

# Transforming Health Care Workforce Management: How Technology Can Address Workforce Challenges at Health Systems



Center for  
**Connected**  
Medicine



Workforce shortages, rising salaries, and increasing costs for employee benefits continue to strain hospitals and health systems. These challenges, coupled with the critical role that clinical staff play in ensuring high-quality patient care, have made workforce optimization top of mind for health care organizations. The Center for Connected Medicine (CCM) at UPMC partnered with KLAS Research to examine how health care organizations are leveraging technology to tackle these pressing workforce challenges. This report outlines insights from health care executives on current organizational priorities, impactful solutions, and future plans for addressing recruitment, retention, and optimization of clinical staff.



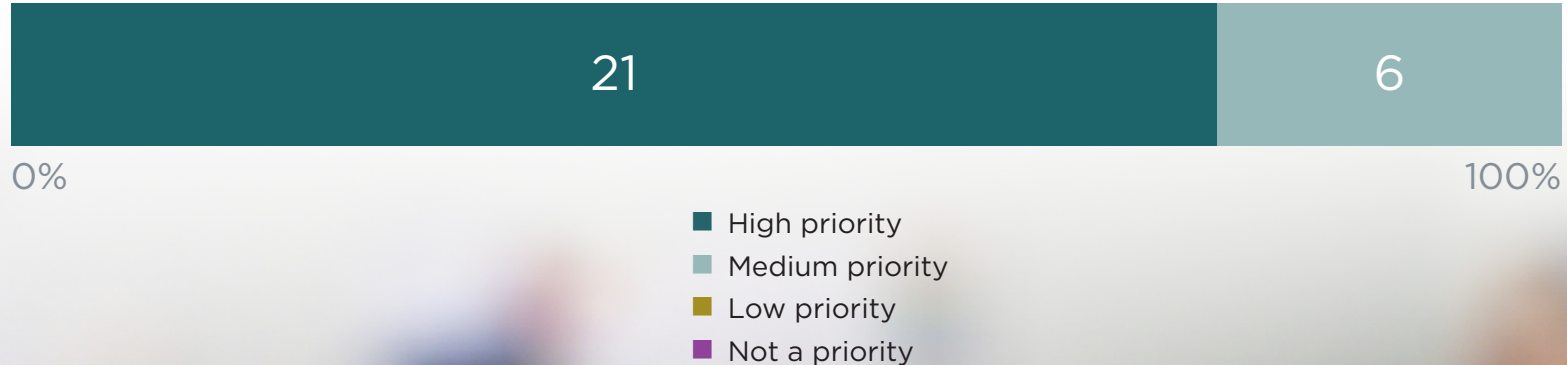
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# Workforce Challenges Are a Top Concern for Health Systems

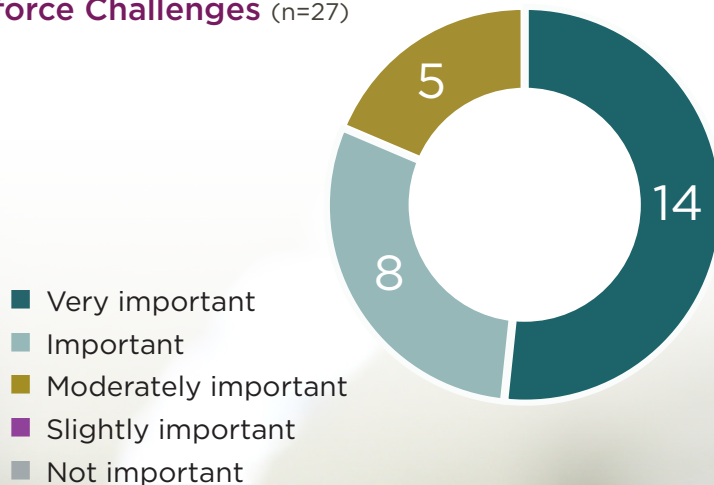
Interviewed health care leaders emphasize the urgency of stabilizing clinical staff levels to maintain operational excellence and quality care delivery, with a vast majority of respondents identifying workforce challenges as a high priority. This urgency stems from widespread staffing shortages, which have been exacerbated by burnout, pandemic aftershocks, and shifting workforce expectations. At the same time, rising labor costs continue to strain health care organizations, forcing many to reassess their staffing models. Respondents cite staffing shortages and rising costs as the primary drivers of their prioritization of workforce management systems, and many note the need for immediate, scalable solutions to address these pressures.

