



2026 HEALTH CARE WORKFORCE SCAN

 American Hospital
Association™
Advancing Health in America

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WELCOME

Every day, individuals and families across America turn to hospitals in their moment of need. They count on nurses to deliver skilled, compassionate care; physicians to make life-saving decisions under pressure; and support staff to keep care moving when every second counts.

The 2026 Health Care Workforce Scan shows how hospitals and health systems are investing in the people who make this possible. Leaders are continuing to build resilient teams, opening new pathways into health care careers and providing a supportive environment for professionals to deliver exceptional care now and in the future.

This year's findings show that having a strong workforce foundation is absolutely necessary, especially as we navigate the changing environment and technological advancements. Leaders are expanding team-based care models and integrating new roles into daily operations, such as virtual care, complex care coordination and roles that heavily utilize artificial intelligence to be more effective. As hospitals partner with their communities to recruit new team members, they are also upskilling current team members by helping deepen existing expertise and gaining new skills in digital fluency and advanced clinical practices. These efforts create the foundation for an adaptable and resilient workforce, utilizing AI to advance large-scale innovations that deliver their full value.

As we look to 2026, the health care workforce continues to show remarkable resilience and dedication — even amid persistent staffing shortages and rising patient acuity. The path forward requires sustained collaboration and innovation to support those who dedicate their careers to caring for others.

We invite you to use this resource as both a source of insight and a practical guide. The strategies here reflect our field's collective experience and can be adapted in communities of every size and location. They underscore the shared responsibility of leaders, policymakers and partners to keep workforce readiness at the forefront.

In many ways, there has never been a better time to transform. The rapid pace of technological change and innovation creates a transformative opportunity — a time to advance care and improve the lives of our teams and communities.



Rick Pollack

President and Chief Executive Officer
American Hospital Association



Tina Freese Decker

Chair of AHA Board of Trustees
President & CEO, Corewell Health



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49%

Average reduction in **turnover**

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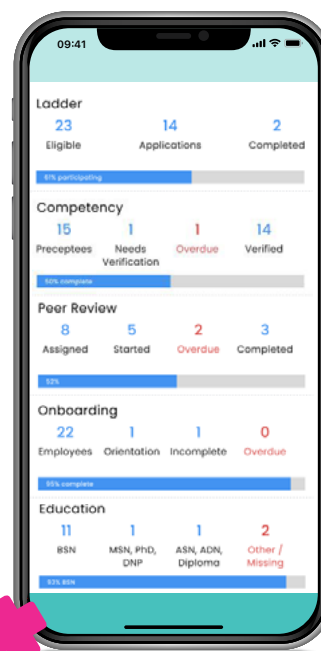
>80%

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OVERVIEW

America's health care system will continue to face significant workforce shifts in 2026, with a collection of common factors impacting the field.

Longstanding workforce shortages, which the pandemic only intensified, will be exacerbated by an aging population, persistent turnover, burnout and other factors. These shortages impact all levels of health care professionals, from nurses and physicians to other team members, including those who clean and care for facilities.

Meanwhile, hospitals and health system leaders are accelerating workforce strategies they began developing before the pandemic. They are rapidly expanding efforts to upskill workers, leveraging technologies to reduce administrative burden and worker stress, and redesigning care models to better allocate staff time to direct patient care.

Team-based care models are seeing renewed investment as hospitals scale up strategies that embed greater teamwork and new team members into daily operations.

While artificial intelligence (AI) often dominates conversations about innovation, many care model advancements are happening without major technological investments. AI use continues to expand, but it works best when paired with redesigned processes.

Recognizing this, organizations are adding new positions in digital health, virtual care, cybersecurity, complex care coordination and capacity management. Hospitals are upskilling existing team members, launching apprenticeship programs and redesigning education pathways to train workers more quickly for roles that require digital fluency alongside clinical expertise. They are also using these pathways to retain employees by helping them advance into higher-skill positions.

Emotional stress is still the most common reason nurses leave their roles. With the cost of replacing even one bedside nurse now exceeding \$61,000,¹ leaders are implementing shared professional governance structures and management practices that build trust and connection, based on the needs of a four-generation workforce. Regardless of staff tenure, organizations with healthy cultures — and who make employee engagement a key strategic priority — are better positioned to retain early-career clinicians and sustain their workforce in the long term.

From new staffing models and education pathways to technology governance and organizational design, hospital leaders are meeting today's workforce demands — and preparing for what's next.



CURRENT LANDSCAPE

As persistent staffing shortages and rising patient demand intensify pressure, health care leaders remain committed to the complex work of improving care delivery, developing their workforce and managing costs. It is important to understand the current workforce landscape when considering workforce initiatives.

- ◆ Health care will generate 24% of all new U.S. jobs this decade² while facing increasing turnover and projections of 64,000 fewer nurses by 2030.³ This situation calls for evolving models of care, roles and training approaches that address current and future staffing needs.



New patient appointment wait times average **26 days nationwide.**

- ◆ With 1.1 million physicians serving 340 million Americans,⁴ access to care remains a challenge. New patient appointment wait times now average 26 days nationwide.⁵
- ◆ These access challenges are particularly significant given changing demographics. One in 6 Americans is now older than 65,⁶ a group with more complex care needs. Additionally, 35% of Medicare beneficiaries require behavioral health services,⁷ creating further demand on an already stretched system.
- ◆ Access is more limited in rural areas, which have widespread shortages of primary care, specialty, dental and behavioral health professionals. As of March 2025, 66.4% of Primary Care Health Professional Shortage Areas were in rural areas.⁸

TAKING ACTION TO REDESIGN STAFFING MODELS AND WORKFLOWS WITH TEAM-BASED APPROACHES

A nationwide shortage of primary care clinicians⁹ continues to limit timely care for many Americans, and more patients are turning to emergency departments as a result¹⁰ — a trend that is expected to grow. The field faces additional workforce gaps in nursing and allied health, especially in anesthesia¹¹ and cardiology,¹² as well as physical¹³ and occupational therapy.¹⁴ A lack of trained behavioral health specialists has further limited the availability of behavioral health services,¹⁵ especially for older adults and children.

Rural hospitals are especially vulnerable to these shortages, and many facilities have been forced to close or reduce services.¹⁶

Expanding access and anticipating changing needs

As health care leaders see rising volumes of high-acuity patients,¹⁷ they are rethinking how clinical teams function, moving away from compartmentalized workflows and toward more collaborative care delivery.

Managers use float pools, internal agencies and support shifts to cover short-term staffing gaps. Mobile scheduling tools quickly match available clinicians to open shifts; predictive analytics tools forecast scheduling needs; and real-time credentialing systems ensure that clinicians can be deployed where they are needed without delay.



Hear from the Experts

Dora Anne Mills, M.D., MPH, FAAP

Chief Health Improvement Officer
MaineHealth

“As we implement strategies across the communities to improve the overall emotional mental health of the population, we know we’re not going to have enough therapists for everybody and we’re using programs like MindUP, Mental Health First Aid and Youth Mental Health First Aid. About 10 people across the system are trained in these programs and are educating staff in schools and community settings. Our population health efforts in behavioral health and direct care services use technology and are often virtual because we’re primarily rural.”



By increasing staff availability and streamlining scheduling, managers reduced their reliance on premium bonuses paid to staff for last-minute coverage. Some systems cut incentive spending by \$1 million in the first year, reduced overtime from 15% to 6% and decreased turnover by 4%.¹⁸

These intermediate steps can help the nation's hospitals and health systems become more flexible and nimble as they continue to focus on redesigning operations.



Augmenting care teams through additional clinical roles

To expand access, many leaders have relied on advanced practice professionals (APPs) to deliver care within their scope — with APPs comprising 41% of providers in U.S. physician practices.¹⁹ An NEJM Catalyst report²⁰ shows that 78% of health leaders surveyed expect to increase the use of APPs in the next two years to support primary care, behavioral health and hospital-based roles.

A recent Kaufman Hall report found that more than 40% of all clinicians nationwide are now APPs²¹ — a sign of the growing reliance on nonphysician roles. In anesthesiology, the number of APPs already has reached parity with anesthesiologists, and graduation trends suggest that the U.S. could have more APPs than physicians within a decade.

At the same time, some organizations are rethinking internal roles, using exercise physiologists as mobility technicians to accelerate discharge timing and throughput to improve mobility and patient experience. They are also reintroducing licensed practical nurses (LPNs) into acute care settings, which is a shift from their traditional use in post-acute care. While LPNs typically don't need additional training, these models often require educating registered nurses (RNs) and physicians about the LPN's scope of practice, which varies by state, to ensure that responsibilities align with licensure.



Embedding behavioral health into routine care

These staffing strategies are part of a broader effort to reconfigure care delivery and expand access, especially in high-need areas like behavioral health.

Some organizations are placing behavioral health specialists in primary care settings to offer immediate support.²² Others are adding video-based psychiatric care to improve timely access to care, particularly for reaching patients in rural or underserved areas.²³

Organizations are also training primary care physicians, nurses and other clinical staff to identify and respond to behavioral health needs. Many are working with peer support specialists, community health workers and schools to extend care. Recent licensure and billing changes under the Centers for Medicare & Medicaid Services' 2025 physician fee schedule final rule now allow clinical psychologists, licensed social workers, marriage and family therapists and mental health counselors to bill for interprofessional consultations, further expanding the pool of professionals who can support integrated behavioral health services.²⁴

Moving care beyond the hospital

Organizations are extending care through hospital-at-home programs in areas where in-person services are hard to reach²⁵ and are combining remote monitoring with in-home visits and aging-in-place models.

