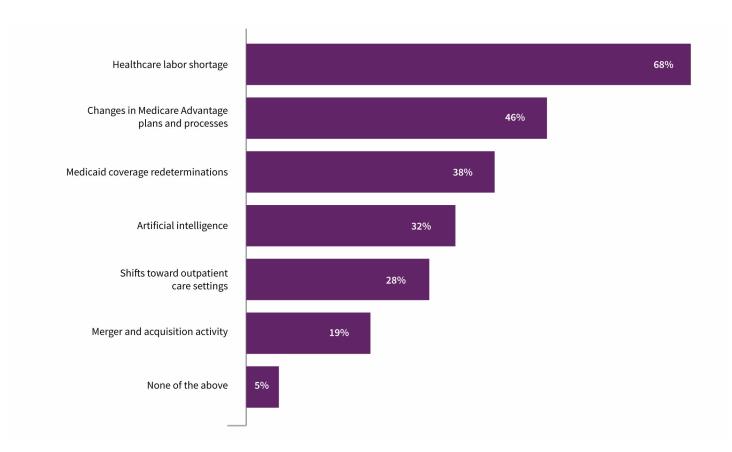


Appendix: Healthcare strategies full survey results

In January 2024, Q-Centrix conducted a survey to learn how hospitals and health systems are navigating the changes and challenges impacting the healthcare industry and understand how they are leveraging clinical data in the process.

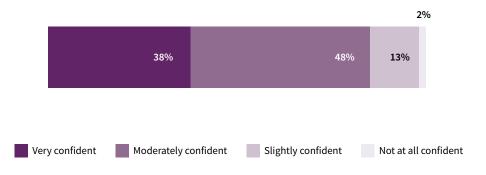
The survey was administered to individuals in executive and senior management roles at hospitals and health systems throughout the United States on January 9, 2024. A total of 256 respondents completed the survey.

Which of the following factors are impacting your facility or health system's strategic planning most significantly (whether positively or negatively)? Select up to three.

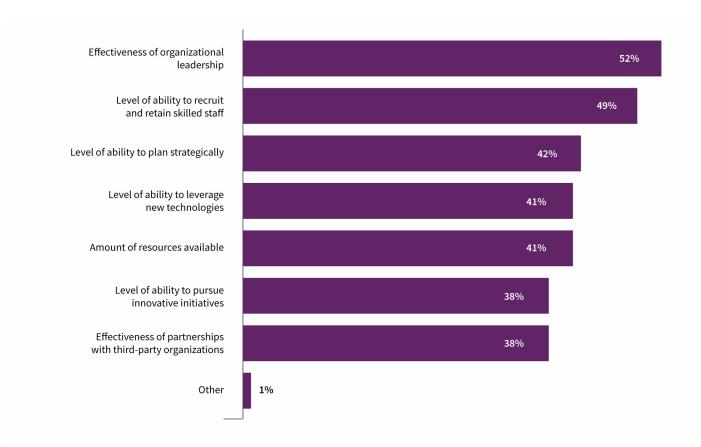




How confident are you in your facility or health system's ability to adapt to the challenges impacting the healthcare industry?

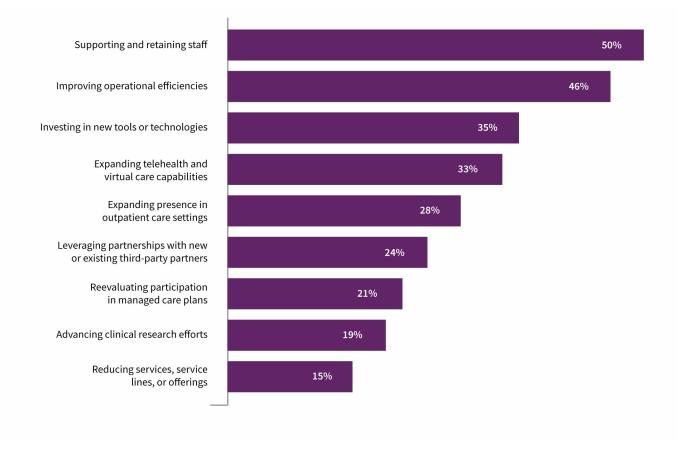


You indicated in the previous question that you were [very/moderately/ slightly/not at all] confident about your facility or health system's ability to adapt to the challenges impacting the healthcare industry. What key factors contributed to your response? Select all that apply.