Priority Level of Workforce Challenges (n=27)



# The Critical Role of Technology & Investment Trends in Addressing Workforce Challenges

## Importance of Technology Solutions in Addressing Workforce Challenges (n=27)



Health care organizations increasingly recognize technology solutions as vital for addressing workforce challenges — scheduling software, workforce analytics, and employee self-service platforms are frequently cited as tools that can help. More than 80% of respondents rate technology solutions as “very important” or “important” for addressing workforce challenges — highlighting technology’s capability to streamline organizational operations, facilitate efficient workflows, reduce administrative burdens, and improve task automation, all ultimately critical to mitigating the effects of staffing shortages. Further, investment in these types of solutions is a priority for many in the short term, with two-thirds saying they are very likely to invest in workforce solutions in the next one to two years. (See *findings on page 8 for more on future investments*). Most respondents feel that targeted investments in tools such as AI-enabled recruitment tools or advanced scheduling systems are critical for achieving long-term workforce stability. A small number of respondents remain hesitant about investing in these tools, saying their current non-technology methods are sufficient for attracting and keeping their workforce.

# Effective Solutions for Recruiting, Retaining, & Optimizing Workforces

## Defining the Three Elements of Workforce Operations

When it comes to workforce operations, health systems focus on three major elements: recruiting, retaining, and optimizing their workforces. For this research, interviewed health systems answered questions about workforce technology and how they are using it or planning to use it in each of these areas, defined below.

**Recruit:** Involves attracting, screening, and selecting qualified individuals for a job.

**Retain:** Focuses on employee engagement and satisfaction in efforts to reduce turnover.

**Optimize:** Aims to enhance workforce productivity and efficiency.

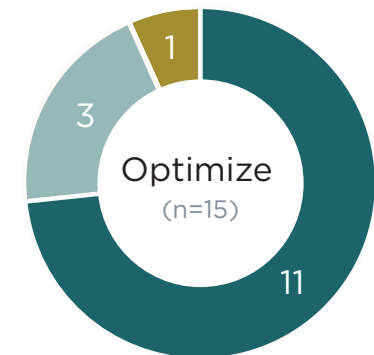
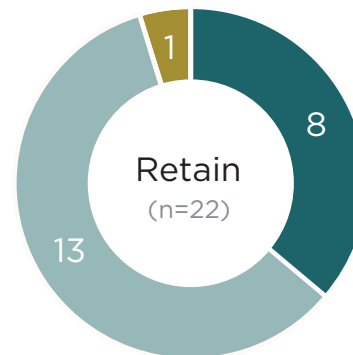
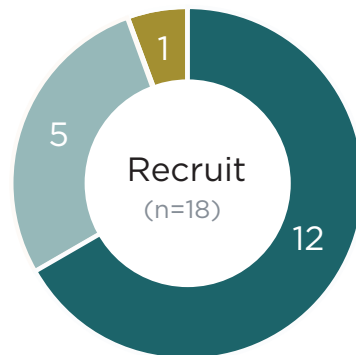
## Recruit:

### Modernizing the Hiring Process

Health care organizations are increasingly trying to address recruitment challenges by adopting technology that can streamline processes, enhance efficiency, and attract top talent. Specifically, two-thirds of respondents say they use workforce tools to recruit workers. These solutions leverage digital marketing, ultimately increasing visibility and expanding recruitment efforts beyond local areas. There is a growing emphasis on evaluating and refining recruitment strategies, such as revising pay scales to remain competitive, identifying top-tier talent through stricter qualification criteria, and aligning recruitment tools with organizational goals—highlighting the growing importance of scalable, data-driven recruitment solutions. Still, respondents note challenges, including integration issues with legacy systems, limited tracking capabilities, and high costs associated with advanced recruitment platforms.