At the same time, they are using virtual communication tools to help patients manage chronic conditions. With limited staff, some are adopting chatbots and virtual assistants to handle routine questions, provide preventive guidance and triage basic concerns, freeing up clinicians to focus on more complex needs.²⁶

Hospital leaders are also creating training programs for high-demand roles and partnering with schools and community organizations to create new entry points into health care careers.²⁷



Case in point

Northwestern Medicine's Basic Nursing Assistant Training Program is a 16-week, no-cost course designed to help nonclinical employees transition into patient care technician (PCT) roles. For example, two graduates advanced from roles as a security guard and health unit coordinator to certified PCTs. Both plan to continue their nursing educations. The program includes classroom, lab and clinical training and is approved by the Illinois Department of Public Health. Graduates are eligible to take the Illinois Nurse Aide Competency Certification Exam.²⁸

Case in point

Pittsburgh-based UPMC introduced a team-based care model in its medical-surgical units to address findings that nurses were spending more time on indirect patient care than direct patient care. The model adds nonclinical support through a new patient and family concierge role and encourages a collaborative team culture. Units using the model have reported having more time for direct care, higher patient satisfaction from more frequent rounding and fewer call lights.²⁹

Case in point

Corewell Health partnered with a local technology entrepreneur to pilot Helen, a mobile platform that routes patients' nonclinical requests — such as for food or blankets — directly to trained concierge staff working on-site. In less than two years at Butterworth Hospital, one of Corewell's largest facilities, concierge staff from the technology provider fulfilled nearly 133,000 nonclinical call light requests that otherwise would have pulled nurses away. Corewell has expanded the approach to other hospitals and adapted it for environmental services, patient transport and linen delivery. Since implementation, it has saved clinicians across the health system more than 25,000 hours in nonclinical work and contributed to a 19% reduction in nurse departures.³⁰



Case in point

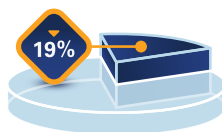
Allegheny Health Network's team-based care model includes nurses, health coaches, behavioral health specialists, pharmacists and dietitians to support primary care physicians, moving away from its one-physician, one-medical assistant model. It rolled out the new model in waves from 2017 to 2024, with practices showing improved depression screening rates, better post-discharge follow-up and higher quality scores compared with those that hadn't yet adopted the model. The initiative achieved measurably better patient outcomes while generating nearly \$1 million in bonus payments that exceeded the program's costs.³¹



Hours Saved



Nurse Departures



Routing patients' nonclinical requests to trained, on-site concierge staff saved a health system's clinicians more than **25,000 hours** and **cut nurse departures by 19%**.

Considerations

- ◆ How do you identify which roles and tasks can be reallocated or shared across team members to improve workflow?
- ◆ Do you leverage data to evaluate staffing model performance, such as overtime, vacancies or patient satisfaction rates?
- ◆ How do you involve staff in developing new care models and training them to work together?



More insights from the field

- ◆ **Mayo Clinic** redesigned its patient care assistant position as an outpatient clinical care associate role, extending team-based coverage in ambulatory settings. The work is similar but does not require the same lengthy certification.³²
- ◆ In *Pediatrics Nationwide*, an online publication produced by **Nationwide Children's Hospital**, David Axelson, M.D., discusses the need for training that prepares psychiatrists for both clinical care and systemic care team leadership. A study by RAND Corporation, the University of Georgia and Harvard University³³ shows that despite a 21% increase in the number of child psychiatrists from 2007 to 2016, the current supply — 9.75 per 100,000 children — falls far short of the recommended 47 per 100,000 (per the American Academy of Child and Adolescent Psychiatry³⁴). Axelson suggests child psychiatrists lead multidisciplinary teams, consult in broader care systems and use telehealth to extend their reach — in addition to expanding the workforce.³⁵

BUILDING THE FOUNDATION FOR AI TO DELIVER VALUE



As leaders rethink workflows and redesign care teams, they are laying the groundwork to obtain more benefits from their AI investments.³⁶ McKinsey's 2025 State of AI report³⁷ cited workflow redesign as the strongest link to improved financial performance out of 25 organizational practices tested, with early adopters seeing improved care quality, better workforce retention and more efficient operations.³⁸

Rather than using AI tools to address isolated situations, specialists recommend using solutions that support care across the full episode³⁹ — such as tools that predict readmission risk, identify gaps in chronic disease management or help coordinate post-discharge care. These tools rely on strong data infrastructure, including Fast Healthcare Interoperability Resources-based systems to connect external applications with electronic health records (EHRs);⁴⁰ enterprise data warehouses⁴¹ that aggregate clinical, operational and financial data for longitudinal analysis; and digital command centers⁴² that provide real-time visibility into staffing, patient flow and resource use.

When these tools are connected, leaders can see where delays are building and take action before they affect care.⁴³



Hear from the Experts

Gratia L. Pitcher, M.D., MBA

Chief Medical Officer, Patient Experience Dyad Leader
Essentia Health

“To enhance the patient experience at Essentia Health, we are introducing ambient listening so our providers can be more engaged and more responsive during patient visits while also reducing time spent on documentation. We have an AI steering committee and a digital health steering committee to help us evaluate opportunities for process improvement that will benefit our colleagues and the patients we serve.”



Navigating AI governance

The field is calling for responsible adoption of AI tools.⁴⁴ ECRI listed insufficient AI governance as its second top safety concern for the coming year⁴⁵ and recommended that leaders reduce this risk by forming multidisciplinary committees to create AI policies, training staff around ethical use and monitoring safety outcomes. It also advises organizations to disclose AI use to patients, obtain their consent for using generative AI applications in their care and assess how AI affects clinical workflows. The American Society for Health Care Risk Management, a professional membership group of the AHA, recommends incorporating AI risk into organizational enterprise risk management plans.



Case in point

Houston Methodist Hospital used the AI platform Apella to capture and analyze operating room events in real time, improving resource productivity and team coordination. The health system increased operating room capacity by 15% without adding staff or compromising the quality of care. Connected to ceiling-mounted cameras, Apella uses ambient sensor technology and deep learning to provide a 360-degree view of the operating rooms and create a real-time data feed that teams can use to adjust schedules on the fly, improve turnover and cleaning coordination, and segment surgeries into clearer phases for benchmarking and improvement. During the initial pilot, monthly case volume increased by 10% — about 33 more cases per month — site-wide. The hospital is now rolling out the technology to all 14 surgical facilities.⁴⁶

Case in point

Leaders at **Emory Healthcare** launched an AI-powered ambient listening system that uses speech recognition and natural language processing to capture patient-clinician conversations. The technology, first tested at Emory University Hospital Midtown, records interactions through mobile and light detection and ranging devices, converts the dialogue into clinical note drafts and integrates them into Emory's Epic EHR. The program grew from 16 providers in seven specialties to more than 1,900 within months. The high adoption and retention rates were associated with significant productivity improvements. For instance, clinicians closed 7% more appointments on the same day and held 0.33 additional appointments per day. Emory reported post-implementation improvements of 32% in usability, 13% in patient experience and 40% in provider wellness. Of those who tried the product, 78% adopted it and of those activated, 82% remained.^{47,48}

Case in point

Mount Sinai Health System boosted productivity and moved away from a highly manual cash reconciliation process after automating its revenue cycle and consolidating clearinghouses.⁴⁹

The organization uses software that automatically processes insurance claims, matches payments and reconciles accounts — repetitive tasks that billing staff previously handled manually.

This technology reduced the time insurers needed to review and pay claims from 36 to 22 days, improving cash flow and shortening billing timelines for patients. By streamlining these steps, the system tripled the number of back-office tasks completed without staff involvement and reassigned three employees to higher-value work.



By automating its revenue cycle, a health system completed **3x more** back-office tasks without staff involvement — allowing it to **move three employees to higher-value work**.



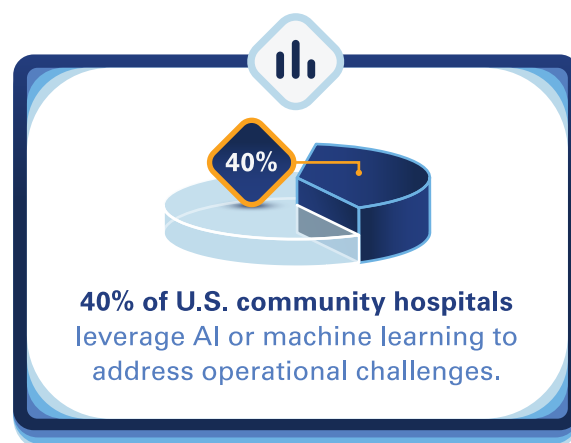
Considerations

- ◆ How will your organization develop appropriate governance models to oversee AI and other technology implementation? How will you ensure that front-line users are represented in decisions about technology integration?
- ◆ How will you address the different documentation needs between clinical roles?
- ◆ What processes will you establish to communicate with patients about AI use in their care?



