



manatt

MAY 2025

Opportunities to Alleviate the Health Care Workforce Crisis With Telehealth and Emerging Technologies

Proceedings From an Expert Roundtable

Jared Augenstein, Senior Managing Director

Tracy A. Massel, Director

Annie Fox, Senior Manager

Ryan Kruis, Senior Manager

Manatt Health

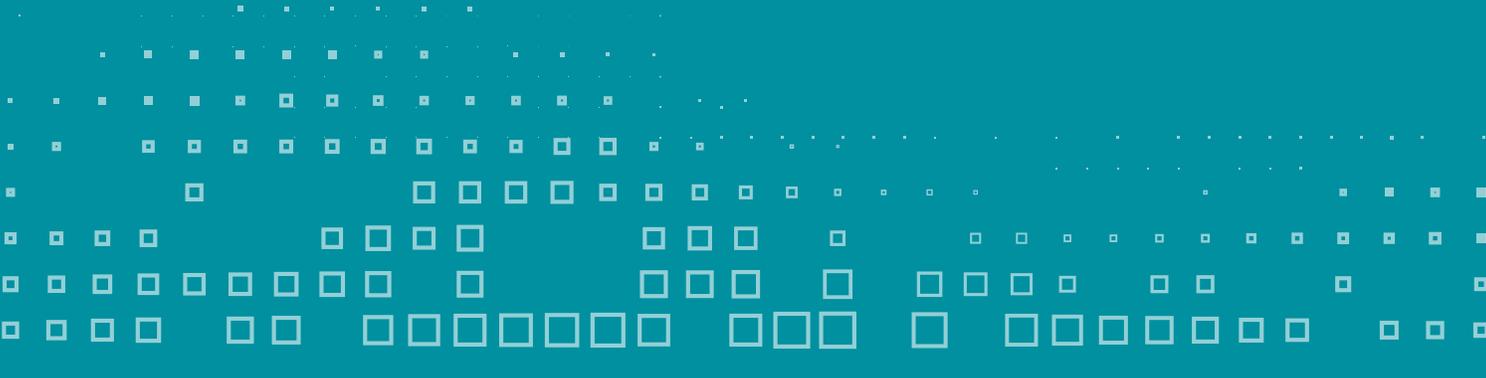
Acknowledgments

Medical University of South Carolina Project Team

- **Dee Ford, MD, MSCR**—Program Director, Telehealth Center of Excellence
- **Kathryn King, MD, MHS**—Chief Medical Information Officer, Associate Program Director, Telehealth Center for Excellence
- **James McElligott, MD, MSCR**—Executive Medical Director, Center for Telehealth
- **Emily Warr, MSN, RN**—Administrator, Center for Telehealth
- **Rebecca Verdin, MHA**—Manager, Telehealth Center of Excellence
- **Samantha D’Orio**—Coordinator, Telehealth Center of Excellence