### Type of Workforce Solution with Most Positive Impact on Workforce Goal

- Technology solution
- Non-technology solution
- No solution mentioned



## Retain:

### Strengthening Culture & Benefits for Longevity

Employee retention is a critical challenge for health care, and organizations are implementing a range of strategies to improve their retention rates. A heavy focus remains on non-technology solutions, as less than half of respondents are using technology to address employee retention. Instead, they are working to offer strong benefits packages, competitive compensation, and retirement plans and to lead initiatives — such as employee satisfaction surveys, team-building activities, and turnover reporting — that build a supportive work culture. (Notably, other respondents cite the use of technology for employee satisfaction surveys, showcasing the mixed use between organizations.) Leadership quality and open communication are also noted for their importance in fostering employee loyalty. Still, technology can play an important role in employee retention, specifically when used to improve employee satisfaction, increase company transparency, and streamline benefits administration, open enrollment, and employee self-service. For example, respondents note that credentialing tools and professional growth tools provide employees with opportunities for development and engagement.

### Vendors/Solutions Mentioned in Use for Recruiting, Retaining & Optimizing Workforce (n=27)

Bolded vendors were mentioned more than once.

UPMC has no direct financial interest in any companies named in this report.

## Optimize:

### Enhancing Efficiency & Productivity

Technology plays a larger role in organizations' plans to optimize their workforce, with nearly three-quarters of respondents reporting the use of technology for this goal. Many actively take opportunities to optimize workforce efficiency and productivity, though approaches and levels of success vary widely. But as with the other categories, organizations often find success by balancing their cultural and leadership strategies with robust technology solutions to optimize their workforce. Some respondents are focusing on internal process improvements, including conducting workflow audits, integrating automation tools, and streamlining operations to minimize repetitive tasks. Many interviewed organizations use software tools to enhance efficiency, particularly with scheduling, productivity tracking, and cost accounting. One organization utilizes advanced technology solutions that create seamless, integrated workflows that support remote work and rapid scaling (such as cloud-based systems and automated device management). Despite the benefits, challenges with using software to optimize their workforce are reported, including underutilization of these tools and the need for greater education and transparency.

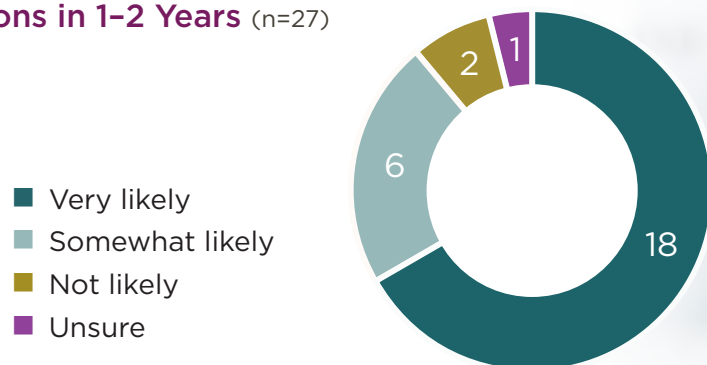
Recruit	Retain	Optimize
ClearCompany	ADP	ADP
<b>Indeed</b>	LinkedIn	Epic
Oracle Recruiting	MD-Staff	Microsoft
Rippling	Microsoft Viva Glint	Paycor LMS
symplr	Paycor LMS	Surgical Information Systems
Taleo	Rippling	SIS Complete
<b>Workday</b>	SurveyMonkey	symplr
	Workday	UKG
		<b>Workday</b>

Note: Other types of technology were mentioned without a specific vendor name: online recruitment tools for “Recruit” and EHR for “Optimize.”