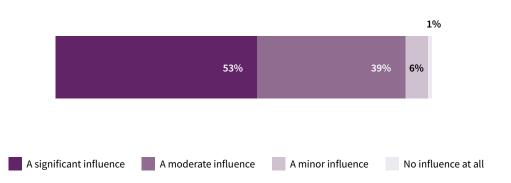




What strategies do you think will be most essential for healthcare facilities navigating industry changes and challenges for the next year ahead? Select up to three.

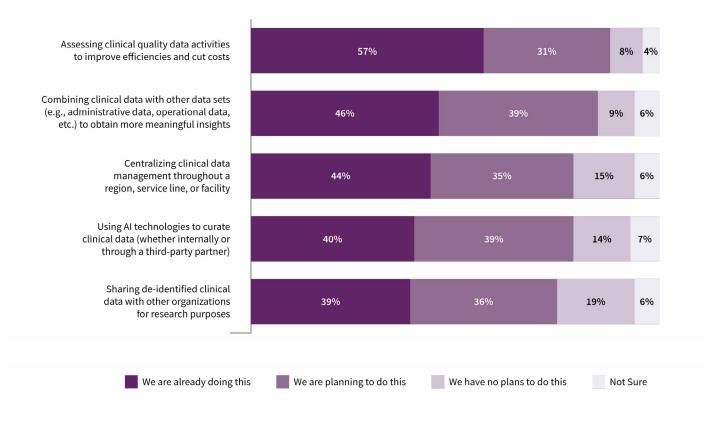


How influential are clinical data in shaping strategic decision-making for your facility or health system?



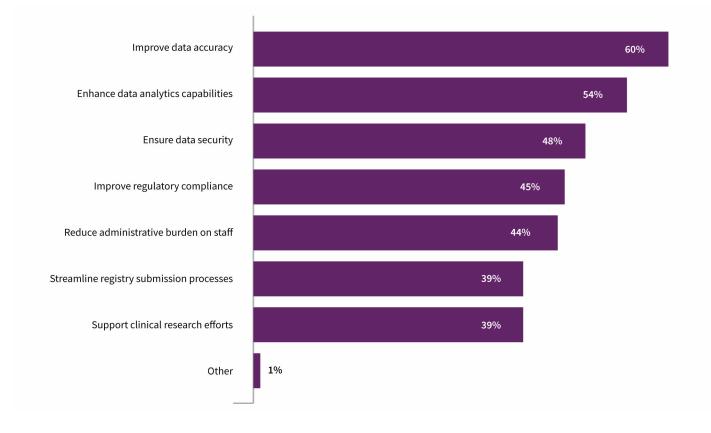


Has your facility or health system implemented any of the following strategies?

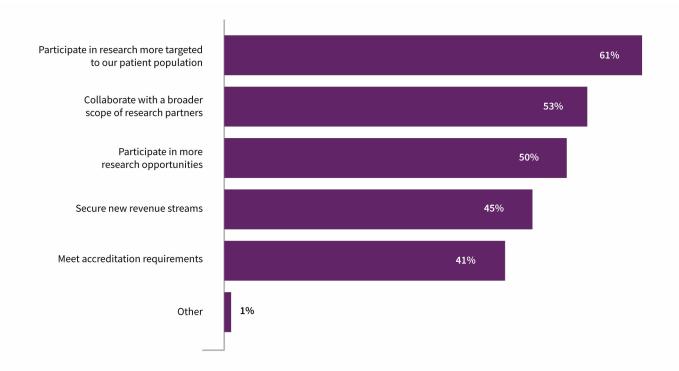




What are your facility or health system's primary goals for using AI technologies to curate clinical data? Select all that apply.



What are your facility's primary goals for sharing de-identified clinical data with other organizations for research purposes? Select all that apply.



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