Participating Stakeholders

- **Elisa Arespachoga, MBA**—Vice President of Clinical Affairs & Workforce, American Hospital Association
- **Sameer Berry, MD, MBA**—Chief Medical Officer & Co-Founder, Oshi Health
- **Saurabh Chandra, MD, PhD, MBA**—Chief Telehealth Officer & Telehealth Center of Excellence Program Director, University of Mississippi Medical Center
- **Alison Connelly-Flores, MPAS, PA-C**—Chief Medical Information Officer, Urban Health Plan, Inc.
- **Tammy Cress, MSN, RN**—Senior Vice President, Clinical Solutions & Innovation, Teladoc Health
- **Michael Dill, MPA**—Director of Workforce Studies, Association of American Medical Colleges
- **Atul Grover, MD, PhD**—Executive Director of Research & Action Institute, Association of American Medical Colleges
- **Ann Marie Huffenberger, DBA, RN**—Director of Penn Center for Connected Care, Penn Medicine
- **Yalda Jabbarpour, MD**—Director, Robert Graham Center at American Academy of Family Physicians
- **Parinda Khatri, PhD**—Chief Executive Officer, Cherokee Health Systems
- **Mei Wa Kwong, JD**—Executive Director, Center for Connected Health Policy
- **Gayle Lee, JD**—Senior Director, Policy & Regulatory of Association of American Medical Colleges
- **Brianna Lombardi, PhD, MSW**—Director of the Behavioral Health Workforce Research Center
- **Margaret Lozovatsky, MD**—Vice President of Digital Health Innovation, American Medical Association
- **Alan Morgan, MPA**—Chief Executive Officer, National Rural Health Association
- **Tina Shah, MD, MPH**—Chief Clinical Officer, Abridge
- **Scott Shipman, MD, MPH**—Nebraska Healthcare Collaborative Endowed Professor of Population Health, and Executive Director, Institute for Population Health, Creighton University
- **Prabhjot Singh, MD, PhD**—Senior Advisor for Strategic Initiatives, Peterson Health Technology Institute
- **Deborah Trautman, PhD, RN**—President & Chief Executive Officer, American Association of Colleges of Nursing
- **Claire Zangerle, DNP, MBA, RN**—Chief Executive Officer & Chief Nurse Executive, American Organization for Nursing Leadership



About This Report

This report was developed by Manatt Health and the National Telehealth Center of Excellence at Medical University of South Carolina (MUSC) as a part of a collaboration to understand and describe opportunities for telehealth to address the emerging health care workforce crisis. Manatt and MUSC conducted background research, interviewed 20 telehealth and workforce leaders, and then convened these experts for an in-person expert roundtable in Washington, D.C., in February 2025. Participants represented a diverse array of health systems, provider associations, health technology companies, and workforce researchers. The findings and opportunities outlined in this report represent a combination of research and the input provided by participants. The views expressed here are solely those of Manatt Health and MUSC.

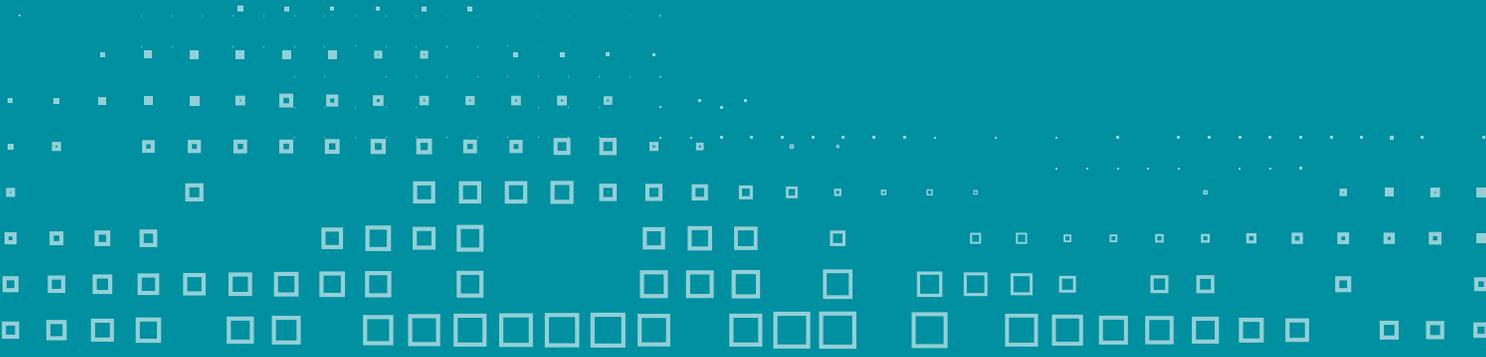
Funding Acknowledgment

Funding for this report was provided by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of the National Telehealth Center of Excellence Award (U66 RH31458). The content is those of the authors and does not necessarily represent the official views of, nor an endorsement by, HRSA, HHS, or the U.S. Government.