More insights from the field

- ◆ The AHA webinar “[Ethical AI Deployment in Hospital Systems](#)” explores how hospital systems can responsibly use AI solutions to maximize patient safety and care quality, and features insights from [Penn Medicine](#) on AI implementation strategies and Medical Informatics’ approach to aggregating patient monitoring data for actionable clinical intelligence.
- ◆ 40% of responding U.S. community hospitals report leveraging AI or machine learning to address key operational challenges, including predicting staffing needs, forecasting patient demand, scheduling staff, automating routine tasks and optimizing administrative and clinical workflows.⁵⁰
- ◆ [The AONL Foundation Leadership Symposium on Exploring Artificial Intelligence](#) highlights immediate opportunities to reduce nurses’ clerical workload through such tools as virtual assistants and automation of routine tasks. Panelists warned, however, against embedding outdated processes into these tools. Nurse leaders discussed the need to prioritize education and data literacy to ensure that nurses can co-design, evaluate and safely use AI in practice.⁵¹



IMPROVING ENGAGEMENT AND WELL-BEING



Emotional stress increases nurse **turnover risk by 68%**.



\$61,110



The average cost to replace one bedside nurse is **\$61,110**.



Nearly **50% of nurse leaders** cite recruitment and retention as their top concern.

As the job's physical and emotional demands, rising patient acuity, staffing shortages, workplace violence and administrative burden take a toll on health care workers' well-being, leaders are making staff engagement — which is closely linked to patient engagement — a strategic priority.

The impact of these stressors is most pronounced among newer staff members, particularly nurses, who are more likely to experience burnout and leave their roles within the first year of employment. First-year RN turnover was at 22.3% and at 29.9% for all first-year hospital employees — significantly higher than the national average RN turnover rate of 16.4%,⁵² according to NSI's 2025 National Health Care Retention & RN Staffing Report. Research found that emotional stress ranks as the top driver of nurse resignations, regardless of tenure, with high physical demands and insufficient staffing increasing turnover risk by 68%.^{53,54}

Beyond the human cost, turnover represents a significant financial burden for hospitals and health systems. In 2025, the average cost to replace a single bedside nurse is \$61,110, with a range of \$49,500 to \$72,700.^{55,56} In total, hospitals incur costs of between \$3.9 million and \$5.7 million annually due to nurse turnover.^{57,58}

In the 2025 AONL Nursing Leadership Insight Study,⁵⁹ nearly half of nurse leaders cited recruitment and retention as their top concern, while 34% pointed to emotional well-being as a key issue. The report also found that giving staff the ability to take a day off when needed, offering flexible scheduling and providing professional development opportunities were among the most helpful ways to boost morale.

Hospital leaders are responding by redesigning staffing models, identifying early signs of burnout and strengthening staff support. For example, recent data shows that hospitals are performing at or above



Hear from the Experts

Teresa Mallett, MHA

CEO

Madison (S.D.) Regional Health System

“Implementing technology that can relieve the work of employees will hopefully increase staff satisfaction, retention and recruitment efforts all while keeping the patient front and center.”

Jenna Lloyd Fisher, DNP, MSMT, APRN, NEA-BC, FACHE

Vice President, Clinical Excellence

StaffGarden by Ascend Learning

“Digital transformation for development programs is no longer optional. Centralized insights and automation are critical levers for driving engagement, retention and consistent care quality amidst matrixed teams, complex patients, and the onboarding of new nurses directly into specialty units.”

pre-pandemic levels on multiple safety measures, and workforce engagement and resilience are rebounding from pandemic lows.⁶⁰

Health care professionals, who dedicate their lives to healing others, are among the most at risk for workplace violence, another significant emotional and physical stressor. Nearly 75% of about 25,000 workplace assaults reported annually happen in health care settings.⁶¹ The total financial cost of violence to hospitals in 2023 was estimated to be \$18.27 billion.⁶² Hospitals’ protocols to detect, deter and respond to violence against their team members include a variety of approaches that range from incident reporting systems and tracking to staff duress alarms, increased training on topics such as de-escalation, and more effective policies and procedures. Anchored in a framework to address mitigating risk, building a culture of safety, violence intervention and trauma support, hospitals and health systems are using data analytics, education and training to support the workforce. Visit [AHA’s Hospitals Against Violence webpage](#) for helpful resources.

Addressing burnout and turnover

Caregivers are more likely to remain in their roles when they feel supported by their colleagues, respected at work and connected to a shared sense of purpose.⁶³ In other words, they will stay if they feel they belong.

Researchers define belonging as the sense of being a welcomed member and part of a team — a condition necessary for engagement.⁶⁴ When organizations prioritize belonging as a workforce strategy, they create conditions for staff to thrive, stay and lead.⁶⁵ The 2025 Health Care Workforce Retention Study by Lotis Blue⁶⁶ found that meaningful work and strong peer relationships are top reasons clinical staff stay, ranking above pay for many front-line workers.



For this reason, hospital and health system leaders are expanding peer recognition programs and telling patient-impact stories. They are implementing informal touchpoints — check-ins with new hires, stay interviews that explore why employees remain and what might prompt them to leave, and social events that build community. Some organizations host coffee hours where new graduates share feedback, while others organize team-building events. They are also training managers to hold regular one-on-one conversations and conduct intentional staff rounding — practices that can help staff feel heard.

Mentorship programs are also popular as they provide relationship-building opportunities across generations and help caregivers develop confidence in complex care environments. Some organizations offer educator programs where more experienced nurses mentor new clinicians, helping them to build peer connections while developing professionally. El Camino Health has boosted nurse retention among younger generations by offering career advancement opportunities such as its one-year nurse residency program.⁶⁷



Building structures that strengthen engagement

To last, engagement strategies need organizational buy-in. That's why a report from the AHA, in partnership with Press Ganey, recommends⁶⁸ that leaders set distinct, measurable engagement goals; clearly define each participant's role in those plans; create environments in which staff want to participate; invest in developing leadership skills at all levels; and maintain open communication channels, among other strategies.⁶⁹

What does this look like in practice? One example is shared professional governance structures that give employees meaningful platforms in which to voice their perspectives and influence decisions that affect their work. Nursing organizations and academic institutions report that clinicians who participate in shared governance are less likely to experience burnout and more likely to stay with their employers.^{70,71} Such opportunities may also make the nursing profession more attractive to potential hires.^{72,73}

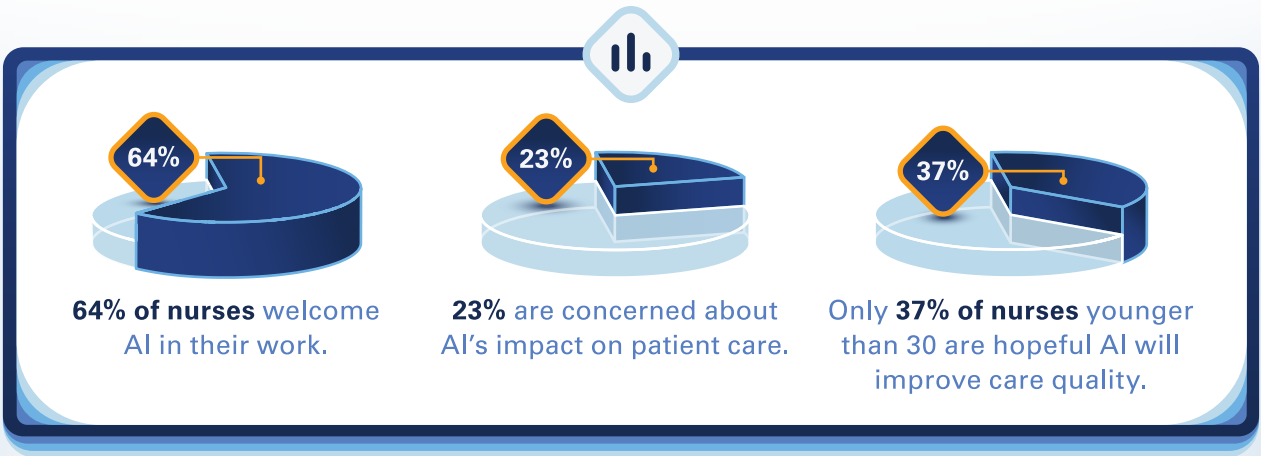
Supporting employees also means reducing stigma about behavioral health, starting with how clinicians are privileged and credentialed. The rate of suicide among physicians is twice that of the general population,^{74,75} yet health care professionals may avoid seeking behavioral health care, fearing license or privilege loss if they disclose issues on applications. The Dr. Lorna Breen Heroes' Foundation's Remove Barriers initiative calls for eliminating intrusive and stigmatizing behavioral health questions from these applications. As of May 2025, 635 hospitals and care facilities have verified their credentialing applications⁷⁶ to exclude intrusive behavioral health questions, making it easier for the workforce to seek care when they need it.