# Where Health Care Leaders Are Investing Next

Many organizations' planned investments for their workforce management directly mirror their current strategies, sometimes with the expansion of a current solution or the addition of a new solution. Still, a significant number of respondents indicate uncertainty or a lack of intent in pursuing future investments. Even among those who want to invest, there is a wide array of vendors that organizations may invest in, with few being mentioned more than once — this indicates that there is no clear consensus among health care organizations regarding what methods are most effective for solving workforce challenges.

## Likelihood of Investing in Workforce Solutions in 1-2 Years (n=27)



## Recruit:

### Advanced Tools for Better Talent Acquisition

Future investments in recruitment technologies and strategies vary across organizations, though most intend to modernize their recruitment processes through technology and efficiency enhancements to meet evolving workforce demands. While organizations have generally already adopted technology to streamline their hiring process, many want to further streamline the process by implementing or upgrading their application tracking systems, including potentially moving to AI-powered solutions. Respondents hope these solutions will help them sift through extensive applicant databases, reconnect with former candidates, and identify potential hires more efficiently. One organization is investing in remote education and onboarding solutions to accelerate new-hire readiness and productivity, which they hope to be appealing for potential hires as well as to help retain employees later on. A few organizations consider their current tools sufficient (sometimes after having recently upgraded them), so they are focusing more on building relationships with locum companies and staffing partners to meet unique hiring needs.

## Retain:

### Empowering Staff with Flexible, Engaging Solutions

Future investments to aid retention strategies are focused primarily on improving benefits, enhancing culture, and providing better tools for workflow efficiency. For example, respondents are prioritizing internal training and cross-training to prevent knowledge silos and improve work coverage, ultimately lessening employee stress and burnout. A few organizations acknowledge they have limited future technology plans to improve employee retention, instead relying on existing tools or non-technology interventions. Some are beginning to explore innovative tools (e.g., ambient speech technology) to improve workflows and reduce provider stress. Others mention technology investments including updates to employee self-scheduling and communications platforms, to put more power in the employees' hands.

## Optimize:

### Streamlining Operations for Improved Efficiency

In their optimization efforts, respondents are often focusing on enhancing productivity and efficiency through technology. Many plan to implement or upgrade their scheduling and timekeeping systems to address staffing challenges. Additionally, some are investing in tools for cost accounting and workforce productivity analysis. Optimization efforts also extend to improving specific workflows, such as denials management, claims adjudication, and physician coding. While clinical optimization is reported to be lagging behind administrative and revenue cycle advancements, organizations are updating their EHRs, improving user interfaces, and considering benchmarking tools to enhance usability and sustainability.

### Vendors/Solutions Mentioned for Future Investments in Recruiting, Retaining, & Optimizing Workforce (n=27)

Bolded vendors were mentioned more than once.