About Medical University of South Carolina

Founded in 1824 in Charleston, MUSC is the state's only comprehensive academic health system, with a unique mission to preserve and optimize human life in South Carolina through education, research and patient care. Each year, MUSC educates more than 3,200 students in six colleges—Dental Medicine, Graduate Studies, Health Professions, Medicine, Nursing, and Pharmacy—and trains more than 900 residents and fellows in its health system. MUSC brought in more than \$300 million in research funds in fiscal year 2023, leading the state overall in research funding.

As the health care system of the Medical University of South Carolina, MUSC Health is dedicated to delivering the highest-quality and safest patient care while educating and training generations of outstanding health care providers and leaders to serve the people of South Carolina and beyond. Patient care is provided at 16 hospitals (includes owned or governing interest), with approximately 2,700 beds and four additional hospital locations in development, more than 350 telehealth sites



and nearly 750 care locations situated in all regions of South Carolina. In 2023, for the ninth consecutive year, U.S. News & World Report named MUSC Health University Medical Center in Charleston the Number 1 hospital in South Carolina.

The MUSC Health Center for Telehealth has over 15 years of experience providing telehealth, offering over 100 unique telehealth services to over 380 sites across South Carolina (SC). Care settings include over 52 hospitals and freestanding emergency departments, over 156 schools, over 170 community clinics and other facilities, and reaching patients at home in all 46 counties.

MUSC Center for Telehealth is proud to be a national Telehealth Center of Excellence, one of two designated by the Health Resources Services Administration (HRSA) nationally. The role of the Center of Excellence is to fill important gaps in the national telehealth landscape through a combination of ongoing regional and national collaborations, as well as proactive dissemination of telehealth resources. MUSC leverages unique qualities as an academic medical center to rigorously research, evaluate, and disseminate telehealth initiatives and promising practices.

About Manatt Health

Manatt Health integrates legal and consulting services to better meet the complex needs of clients across the health care system.

Combining legal excellence, firsthand experience in shaping public policy, sophisticated strategy insight and deep analytic capabilities, we provide uniquely valuable professional services to the full range of health industry players.

Our diverse team of more than 200 attorneys and consultants from Manatt, Phelps & Phillips, LLP, and its consulting subsidiary, Manatt Health Strategies, LLC, is passionate about helping our clients advance their business interests, fulfill their missions and lead health care into the future. For more information, visit <https://www.manatt.com/Health> or contact:

Jared Augenstein
Senior Managing Director
Manatt Health
212.790.4597
jaugenstein@manatt.com

Tracy A. Massel
Director
Manatt Health
212.704.1904
tmassel@manatt.com

Annie Fox
Senior Manager
Manatt Health
212.790.4544
afox@manatt.com

Ryan Kruis
Senior Manager
Manatt Health
312.477.4761
rkruis@manatt.com

Opportunities to Alleviate the Health Care Workforce Crisis With Telehealth and Emerging Technologies

Proceedings From an Expert Roundtable

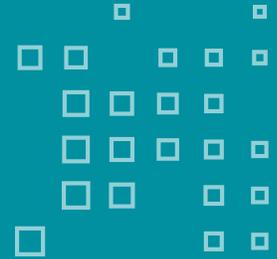


Table of Contents

Executive Summary.....	6
National Health Care Workforce Crisis.....	7
Workforce Shortages.....	7
Provider Burnout.....	8
Provider Maldistribution.....	8
Telehealth as a Workforce Crisis Mitigator.....	10
Opportunities for Telehealth.....	10
Challenges to Scale.....	12
New Possibilities With Artificial Intelligence.....	14
Promising Telehealth Programs to Alleviate the Crisis.....	15
Considerations Looking Forward.....	20
Looking Beyond Technology.....	20
Conclusion.....	21
Appendix: Telehealth Modality Definitions.....	22

Executive Summary

The U.S. health care system is facing a severe and worsening workforce crisis, characterized by a shortage of providers, geographic maldistribution of providers, and record levels of burnout. This crisis spans various clinical specialties and provider types, including physicians, advanced practice providers, registered nurses, and social workers, among others. In 2024, the Health Services and Resource Administration (HRSA) estimated the supply of physicians and registered nurses only met 90% of the total demand for each respective workforce needs, and the problem is only getting worse, with a growing patient population that needs more care and a limited number of providers to care for them. By 2037, HRSA projects that nonmetro areas will experience a 60% shortage of physicians and metro areas a 10% shortage.¹ The workforce crisis hinders patient access to necessary care and compromises quality of care, leading to sub-optimal health outcomes.