Selectively using technology to reduce burden

Beyond culture and engagement, hospital leaders are addressing the operational challenges that strain clinical teams, such as documentation burden and inefficient workflows.⁷⁷

Many organizations are using automation to handle routine tasks, such as pre-populating patient forms and automatically scheduling follow-ups after discharge, so clinicians can spend less time on administrative work and more time with patients. While some digital tools have added to clinicians' loads, recent studies^{78,79} suggest a more encouraging picture, showing that thoughtfully implemented automation can help clinical teams reduce repetitive tasks. For example, many health systems now use generative AI tools to draft progress notes, summarize visit transcripts and update medication lists — tasks that otherwise would take significant time. Looking ahead, experts expect that AI will move beyond individual tasks to automate entire care episodes.⁸⁰

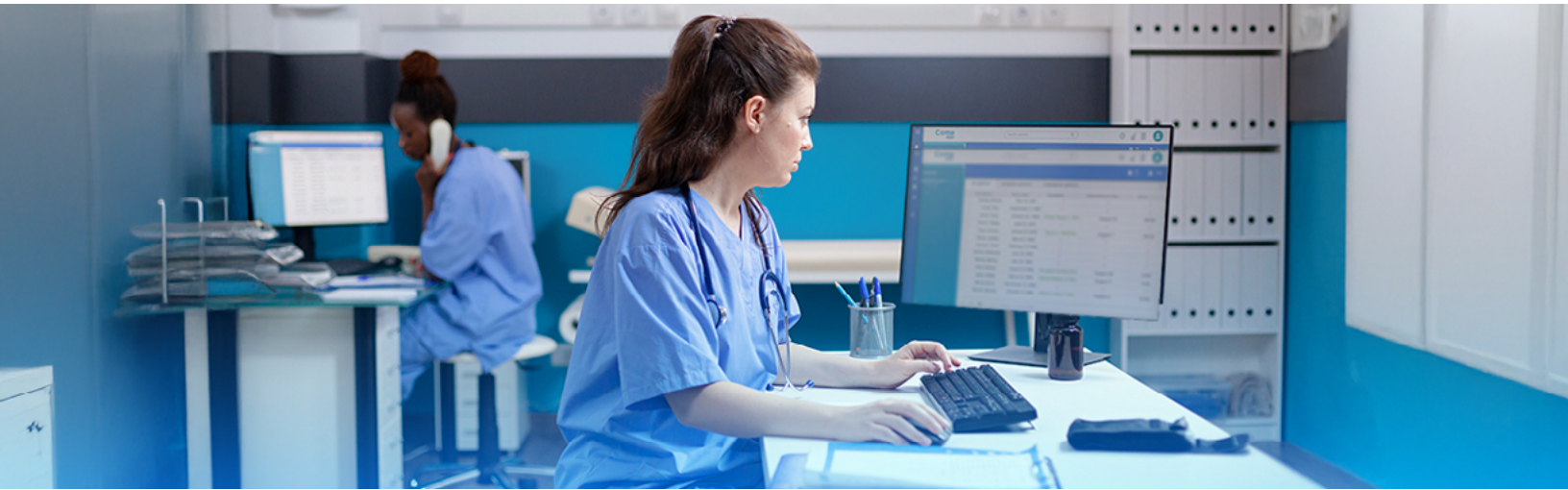
However, not every tool fits every environment, and leaders must carefully evaluate each investment to ensure that it supports rather than undermines staff well-being.



Addressing staff concerns over role disruption

As new technologies are introduced, many staff remain uncertain about how their roles may change. While data show that nurses are unlikely to be replaced by AI,⁸¹ some worry that it may displace them or complicate care delivery.⁸² A McKinsey & Company American Nurses Foundation survey found⁸³ that 64% of nurses welcome AI in their work, but 23% are concerned about its impact on patient care. Among nurses younger than 30, only 37% said they are hopeful that AI will improve care quality.

Health care leaders can help address these concerns by involving front-line staff in implementation and clearly demonstrating how new tools support — not replace — clinical judgment and patient relationships.



Case in point

Ambient scribes can support physician documentation, although they're less useful for nurses who typically chart after care rather than speaking their notes out loud during patient interactions. To address this, [Cedars-Sinai](#) helped develop and pilot the Aiva Nurse Assistant, an AI-powered voice documentation tool, in a 48-bed medical-surgical unit to reduce nurses' administrative workload.⁸⁴ Early metrics show improved documentation timeliness.⁸⁵

Case in point

In the AHA podcast "[The Well-being Impact of Northwestern Medicine's Scholars of Wellness Program](#)," representatives from [Northwestern Medicine's Scholars of Wellness program](#) discuss how they train clinicians in well-being science, change leadership and process improvement, who then apply those skills to real-world projects in their departments. The program recently expanded beyond physicians to include APPs, creating stronger teamwork and an increase in mutual understanding between the two groups. Northwestern's peer support program also trains providers to offer emotional support after adverse events. Other projects focused on small workflow improvements, including QR code feedback tools, that improved daily work experiences.⁸⁶

Case in point

ChristianaCare's Care for the Caregiver peer support program that began in 2015 focuses on supporting physicians after adverse events and has since expanded to serve all 14,000 clinical and nonclinical staff across the organization. The program uses a tiered model of psychological first aid and confidential peer support to address a wide range of stressors and has trained more than 200 peer supporters. Utilization has grown steadily with supervisors, colleagues and self-referrals driving engagement, and internal data show peer support is linked to stronger culture-of-safety scores. A key story involved a surgeon who paused mid-procedure due to distress, accessed peer support and later performed the same surgery successfully.⁸⁷

Case in point

Main Line Health is promoting psychological well-being by addressing employee concerns about safety, emotional health and work-life balance. In response to staff feedback gathered through surveys and meetings, the organization installed weapons detection systems, issued duress-signal badges and expanded access to family care resources. Leaders are shifting to a more people-centered approach and are encouraged to model healthy boundaries. While not all roles allow remote work, Main Line Health is exploring hybrid arrangements and flexible schedules to better support staff needs. These efforts already have led to measurable improvements in perceived safety, emotional well-being and paid-time-off usage.⁸⁸



Considerations

- ◆ Do you meaningfully involve front-line clinicians in evaluating and implementing new tools?
- ◆ Will this technology reduce duplicative or nonvalue-added tasks or simply shift the burden elsewhere?
- ◆ Do staff have the time, training and psychological safety needed to adopt these innovations?



More insights from the field

- ◆ In the AHA podcast [“Leading With Empathy: Workforce Well-being at Ochsner Health,”](#) Nigel Girgrah, M.D., chief wellness officer at [Ochsner Health](#), shares insights on his journey in workplace wellness initiatives, creating compelling arguments for executive support and why leaders must embrace openness about behavioral health challenges.⁸⁹
- ◆ In this [podcast](#), health care leaders from [Wellstar Health System](#) and [Virginia Commonwealth University](#) discuss the evolving role of chaplains in health care well-being.
- ◆ Research shows that organizations with shared governance report higher nurse retention and lower turnover rates. One study found that a systemwide shared governance council significantly reduced new nurse turnover — from 32.1% to 27.3%, saving the organization approximately \$2 million in recruitment, hiring and training costs.⁹⁰
- ◆ A formal, evidence-based one-year mentorship program was designed to support new graduate pediatric nurse practitioners (NPs) during their transition from bedside nurses to NPs at a large pediatric health system. Thirty mentees participated, with data collected at four intervals using such validated tools as the Novice Nurse Practitioner Role Transition Scale and an adapted SCORE survey. Common mentoring topics included work-life balance, clinical practice, goals and professional skill development, although time and scheduling were cited as barriers. The program demonstrated that structured mentor support helped ease the role transition for early-career NPs.⁹¹
- ◆ Researchers surveyed 74 nurses from [Providence](#) in Renton, Wash., and found that virtual sitting improved their emotional state compared with in-person sitting. The survey showed that virtual sitting enhanced nurses’ well-being while maintaining patient safety.⁹²

REDEFINING WORKFORCE NEEDS



Nearly 50% of surveyed health care leaders recently added digital health and virtual care roles. **More than 1/3** created roles in cybersecurity, AI or managing complex care.

Technology, staffing shortages and new care models are reshaping the types of roles for which leaders are hiring and the skills those roles require. As organizations adopt AI and automation tools, they are looking for digitally fluent professionals⁹³ with expertise in such areas as cybersecurity, virtual care and complex care coordination.⁹⁴

In a recent survey of health care leaders,⁹⁵ nearly half said they had recently added roles in digital health and virtual care, while more than a third had created positions focused on cybersecurity, AI or managing complex care. Most U.S.-based respondents pointed to advances in technology and persistent workforce shortages as the driving forces behind this shift.

To keep pace, many organizations are upskilling existing staff, partnering with colleges and training programs, and weighing whether to recruit from technical or clinical backgrounds.



Hear from the Experts

Tony Torres, M.D., FACP

President and CEO

Dignity Health Yavapai Regional
Medical Center

“We are kicking off a new program training non-clinical persons as community health workers. These individuals will be attending Arizona State University and undergo a training program with eventual certification through a program supported by a federal grant. Upon completion, we will be able to send these individuals into our communities to visit those suffering from lack of access to health care due to the effect of health-related social needs.”



Rethinking education and career pathways

These shifts are also changing the nursing landscape. In the Wolters Kluwer Future of Nursing report,⁹⁶ respondents identified nurse informaticists, telehealth nurses and care coordinators as in-demand roles when implementing new care models, highlighting the growing need for digital fluency and care integration within nursing teams.