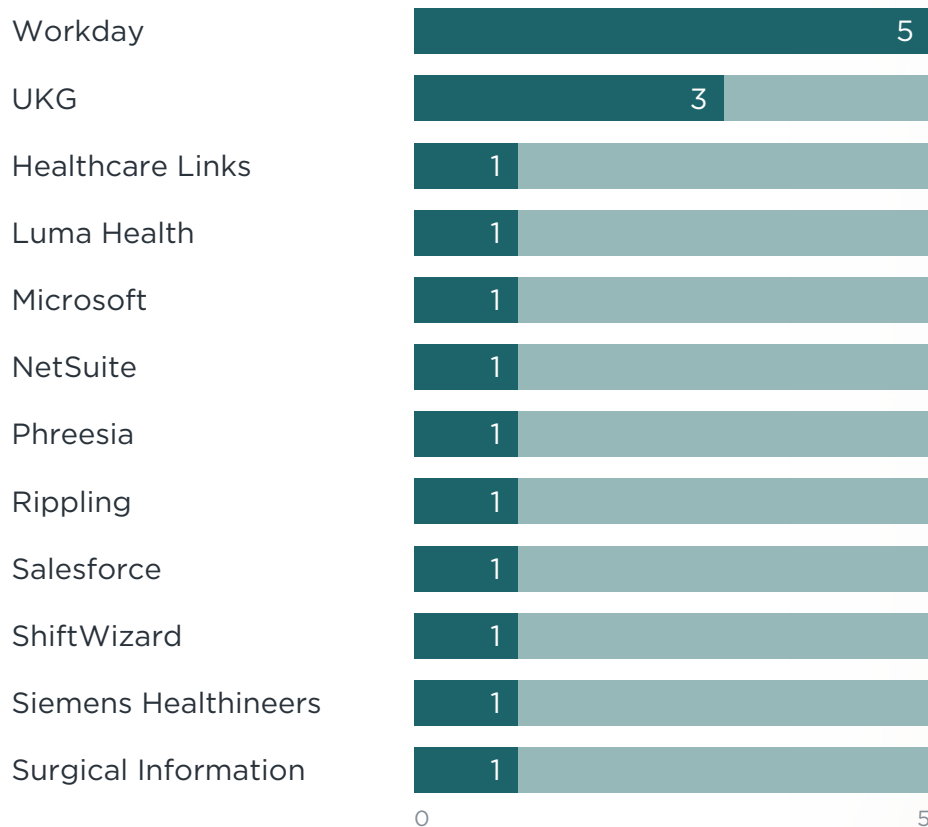
Recruit	Retain	Optimize
ADP	ADP	ADP
FinThrive	NetSuite	EZCall
NetSuite	Nuance DAX (ambient speech)	Luma Health
<b>Workday</b>	UKG	Solventum
	<b>Workday</b>	Strata Decision Technology
		Tableau
		UKG
		<b>Workday</b>

Note: Other types of technology were mentioned without a specific vendor name. For "Recruit," AI, a customer relationship management tool, an app tracking system, a new EHR, and a remote work solution were mentioned. For "Optimize," AI, a benchmarking tool, and an EHR were mentioned.

# Vendors That Offer Platforms Are More Aligned with Organizations' Workforce Needs

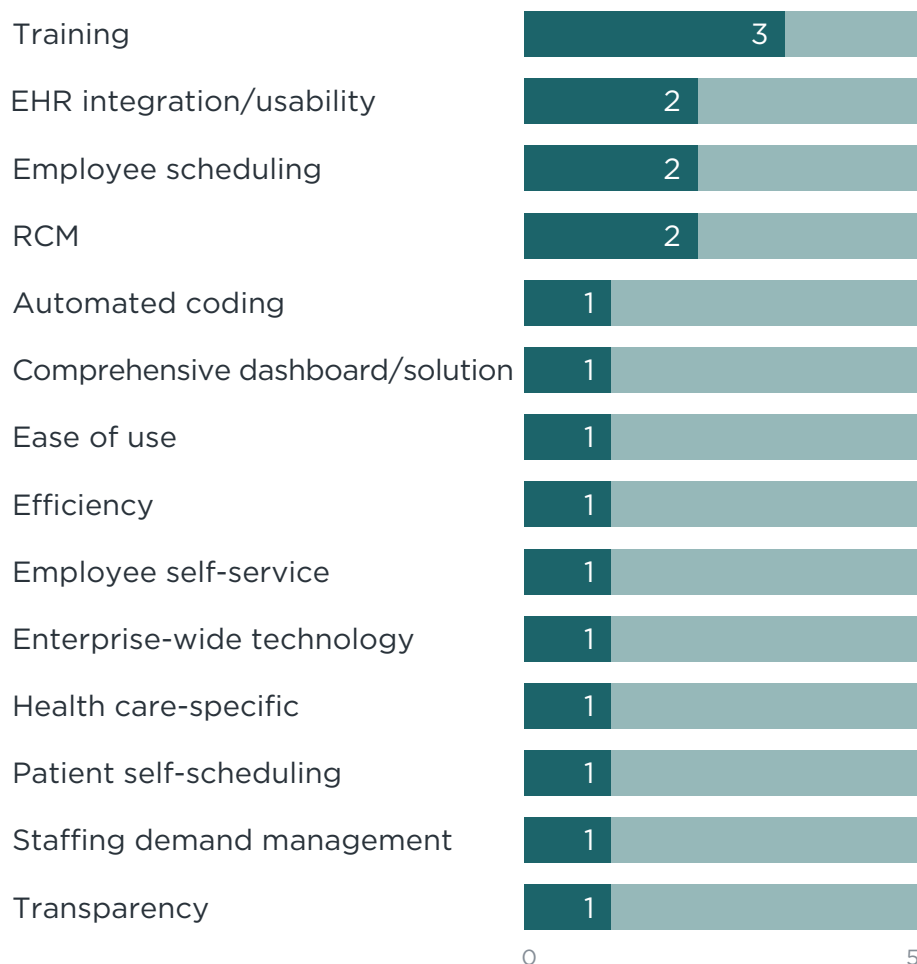
When considering which vendors are most aligned with their workforce needs, interviewed executives prioritize vendors that can help address specific pain points while supporting broad workforce management goals. To that point, organizations are increasingly relying on broad platforms to streamline HR and clinical processes. Additionally, robotic process automation tools are gaining traction for their ability to enhance efficiency in repetitive tasks. Specialty tools help automate workflows for processes such as patient check-in and surgery scheduling.