Telehealth is a promising solution to mitigate the workforce crisis. Telehealth modalities—in particular, virtual nursing, eConsults, and video visits—offer innovative ways to extend the current workforce, expand the geographic reach of providers, and maintain the existing workforce by reducing burnout and improving work-life balance. However, despite this potential, many telehealth programs are sub-scale due to limited coverage and reimbursement, insufficiently robust evidence, cultural barriers around adopting new technology, and other factors.

Even at full scale, telehealth alone will not meaningfully address the workforce crisis. Other emerging technologies, particularly artificial intelligence (AI), have the potential to significantly unlock workforce capacity. AI can assist, augment, and automate certain activities currently performed by clinical and administrative staff, thereby increasing efficiency and improving access. AI tools can streamline clinical documentation, enhance decision support, and automate routine administrative tasks, allowing providers to focus on patient care. AI tools can also be used to accelerate the adoption and impact of promising telehealth models by enabling significant gains in efficiency through automation.

To fully realize the potential of telehealth and AI in addressing the workforce crisis, several key considerations must be addressed. These include establishing clear and consistent reimbursement models, incorporating telehealth and AI into education and training curricula, addressing the digital divide, and investing in research and implementation resources. Additionally, broader policy and industry changes are needed to attract, optimize, and retain health care professionals, including enhancing financial and workplace incentives and prioritizing provider well-being.

While there is no silver bullet to addressing the workforce crisis in the U.S., scaling high-impact telehealth programs and accelerating the adoption of high-value AI can produce meaningful improvements in workforce shortages, maldistribution, and clinician burnout.

National Health Care Workforce Crisis

The United States health care system is facing an evolving workforce crisis, defined by a shortage of providers, a geographic maldistribution of providers, and high levels of burnout. This crisis is multifaceted, spanning both clinical specialties (e.g., primary care, behavioral health) and provider types (e.g., physicians, advanced practice providers, registered nurses, social workers), and is only expected to worsen over the next decade.^{2,3,4}

Given that a robust workforce is core to meeting patient health care needs, the country's ability to ensure access to health care services hinges on the availability of eligible, engaged providers. Ultimately, worsening shortages, maldistribution, and burnout will negatively impact patient access, quality of care, and health outcomes nationally.

Figure 1. Factors Driving U.S. Health Care Workforce Crisis



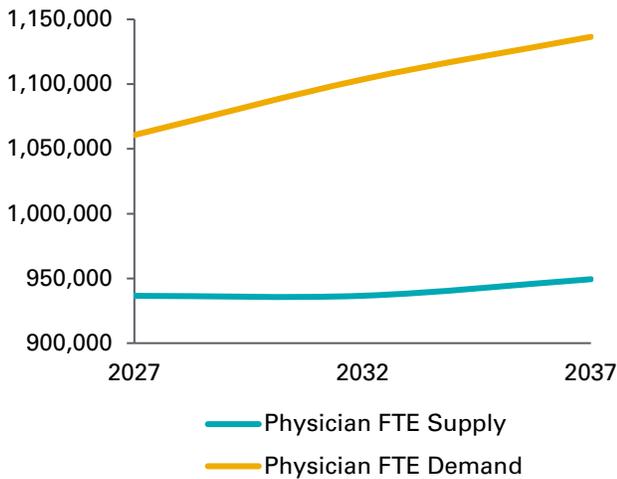
Workforce Shortages

In 2024, the HRSA estimated that the supply of physicians and registered nurses only met approximately 90% of the total demand for each respective workforce need.^{5,6} Societal and demographic trends are expected to exacerbate shortages. The overall U.S. population is expected to grow by 8.4% over the next decade, with the population 75 years or older, who have the greatest and most specialized care needs, expected to grow by 54.7%.⁷ Concurrent with this rise in patient demand is a fall in physician supply: nearly a third of the current physician workforce is expected to retire over the next decade, with others considering an early exit from the workforce due to burnout.^{8,9} Additionally, limitations in training opportunities, such as the capped volume of graduate medical education positions, creates barriers for new entry into the workforce.¹⁰