New C-suite positions in digital and data leadership are emerging, while new provider types, such as digital health coaches and community health workers, are prompting a broader reconsideration of credentialing and workforce development.^{97,98,99} To adapt, health care leaders are revisiting accreditation standards and educational models to ensure that they can train, deploy and upskill staff more quickly. Some are launching apprenticeship programs in pharmacy, sterile processing and ophthalmology, while others are hiring for associate-level roles that offer faster on-ramps without lengthy certification processes.¹⁰⁰

At the same time, many organizations are redesigning education and onboarding to make training more flexible and scalable. Others are building refresher and re-entry programs to bring experienced clinicians back into the workforce and create clearer progression through career stages.



Case in point

Cleveland Clinic is using apprenticeships to build a more reliable, inclusive pipeline for middle-skill health care roles. Since launching its program in 2021, the organization has exceeded hiring goals and raised apprentice retention from 75% to 95% by tailoring each apprenticeship to the needs of individual departments. The program is supported by dedicated managers, mentors and external partners, with plans to add career navigators to help apprentices surmount personal and logistical barriers to success. Leaders credit the apprenticeships with improving recruitment, reducing turnover, and building a stronger, more engaged workforce.¹⁰¹



Case in point

Mass General Brigham is using digital technologies to deliver acute care and will increasingly rely on AI and data analytics to identify eligible patients and manage care more proactively. As the program scales, new roles are emerging in care orchestration, remote monitoring and virtual clinical collaboration, which requires new skill sets across both clinical and administrative teams.¹⁰²

Case in point

Mary Washington Healthcare (MWHC) made financial contributions to Germanna Community College's Stafford County Center, a 74,000-square-foot facility built to address workforce gaps in cybersecurity and information technology. MWHC helped fund building renovations and equipment for classrooms, labs and the Dr. Patti Lisk Virtual Hospital, enabling students to train in realistic, high-tech environments. These investments directly support the preparation of job-ready graduates for in-demand roles in the region. MWHC also supports an Earn While You Learn program that helps nursing students gain paid, hands-on experience while completing their educations, easing their transition into the workforce. Additionally, MWHC's support for the Community Doula Program adds capacity in maternal care by training nonclinical support workers to serve expecting families.¹⁰³

Case in point

UVA Health is training emergency medical services (EMS) professionals, nursing students and community health workers across rural Virginia to deliver faster stroke care. Nursing students receive similar training, including how to coordinate with EMS in emergencies, while community health workers learn to use telehealth and stroke education to support patients in their communities and connect them to timely care. UVA's Department of Neurology works with EMS agencies to equip ambulances with secure videoconferencing equipment and high-speed connectivity so specialists can evaluate patients en route to the hospital, speeding diagnosis and treatment. Leaders credit the program with improving patient outcomes, building digital skills and strengthening the pipeline of technology-ready health professionals in underserved regions.¹⁰⁴



Considerations

- ◆ How will training programs need to change as AI automates aspects of some roles?
- ◆ What partnerships should health care leaders build and what investments should they make to sustain long-term workforce readiness?



More insights from the field

- ◆ By integrating data and informatics tools into daily operations, nursing informaticists help streamline processes and ensure that clinicians can focus on patient care. Their expertise also supports the adoption of AI and predictive analytics, creating systems that are both evidence-based and scalable.¹⁰⁵
- ◆ The nonprofit **Health Workforce New York** has launched the Institute for Career Advancement in Medicine, a digital platform that connects health care training, employment and incentive programs across the northern part of the state. Developed in partnership with local colleges and community organizations, the platform helps users explore career pathways, apply for internships and access real-time job information.¹⁰⁶

SUPPORTING A MULTIGENERATIONAL WORKFORCE



With four generations in the workforce, health care leaders are rethinking how they support and train their teams. Generation Z shows the highest turnover rate among hospital and health system employees at 38%,¹⁰⁷ with younger employees saying they are likely to leave because of inflexible schedules and limited opportunities to grow.¹⁰⁸

Organizations are making changes to retain these workers. Many now offer self-scheduling, allowing staff to choose their own shifts to improve retention among younger professionals. They are training preceptors to recognize generational differences in learning styles and are investing early in leadership development by offering mentorship opportunities, coaching and clear advancement pathways for early-career staff.

Leaders are also partnering with schools to update training around AI and other digital tools, aligning with the expectations of younger staff. And more than 80% of hospitals now include community college or vocational partnerships in their strategic plans.¹⁰⁹

Tailoring development and recognition across generations

Leaders recognize that workplace culture and benefits matter significantly to younger staff, with some saying they would turn down a job that lacked work-life balance.¹¹⁰



Hear from the Experts

Claire M. Zangerle, DNP, R.N.

CEO

American Organization for
Nursing Leadership

Senior Vice President and Chief Nurse Executive

American Hospital Association

“There is great strength in having four generations in the workforce, and leaders have a valuable opportunity to leverage that strength. The most important strategy is to move from an across-the-board approach to a flexible method of support and training. Demonstrating inclusivity of all generations requires that a leader be accessible and approachable. Each generation has a distinct communication style, technological maturity and motivation. Recognizing those distinctions will lead to better retention and attraction of the multi-generational workforce. Consider cross-generational mentorships, offering different styles of learning formats and providing flexible work options.”

Some organizations are helping younger staff feel more invested in their work by supporting them early on. For example, nurse leaders are offering mentorship programs and early career exposure in fields where many nurses seek advancement,^{111,112} such as oncology, pediatrics and critical care.

Support programs are especially important for millennial nurses, who reported the highest levels of burnout and the lowest sense of meaning in their work during the pandemic.¹¹³

Recognition preferences also vary by generation. Research shows that baby boomers value formal recognition, such as titles and awards, while younger nurses prefer regular check-ins and clear feedback about how to grow.¹¹⁴



Baby boomers value formal recognition, such as titles and awards.
Younger nurses prefer regular check-ins and clear feedback about how to grow.

Case in point

Clinical staff are often expected to serve as preceptors, but many have never received formal training. For more than 20 years, the **Kansas and Missouri Hospital Associations' Preceptor Academy** has helped hospitals improve retention by training front-line staff to better support new hires and students during the first year on the job. Nurses, pharmacists, respiratory therapists, certified nursing assistants and others learn how to mentor, communicate across generations and create a welcoming culture for new staff. With new funding from a Health Resources and Services Administration grant, the academy is reaching more critical access hospitals across Kansas that historically have lacked access to this kind of guidance.





Case in point

Christ Hospital, Methodist Le Bonheur Healthcare and **Atrium Health** are tailoring efforts to better recruit and retain staff across age groups.

- **Christ Hospital** uses employee feedback tools, such as MaxDiff analysis, and an internal advisory group to customize benefits, culture and career pathways for its multigenerational workforce. Employees broaden their experience and discover new career paths within the organization through job shadowing and hands-on projects in such areas as clinical care, operations, human resources and quality improvement.
- **Methodist Le Bonheur** offers benefits tailored to different stages of life, such as backup care for children and aging family members, tuition support through its Associate Advancement Program and traditional retirement plans. It also offers tuition support through a partnership with the University of Memphis and STEM outreach to build future talent pipelines.
- Based on staff feedback, **Atrium Health** revamped its onboarding, created new enterprise-wide “culture commitments” and developed generation-specific engagement efforts. For example, it offers part-time roles for baby boomers and uses TikTok videos to reach Gen Z candidates.

Across all three systems, leaders found that flexible scheduling, personalized career support and inclusive culture helped navigate generational differences.¹¹⁵

Case in point

To improve employee well-being, hospitals are providing staff with flexible scheduling, such as **Mayo Clinic’s** My Time program, which lets staff choose shifts that fit their lives. Massachusetts General offers “recharge days” to prevent burnout and support mental health. Hospitals such as Johns Hopkins also offer remote work options for nonclinical staff to improve work-life balance and reduce stress.¹¹⁶

Case in point

Parkview Health partnered with **StaffGarden** by Ascend Learning to transform its traditional clinical ladder program into a scalable, digital-first model aligned with strategic goals across 13 hospitals. The previous paper-based process was tedious and disengaging, with only 75 participants. Parkview needed a radical redesign to reignite nurse engagement and align development with system priorities.

Launched in 2022, the new platform enables nurses to self-assess against seven core competencies, track certifications and select meaningful activities from a flexible, weighted activities menu aligned with Magnet® domains and organizational objectives. Leaders gain real-time visibility into participation, progress and outcomes — allowing for immediate course correction and data-driven decision-making.

Participation surged to nearly 2,000 annually and retention rose from 87% to 91.3%.¹¹⁷ Notably, 90% of nurse departures came from those not engaged in the program. Strategic weighting of ladder activities helped drive measurable improvements in quality indicators — most notably, a significant reduction in pressure injuries. Nurses championed unit-based initiatives and participated in targeted surveys, improving patient outcomes.

Beyond metrics, the program sparked a cultural shift. Amanda Weaver, MSN, BA, RN, NPD-BC, NE-BC, senior specialist, nursing professional development at Parkview Health, shared:

“Our nurses are feeling inspired. They’re driven, they’re celebrating each other, their confidence is growing and, really, that’s the best outcome that any organization could ask for.”

Parkview’s ladder program is now expanding beyond nursing to surgical technology and perioperative roles. With StaffGarden, they’ve built a sustainable, evidence-based model that aligns workforce development with strategic goals and delivers measurable impact.