## Vendors Most Aligned with Organizations' Workforce Needs (n=18)



# Training, Automation, & Integration Are Noted Gaps in Current Workforce Technology

## Most Needed Improvements for Workforce Technology (n=19)



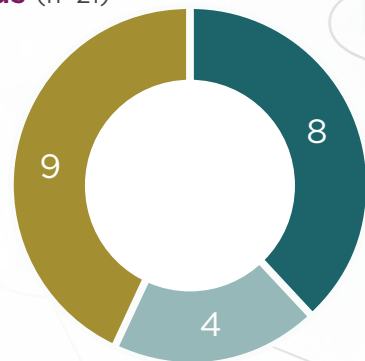
Interviewed organizations indicate there are many needed advancements to workforce technology, especially with training, automation, and integration tools. Many organizations want unified platforms to reduce system fragmentation and enhance user efficiency as well as technology that better supports workforce planning and management (particularly, tools that align staffing with fluctuating health care demands). Respondents also note the importance of optimizing existing tools (i.e., EHRs) to enhance regulatory compliance and reduce redundancy. One organization said that improvements to patient self-scheduling tools would be critical, especially for reducing the burden on call centers and streamlining patient appointment workflows. Additionally, respondents want interactive, hands-on training methods and solutions that can cater to diverse user needs. Another mentioned priority is transparency for both administrators and employees from the organizations themselves, including comprehensive information on benefits and compensation.



# Organizations Balance the Risk & Reward of Innovating with Early-Stage Vendors

Interviewed health care organizations express a mix of optimism and caution when it comes to investing in early-stage workforce management vendors. Many organizations are willing to explore new solutions, particularly if those solutions address specific gaps or provide innovative approaches. Additionally, many organizations say that early-stage vendors offer opportunities to collaborate on product development, allowing them to have influence on the design and functionality of the solutions. Respondents emphasize the importance of proven test cases and scalability when working with a new vendor or solution, especially for large organizations, which often have complex workflows and high employee volumes. A few organizations express interest in new innovations but acknowledge constraints such as vendor consolidation efforts or existing investments in major platforms. Other organizations who don't want to work with early-stage vendors say they prioritize stability and prefer working with established vendors with strong track records in health care, often citing limited budgets and desire to minimize risk.