Projected Workforce Shortages by 2037 (HRSA):¹¹

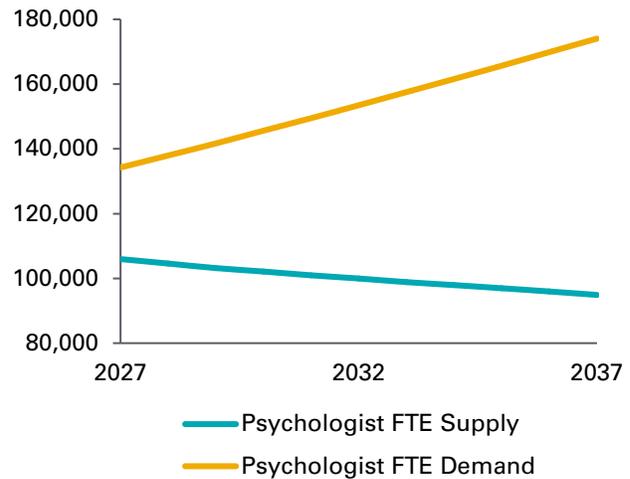
- | | |
|--|-----------------------------------|
| • 187,130 physicians | • 87,840 mental health counselors |
| • 207,980 registered nurses (RNs) | • 79,160 psychologists |
| • 302,440 licensed practical nurses (LPNs) | • 9,140 physical therapists |
| • 113,930 addiction counselors | • 17,030 pharmacists |

Figure 2. Projected Physician Supply Versus Demand (2027–2037)



Source: [Physician Workforce: Projections, 2022–2037](#) (HRSA, 2024).

Figure 3. Projected Psychologist Supply Versus Demand (2027–2037)



Source: [Workforce Projections Dashboard](#) (HRSA, 2025).

Provider Burnout

In 2023, nearly half of physicians reported experiencing at least one symptom of burnout, with similar rates of burnout seen among nurses and behavioral health workers.^{12,13,14} Factors fueling burnout include overwhelming workloads, a perceived lack of control over one’s work environment, insufficient rewards and recognition, and a breakdown of community and support systems within the health care setting.¹⁵ In turn, provider burnout contributes to staffing turnover, reduced clinical hours, and decreased morale¹⁶ and costs an estimated \$4.6 billion a year.¹⁷

Physician burnout has been associated with:¹⁸

- 2x increase in patient safety incidents
- 4x decrease in job satisfaction
- 3x increase in turnover intentions
- 3x increase in regret of career choice

Provider Maldistribution

Provider maldistribution creates uneven access to the already limited supply of providers. There is wide variation by state. For instance, Massachusetts has the most physicians per capita with 466 per 100,000 residents—2.4 times greater than the ratio of physicians to residents in Idaho.¹⁹ Geographically, providers—particularly specialists who require access to tertiary clinical centers that are typically located in urban centers—tend to live in more urban areas, leaving many rural and underserved communities to experience the impact of these shortages more acutely. While HRSA estimates that 94% of demand for physician services will be met in metro areas in 2036, less than half of the estimated demand (44%) will be met in non-

metro areas.²⁰ Geographic distribution also varies by state or region according to provider type. For example, states in the west have fewer nurses per capita as compared to other parts of the country, while states in the southeast have fewer behavioral health practitioners (Figures 4–6).²¹