Considerations

- ◆ Are leaders equipped to manage and unify multigenerational teams?
- ◆ Are benefits, schedules and advancement aligned with varied life stages?
- ◆ Do employees have meaningful ways to shape culture and workplace design?



More insights from the field

- ◆ A study published in *The Online Journal of Issues in Nursing* found that millennial nurses are at the highest risk for burnout and turnover. Compared against Gen X and baby boomers, millennials reported lower resilience, less joy in work and higher fatigue. The study analyzed survey data from hospital nurses in 2017 and 2021, showing that while boomers remained the most stable group, millennial nurses' well-being declined sharply during the pandemic. These findings suggest that targeted strategies, such as promoting meaningful work, improving recovery time and building resilience, may help retain younger nurses and stabilize the workforce.¹¹⁸
- ◆ Becker's recognizes 64 hospitals and health systems with outstanding simulation and education programs. These programs provide a secure environment where providers can develop expertise through hands-on practice. For example, [Texas Children's Hospital](#) has used simulation tools to pilot virtual nursing — testing staff readiness and feasibility before implementing it. And [Carilion Clinic](#) uses its human factors engineers and accredited simulation center to create realistic training and technology testing that streamlines workflows, strengthens clinical skills and supports staff well-being.¹¹⁹

WORKFORCE RESOURCES

The AHA's hub for workforce-related resources can be found at aha.org/workforce. It includes relevant news, reports and white papers, links to upcoming conferences and webinars, and archives of past events, case studies and a variety of resources for workforce development.

The AHA has multiple divisions that address workforce issues:

AHA Physician Alliance

aha.org/aha-physician-alliance

American Organization for Nursing Leadership

aonl.org

American Society for Health Care Risk Management

ashrm.org

AHA Care Delivery Transformation Framework

aha.org/cdt

AHA Team Training

aha.org/center/performance-improvement/team-training

Hospitals Against Violence Initiative

aha.org/hav

Society for Health Care Strategy & Market Development

shsmd.org

SOURCES

- 1 "2025 National Health Care Retention & RN Staffing Report," NSI Nursing Solutions, Inc.
https://www.nsinursingsolutions.com/documents/library/nsi_national_health_care_retention_report.pdf
- 2 "Employment Projections 2023-2033," U.S. Bureau of Labor Statistics.
<https://www.bls.gov/news.release/ecopro.nr0.htm>
- 3 "2023 National Healthcare Retention & RN Staffing Report," NSI Nursing Solutions.
https://www.nsinursingsolutions.com/Documents/Library/NSI_National_Health_Care_Retention_Report.pdf
- 4 "Physician Workforce Data," Association of American Medical Colleges (AAMC).
<https://www.aamc.org/data-reports/workforce/report/physician-workforce-data>
- 5 "Survey of Physician Appointment Wait Times," Merritt Hawkins.
<https://www.merrithawkins.com/news-and-insights/thought-leadership/survey/survey-of-physician-appointment-wait-times>
- 6 "Demographic Trends in Aging Population," U.S. Census Bureau.
<https://www.census.gov/topics/population/aging.html>
- 7 "Behavioral Health Trends Among Medicare Beneficiaries," Centers for Medicare & Medicaid Services (CMS).
<https://data.cms.gov/resources/trends-in-behavioral-health-diagnoses-among-medicare-beneficiaries>
- 8 "Second Quarter of Fiscal Year 2025 Designated HPSA Quarterly Summary," Bureau of Health Workforce, Health Resources and Services Administration (HRSA), U.S. Department of Health & Human Services.
<https://data.hrsa.gov/Default/GenerateHPSAQuarterlyReport>
- 9 "State of the Primary Care Workforce, 2024," Health Resources and Services Administration.
<https://bhw.hrsa.gov/sites/default/files/bureau-health-workforce/state-of-the-primary-care-workforce-report-2024.pdf>
- 10 McCann, Nicole C. and Wolensky, Rochelle. "The first step to addressing the physician shortage," STAT News.
<https://www.statnews.com/2025/01/15/physician-shortage-gme-residency-specialties-setting-limitations>
- 11 "The Anesthesia Provider Shortage," Medicus Healthcare Solutions.
<https://medicushcs.com/resources/the-anesthesia-provider-shortage>
- 12 "Workforce in Crisis: Charting the Path Forward," American College of Cardiology.
<https://www.acc.org/Latest-in-Cardiology/Articles/2023/06/01/01/42/Cover-Story-Workforce-in-Crisis-Charting-the-Path-Forward>
- 13 "Physical Therapy Workforce Data," American Physical Therapy Association.
<https://www.apta.org/your-career/careers-in-physical-therapy/workforce-data>
- 14 Lin, Vernon et al. "Occupational Therapy Workforce in the United States: Forecasting Nationwide Shortages," PM&R 7, no. 9 (September 2015).
<https://www.sciencedirect.com/science/article/abs/pii/S1934148215000866>
- 15 "State of the Primary Care Workforce, 2024," Health Resources and Services Administration.
<https://bhw.hrsa.gov/sites/default/files/bureau-health-workforce/state-of-the-primary-care-workforce-report-2024.pdf>
- 16 "Rural Report: Challenges Facing Rural Communities and the Roadmap to Ensure Local Access to High-quality, Affordable Care," American Hospital Association.
<https://www.aha.org/system/files/2019-02/rural-report-2019.pdf>
- 17 "New Analysis Shows Hospitals Improving Performance on Key Patient Safety Measures Surpassing Pre-pandemic Levels," American Hospital Association.
<https://www.aha.org/guidesreports/2024-09-12-new-analysis-shows-hospitals-performance-key-patient-safety-measures-surpassing-pre-pandemic-levels>
- 18 "Achieving a More Flexible Workforce in Healthcare," Becker's Hospital Review.
<https://www.beckershospitalreview.com/hr/achieving-a-more-flexible-workforce-in-healthcare>
- 19 "APPs make up 41% of the provider workforce. Here's why it matters," Advisory Board.
<https://www.advisory.com/daily-briefing/2025/05/19/app-workforce>
- 20 Hancock, Kelly. "Technology Drives Emerging Roles in Health Care Workforces," NEJM Catalyst Innovations in Care Delivery 6, no. 6.
<https://catalyst.nejm.org/doi/full/10.1056/CAT.25.0165>

- 21 Proulx, Bonnie. "Advanced practice providers can help physicians reach their peak potential," Kaufman Hall.
<https://www.kaufmanhall.com/insights/article/advanced-practice-providers-can-help-physicians-reach-their-peak-potential>
- 22 "Integrating Physical and Behavioral Health: The Time is Now," American Hospital Association.
<https://www.aha.org/system/files/media/file/2023/09/AHA-BH-Integration-TimeisNow-whitepaper-september-2023.pdf>
- 23 "Rural Behavioral Health," American Hospital Association.
<https://www.aha.org/rural-behavioral-health>
- 24 "Medicare Physician Fee Schedule Final Rule Summary: CY 2025," Centers for Medicare & Medicaid Services.
<https://www.cms.gov/files/document/mm13887-medicare-physician-fee-schedule-final-rule-summary-cy-2025.pdf>
- 25 "Idaho's First Hospital-at-Home Program Showing Promising Results," American Hospital Association.
<https://www.aha.org/role-hospitals-st-lukes-regional-medical-center-idahos-first-hospital-home-program-showing-promising-results>
- 26 "How Digital and AI Solutions Will Reshape Health Care in 2025," Boston Consulting Group.
<https://web-assets.bcg.com/8c/f8/ae51ffb44ca59cb8abd751940441/bcg-how-digital-and-ai-solutions-will-reshape-health-care-in-2025.pdf>
- 27 "Partnering for the Future: Academic-practice Partnerships," American Hospital Association.
<https://www.aha.org/workforce-strategies/preparing-for-the-future-academic-practice-partnerships>
- 28 "Northwestern Memorial Hospital employees get free nursing training," American Hospital Association.
<https://www.aha.org/role-hospitals-northwestern-memorial-hospital-employees-get-free-nursing-training>
- 29 "Team-based Care Model at UPMC," UPMC.
<https://www.upmc.com/about/why-upmc/quality/innovation/team-based-care-model>
- 30 "7 Minutes to Innovation: First-Mover Strategies for Incorporating Medical and Technological Breakthroughs Into Care Delivery," Corewell Health. PDF slides available upon request.
- 31 Daugherty, Heather et al. "Primary Care Transformation: A Team-Based Care Model," AJMC.
<https://www.ajmc.com/view/primary-care-transformation-a-team-based-care-model>
- 32 Hancock, Kelly. "Technology Drives Emerging Roles in Health Care Workforces," NEJM Catalyst Innovations in Care Delivery 6, no. 6.
<https://catalyst.nejm.org/doi/full/10.1056/CAT.25.0165>
- 33 McBain RK, Kofner A, Stein BD, Cantor JH, Vogt WB, Yu H. Growth and Distribution of Child Psychiatrists in the United States: 2007-2016. *Pediatrics*. 2019 Dec;144(6):e20191576. doi: 10.1542/peds.2019-1576. Epub 2019 Nov 4. PMID: 31685696; PMCID: PMC6889947.
- 34 Guerrero APS, Beresin EV, Balon R, Louie AK, Aggarwal R, Morreale MK, Coverdale J, Brenner AM. Child and Adolescent Psychiatry: New Concepts and New Strategies for the Future. *Acad Psychiatry*. 2022 Feb;46(1):6-10. doi: 10.1007/s40596-022-01596-2. PMID: 35169972; PMCID: PMC8852936.
- 35 Axelson, David. "Beyond A Bigger Workforce: Addressing the Shortage of Child and Adolescent Psychiatrists," *Pediatrics Nationwide*.
<https://pediatricsnationwide.org/2020/04/10/beyond-a-bigger-workforce-addressing-the-shortage-of-child-and-adolescent-psychiatrists>
- 36 "Achieving sustainable success through employee and patient experience," Becker's Hospital Review.
<https://www.beckershospitalreview.com/strategy/achieving-sustainable-success-through-employee-and-patient-experience.html>
- 37 Singla, Alex et al. "The State of AI: How Organizations Are Rewiring to Capture Value," McKinsey & Company.
<https://www.mckinsey.com/capabilities/quantumblack/our-insights/the-state-of-ai>
- 38 Ibid.
- 39 "How Digital and AI Will Reshape Health Care in 2025," Boston Consulting Group.
<https://web-assets.bcg.com/8c/f8/ae51ffb44ca59cb8abd751940441/bcg-how-digital-and-ai-solutions-will-reshape-health-care-in-2025.pdf>
- 40 ECQI Resource Center, FHIR® - Fast Healthcare Interoperability Resources®.
<https://ecqi.healthit.gov/fhir/about>
- 41 "Utilizing Enterprise Data Warehouses to Improve Operational Efficiency in Healthcare Practices," Simbo.ai.
<https://www.simbo.ai/blog/utilizing-enterprise-data-warehouses-to-improve-operational-efficiency-in-healthcare-practices-2943034>
- 42 "True systems integration gives hospitals real-time insight," Healthcare IT News.
<https://www.healthcareitnews.com/news/emea/true-systems-integration-gives-hospitals-real-time-insight>
- 43 Shoemaker, Jonathon. "From Admission to Discharge: How AI Reduces Hospital Length of Stay," MedCity News.
<https://medcitynews.com/2025/01/from-admission-to-discharge-how-ai-reduces-hospital-length-of-stay>