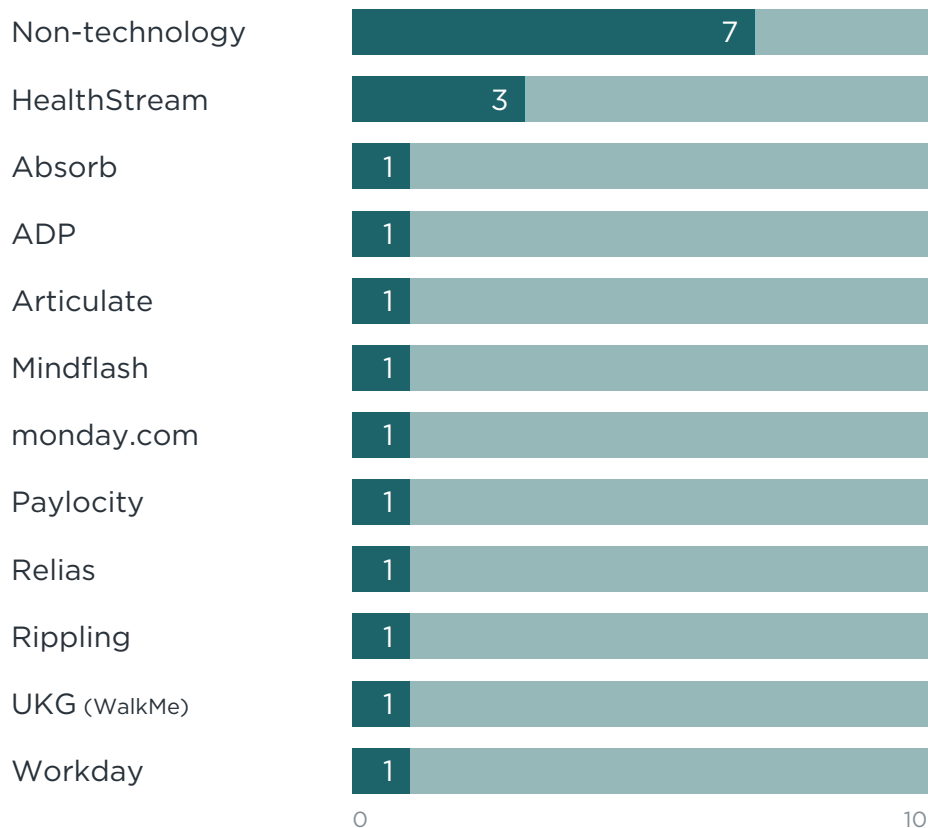
## Openness to Early-Stage Vendors for Workforce Needs (n=21)



- Willing to work with vendors
- Potentially open to consideration
- Not willing to work with vendors

# Workforce Training: Current Tools & Strategies for Clinician Development

## Vendors/Solutions in Use or Being Considered for Clinician Training (n=20)



Clinician development is a critical need for health care organizations, and respondents report a diverse range of approaches and tools as well as current strengths and gaps in their clinician development. Overall, there is a growing demand for training solutions that balance accessibility, interactivity, and clinical relevance to support an evolving health care workforce. Learning management systems are often mentioned as tools that improve hands-on, interactive training. Additionally, many organizations are transitioning to remote and computer-based training (CBT) models as well as video-based training to improve accessibility and engagement. However, many organizations still rely on basic CBT videos, PowerPoints, and manual processes, highlighting the need for more innovative, interactive solutions. While some organizations report progress in integrating their training into broader workforce management systems, others identify needed improvements, such as better EHR-related training tools to address specific clinical needs.

Outside of technology-specific training, organizations highlight one-on-one or peer-led shadowing approaches to training, particularly during onboarding, to ensure clinicians are comfortable with systems and processes. One organization mentioned they provide simulation labs for nursing scenarios (e.g., managing codes, obstetric emergencies), saying these are highly effective over traditional classroom settings.

### Further Research on Training

KLAS Research has collected insights on training from health care organizations partnering with the KLAS Arch Collaborative to optimize their clinicians' EHR satisfaction.