- 44 Duff-Brown, Beth. "Legal Risks and Rewards of Artificial Intelligence in Health Care," Stanford Health Policy. <https://healthpolicy.fsi.stanford.edu/news/legal-risks-and-rewards-artificial-intelligence-health-care>
- 45 "Top 10 Patient Safety Concerns 2025," ECRI. <https://home.ecri.org/blogs/ecri-thought-leadership-resources/top-10-patient-safety-concerns-2025>
- 46 "AI computer vision enables big OR efficiency gains for Houston Methodist Hospital," Healthcare IT News. <https://www.healthcareitnews.com/news/ai-computer-vision-enables-big-or-efficiency-gains-houston-methodist-hospital>
- 47 Schwamm LH, Pletcher S, Erskine A. "AI and Technology Enabled Clinical Workflow Redesign," Telemedicine Reports. <https://pmc.ncbi.nlm.nih.gov/articles/PMC11848050>
- 48 Ibid.
- 49 "Mount Sinai Health System's way forward," Waystar.com https://info.waystar.com/rs/578-UTL-676/images/23_CaseStudy_MountSinai_v12.pdf?version=0
- 50 "AHA Annual Survey Database," American Hospital Association. <https://www.ahadata.com/aha-annual-survey-database>
- 51 "Exploring Artificial Intelligence for Nurse Leaders," AONL Foundation. <https://www.aonl.org/system/files/media/file/2024/11/ExploringArtificialIntelligenceforNurseLeadersProceedingsfromLeadershipSymposium.pdf>
- 52 "2025 National Health Care Retention & RN Staffing Report," NSI Nursing Solutions, Inc. https://www.nsinursingsolutions.com/documents/library/ansi_national_health_care_retention_report.pdf
- 53 "The Science of Staying: 2025 Health Care Workforce Retention Study," LotisBlue. <https://lotisblueconsulting.com/insights/the-science-of-staying-2025-health-care-workforce-retention-study>
- 54 Ibid.
- 55 "2025 National Health Care Retention & RN Staffing Report" NSI Nursing Solutions, Inc. https://www.nsinursingsolutions.com/documents/library/ansi_national_health_care_retention_report.pdf
- 56 "The cost of nurse turnover in 24 numbers | 2025," Becker's Hospital Review. <https://www.beckershospitalreview.com/finance/the-cost-of-nurse-turnover-in-24-numbers-2025>
- 57 "The Soaring Cost of Nurse Turnover in 2025—and How to Cut It in Half," Immersyve Health. <https://www.immersyvehealth.com/resources/the-soaring-cost-of-nurse-turnover-in-2025--and-how-to-cut-it-in-half>
- 58 "The Real Cost of Nurse Turnover: What Hospitals Need to Know in 2025," Plexsum Staffing Solutions. <https://plexsum.com/2025/04/08/the-real-cost-of-nurse-turnover-what-hospitals-need-to-know-in-2025>
- 59 "Nursing Leadership Insight Study: Navigating Evolving Challenges and Opportunities in a Complex Health Care Landscape," American Organization for Nursing Leadership (AONL) <https://www.aonl.org/system/files/media/file/2025/03/AONL-Nursing-Leadership-Insight-Study-2025.pdf>
- 60 "Improvement in Safety Culture Linked to Better Patient and Staff Outcomes," American Hospital Association. <https://www.aha.org/guidesreports/2025-03-11-improvement-safety-culture-linked-better-patient-and-staff-outcomes>
- 61 The Healthcare and Public Health Sector Advisory Bulletin, U.S. Department of Health and Human Services, Administration for Strategic Preparedness & Response, May 21, 2025.
- 62 The Burden of Violence to U.S. Hospitals, prepared for the American Hospital Association by Harborview Injury and Prevention Research Center, University of Washington School of Medicine. <https://www.aha.org/system/files/media/file/2025/05/The-Burden-of-Violence-to-US-Hospitals.pdf>
- 63 Mason, Virginia M. et al. "Belongingness and Retention: Fostering the Future of Nursing," Dimensions of Critical Care Nursing. https://journals.lww.com/dccjournal/citation/2025/03000/belongingness_and_retention_fostering_the.11.aspx
- 64 Ibid.
- 65 Ibid.
- 66 "The Science of Staying: 2025 Health Care Workforce Retention Study," LotisBlue. <https://lotisblueconsulting.com/insights/the-science-of-staying-2025-health-care-workforce-retention-study>

- 67 Reinking, Cheryl. "Boosting Nurse Retention in Younger Generations," Health Leaders.
<https://www.healthleadersmedia.com/nursing/contributed-content-boosting-nurse-retention-younger-generations>
- 68 "Improvement in Safety Culture Linked to Better Patient and Staff Outcomes," American Hospital Association and Press Ganey.
<https://www.aha.org/system/files/media/file/2025/03/AHA-Insights-Report-Improvement-in-Safety-Culture.pdf>
- 69 "7 Tactics for Successfully Driving Health Care Team Engagement," American Hospital Association.
<https://www.aha.org/news/blog/2025-04-29-7-tactics-successfully-driving-health-care-team-engagement>
- 70 "Shared Governance in Nursing," Creative Health Care Management
<https://chcm.com/news-events/shared-governance-in-nursing>
- 71 "Engaging Staff with Shared Governance In Nursing," Bradley University.
<https://onlinedegrees.bradley.edu/blog/shared-governance-in-nursing>
- 72 Kutney-Lee, Ann et al. "Nurse Engagement in Shared Governance and Patient and Nurse Outcomes," Journal of Nursing Administration 46, no. 11 (2016): 605–612.
<https://pmc.ncbi.nlm.nih.gov/articles/PMC5117656>
- 73 "Shared Governance in Nursing," Creative Health Care Management.
<https://chcm.com/news-events/shared-governance-in-nursing>
- 74 "Be Well: Preventing Physician Suicide," American Hospital Association.
<https://www.aha.org/advancing-health-podcast/be-well-preventing-physician-suicide>
- 75 Malone, Kevin M. and Mrazek, David A. "Physician Suicide: Overview," Medscape.
<https://emedicine.medscape.com/article/806779-overview>
- 76 "Remove Barriers to Mental Health Care for Health Workers," Dr. Lorna Breen Heroes' Foundation.
<https://drlornabreen.org/removebarriers>
- 77 "Commitment to Clinician Well-Being and Resilience," American Hospital Association.
<https://nam.edu/wp-content/uploads/2021/02/AHA-Commitment-Statement.pdf>
- 78 "Artificial Intelligence–Generated Draft Replies to Patient Inbox Messages," JAMA Network Open.
<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2816494>
- 79 "Artificial intelligence in clinical medicine: a state-of-the-art overview of systematic reviews with methodological recommendations for improved reporting," Frontiers in Digital Health.
<https://www.frontiersin.org/journals/digital-health/articles/10.3389/fdgth.2025.1550731/full>
- 80 "How Digital and AI Will Reshape Health Care in 2025," Boston Consulting Group.
<https://web-assets.bcg.com/8c/f8/ae51ffb44ca59cb8abd751940441/bcg-how-digital-and-ai-solutions-will-reshape-health-care-in-2025.pdf>
- 81 Yakusheva, Olga et al. "How Artificial Intelligence is altering the nursing workforce," Nursing Outlook.
[https://www.nursingoutlook.org/article/S0029-6554\(24\)00193-3/fulltext](https://www.nursingoutlook.org/article/S0029-6554(24)00193-3/fulltext)
- 82 Wei, Qiuying et al. "The integration of AI in nursing: addressing current applications, challenges, and future directions," Frontiers In Medicine.
<https://pmc.ncbi.nlm.nih.gov/articles/PMC11850350>
- 83 "The pulse of nurses' perspectives on AI in healthcare delivery," McKinsey & Company.
<https://www.mckinsey.com/industries/healthcare/our-insights/the-pulse-of-nurses-perspectives-on-ai-in-healthcare-delivery>
- 84 Bruce, Giles. "The ROI on AI for nurses at Cedars-Sinai," Becker's Health IT.
<https://www.beckershospitalreview.com/healthcare-information-technology/ai/the-roi-on-ai-for-nurses-at-cedars-sinai>
- 85 Coren, Rachel and Stephenson, Lisa, "Reducing Nurses' Administrative Burden with Conversational AI Charting," PowerPoint presentation, Cedars-Sinai, March 5, 2025.
- 86 "The Well-being Impact of Northwestern Medicine's Scholars of Wellness Program," American Hospital Association.
<https://www.aha.org/advancing-health-podcast/2023-12-15-well-being-impact-northwestern-medicines-scholars-wellness-program>
- 87 "Peer Support Programs with ChristianaCare," American Hospital Association.
<https://www.youtube.com/watch?v=qU1dwaAzh1E>
- 88 Kitterman, Ted. "How Main Line Health Is Exploring Flexible Work to Promote Psychological Well-being," Great Place To Work.
<https://www.greatplacetowork.com/resources/blog/how-main-line-health-is-exploring-flexible-work-to-promote-psychological-well-being>