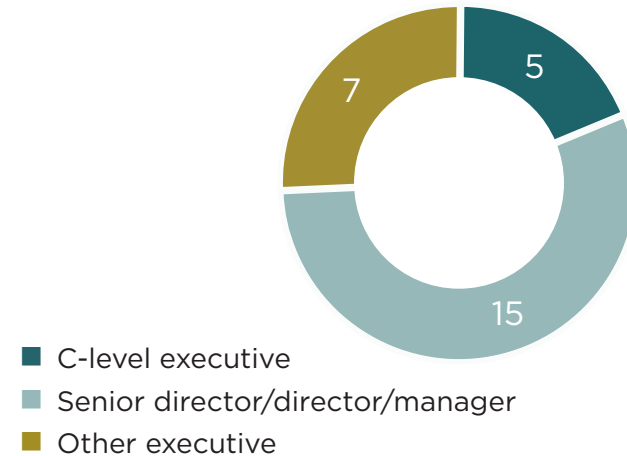
[See the KLAS Arch Collaborative landing page for more information.](#)

# Methodology & Respondent Demographics

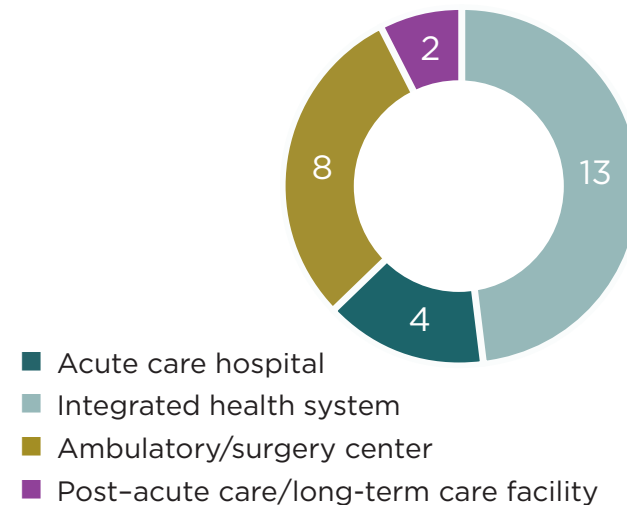
The Workforce Technology survey was administered to 27 executives and other leaders at U.S. hospitals, health systems, and other health care organizations from November 2024 to January 2025. Respondents were asked the following questions:

1. Where does addressing workforce challenges rank among your organizational challenges?
2. To what extent are technology solutions important to how your organization is addressing workforce challenges?
3. How likely is your organization to invest in workforce solutions in the next 1-2 years?
4. What workforce solutions or types of solutions are having a positive impact at your organization in the following categories: (1) recruit, (2) retain, and (3) optimize?
5. What solutions or types of solutions are you planning to buy in the next 1-2 years in the following categories: (1) recruit, (2) retain, and (3) optimize?
6. What solutions that your organization has used or evaluated are most aligned with your specific workforce needs?
7. What is most needed in workforce technology?
8. When it comes to training the existing clinical workforce and helping new clinicians transition into practice, what solutions are you currently considering or using?

Respondent Job Level (n=27)



Respondent Organization Type (n=27)



# About the Center for Connected Medicine and KLAS

## Center for Connected Medicine

The Center for Connected Medicine (CCM) at UPMC is defining the future of the modern health system through programming that informs, connects, and inspires leaders and innovators in health care. Collaborating with a network of experts from across the health care ecosystem, the CCM focuses its research and events on consumer-centered solutions, digital transformation, and scientific and medical innovation.



## KLAS Research

Driven by a mission to improve the world's health care, KLAS is a health care-focused research firm whose data helps provider, payer, and employer organizations make informed software and services decisions. Powered by insights and experiences discovered in the 25,000+ interviews with health care organization leaders and end users that KLAS conducts each year, KLAS' work creates transparency in the health care market and acts as a catalyst for software vendors and services firms to improve their offerings.



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