- 89 "Leading With Empathy: Workforce Well-being at Ochsner Health," American Hospital Association.
<https://www.aha.org/advancing-health-podcast/2023-10-27-leading-empathy-workforce-well-being-ochsner-health>
- 90 Melanie Wetmore. "The Impact of Shared Governance on Nursing Satisfaction and Retention" Walden University, 2018.
<https://scholarworks.waldenu.edu/dissertations/5671>
- 91 Swerdlin, Rachel F. et al. "Developing a Formal Mentorship Program for New Graduate Pediatric Nurse Practitioners: Supporting Role Transition," Journal of Continuing Education in Nursing.
<https://pubmed.ncbi.nlm.nih.gov/40019249>
- 92 Siwicki, Bill. "74% of hospital leaders say virtual nursing will become integral to acute care," Healthcare IT News.
<https://www.healthcareitnews.com/news/74-hospital-leaders-say-virtual-nursing-will-become-integral-acute-care>
- 93 "Skill shift: Automation and the future of the workforce," McKinsey Global Institute.
<https://www.mckinsey.com/featured-insights/future-of-work/skill-shift-automation-and-the-future-of-the-workforce>
- 94 Hancock, Kelly. "Technology Drives Emerging Roles in Health Care Workforces," NEJM Catalyst Innovations in Care Delivery, Vol. 6, No. 6.
<https://catalyst.nejm.org/doi/full/10.1056/CAT.25.0165>
- 95 Ibid.
- 96 "Eight out of ten nursing leaders are piloting new nursing care models, cites Wolters Kluwer survey," Wolters Kluwer.
<https://www.wolterskluwer.com/en/expert-insights/transforming-healthcare-through-nurse-led-innovation>
- 97 "Heartbeat of health: Reimagining the healthcare workforce of the future," McKinsey Health Institute.
<https://www.mckinsey.com/mhi/our-insights/heartbeat-of-health-reimagining-the-healthcare-workforce-of-the-future>
- 98 "The Future of Provider Credentialing: Trends and Predictions," Medwave.
<https://medwave.io/2025/02/the-future-of-provider-credentialing-trends-and-predictions>
- 99 Technology Drives Emerging Roles in Health Care Workforces," NEJM Catalyst Innovations in Care Delivery, Vol. 6, No. 6.
<https://catalyst.nejm.org/doi/full/10.1056/CAT.25.0165>
- 100 Ibid.
- 101 "Tips to Bolster Apprenticeship Program Success," Cleveland Clinic/Consult QD.
<https://consultqd.clevelandclinic.org/tips-to-bolster-apprenticeship-program-success>
- 102 Diaz, Naomi. "The tech shaping healthcare in 2025, per 62 leaders," Becker's Health IT.
<https://www.beckershospitalreview.com/healthcare-information-technology/technology-and-trends-shaping-healthcare-in-2025>
- 103 "Mary Washington Healthcare Recipient of Virginia Community College Systems 2025 Chancellor's Award by Germanna Educational Foundation," Mary Washington Healthcare.
<https://www.marywashingtonhealthcare.com/news/2025/april/mary-washington-healthcare-recipient-of-virginia>
- 104 "EMS and Telehealth: UVA Health Enhances Workforce Development, Immediate Care for Stroke Patients," Virginia Telehealth Network.
<https://www.ehealthvirginia.org/ems-and-telehealth-uva-health-enhances-workforce-development-immediate-care-for-stroke-patients>
- 105 "Unlocking Healthcare's Future: The Invaluable Role of Clinical Informatics," HIMSS.
https://www.himss.org/sites/hde/files/media/file/2024/04/18/wp_value-of-clinical-informatics-1.pdf
- 106 Bradley, Pat. "New digital institute launched to enhance healthcare workforce development," WAMC Northeast Public Radio.
<https://www.wamc.org/news/2024-09-17/new-digital-institute-launched-to-enhance-healthcare-workforce-development>
- 107 "Healthcare employee turnover, by role," Becker's Hospital Review.
<https://www.beckershospitalreview.com/workforce/healthcare-employee-turnover-by-role>
- 108 "The Science of Staying: 2025 Health Care Workforce Retention Study," LotisBlue.
<https://lotisblueconsulting.com/insights/lotis-blue-consulting-releases-the-science-of-staying-2025-health-care-workforce-retention-study>
- 109 AHA Annual Survey Database, American Hospital Association.
<https://www.ahadata.com/aha-annual-survey-database>
- 110 "10 Ways to Attract and Retain Gen Z Nurses," ShiftKey.
<https://assets.asccommunications.com/whitepapers/shiftKey-wp-march-2025.pdf>

- 111** Rachel F. Swerdlin, Rachel F. et al. "Developing a Formal Mentorship Program for New Graduate Pediatric Nurse Practitioners: Supporting Role Transition," *The Journal of Continuing Education in Nursing* 56, no. 3 (March 2025): 105–110.
<https://pubmed.ncbi.nlm.nih.gov/40019249>
- 112** Megan Hignight, Megan et al. "Development of an Emergency Nurse Internship to Promote a Healthy Work Environment and Improve Nurse Retention," *Journal of Emergency Nursing* 50, no. 5 (September 2024): 610–617.
<https://pubmed.ncbi.nlm.nih.gov/39046400>
- 113** Rutledge, Dana N. et al. "Nurses' Generational Differences of Burnout and Turnover Risk," *Online Journal of Issues in Nursing* 29, no. 3 (September 2024): 1–15.
<https://ojin.nursingworld.org/table-of-contents/volume-29-2024/number-3-september-2024/articles-on-previously-published-topics/nurses-generational-differences-of-burnout-and-turnover-risk>
- 114** Schloemer, Stephanie. "Boomers to Gen Z: Career Growth & Recognition Trends in Healthcare," *Perceptyx*.
<https://blog.perceptyx.com/boomers-to-gen-z-career-growth-recognition-trends-in-healthcare>
- 115** Gooch, Kelly. "How 3 health systems bridge workforce generations," *Becker's Hospital Review*.
<https://www.beckershospitalreview.com/workforce/how-3-health-systems-bridge-workforce-generations>
- 116** "Innovating Work-Life Balance: Hospitals Experiment with Scheduling and Perks," *APN Healthcare*.
<https://apnhealthcare.solutions/articles/innovating-work-life-balance-hospitals-experiment-with-scheduling-and-perks>
- 117** LaCross, Erin, DNP, RN, CENP. "Transforming the Workforce Through Innovation: Strategies for Retention and Engagement." Presented at the 2025 AHA Leadership Summit, July 22, 2025. Parkview Health. Recording available at:
<https://www.staffgarden.com/content-transforming-the-workforce-through-innovation>
- 118** Rutledge, Dana N. et al. "Nurses' Generational Differences of Burnout and Turnover Risk," *The Online Journal of Issues In Nursing*.
<https://ojin.nursingworld.org/table-of-contents/volume-29-2024/number-3-september-2024/articles-on-previously-published-topics/nurses-generational-differences-of-burnout-and-turnover-risk/#heading0>
- 119** "64 simulation and education programs to know | 2024," *Becker's Hospital Review*.
<https://www.beckershospitalreview.com/lists/64-simulation-and-education-programs-to-know-2024>