Figure 4.
Physicians per 1,000 Persons by State, 2017–2021

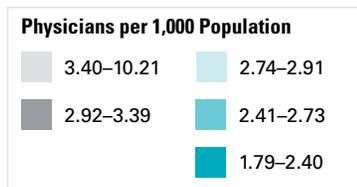
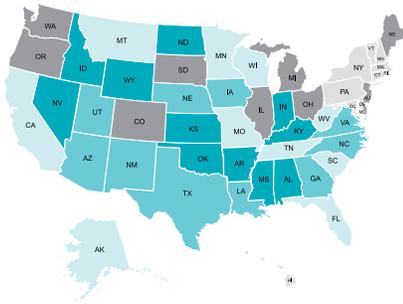


Figure 5.
Registered Nurses (RNs) per 1,000 Persons by State, 2017–2021

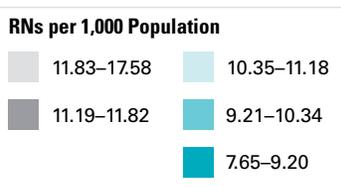
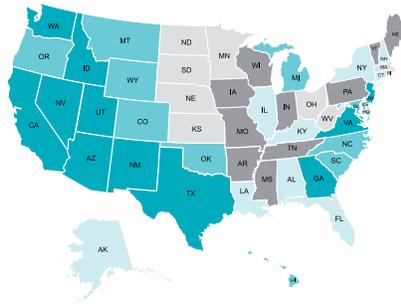
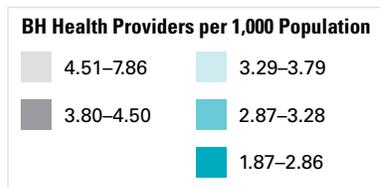
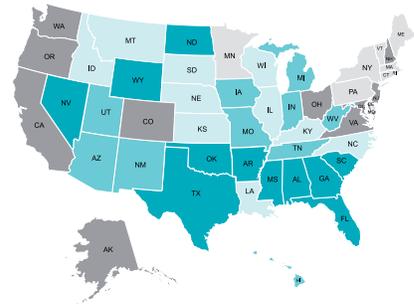


Figure 6.
BH Health Providers* per 1,000 Persons by State, 2017–2021



Source: Health Care Workforce: Key Issues, Challenges, and the Path Forward, U.S. Department of Health and Human Services Office of the Assistant Secretary for Planning and Evaluation, Oct. 2024, aspe.hhs.gov/sites/default/files/documents/82c3ee75ef9c2a49fa6304b3812a4855/aspe-workforce.pdf.

*Figure 6 includes Psychologists, Marriage and Family Therapists, Mental Health and Addiction Counselors, and Social Workers.

Recommended Resources to Learn More About the Health Care Workforce

- [Health Care Workforce: Key Issues, Challenges, and the Path Forward](#) (ASPE, 2024)
- [The Complexities of Physician Supply and Demand: Projections From 2021 to 2036](#) (AAMC, 2024)
- [Workforce Projections Dashboard](#) (HRSA, 2025)

Telehealth as a Workforce Crisis Mitigator

Opportunities for Telehealth

Telehealth has long been used to mitigate workforce challenges, especially in rural communities which historically lacked access to specialty care. The COVID-19 pandemic triggered explosive growth in telehealth, as policymakers relaxed previous regulatory and reimbursement barriers in efforts to maintain health care access at a time when social distancing was mandated and the health care system was constrained.²² While telehealth utilization has declined since the initial months of the pandemic, telehealth visits have consistently accounted for approximately 5% of ambulatory encounter claims since 2021, with the greatest growth seen in behavioral health.^{23,24} As telehealth has become more commonplace, health systems are recognizing its opportunities to support workforce challenges in a few key ways:



1. **Extend the current workforce:** Telehealth can support more efficient use of the current workforce's limited capacity through the following mechanisms:

- **Task shifting:** By enabling remote education, supervision, and specialty consultation, telehealth can support reallocating tasks from more specialized providers to other members of the clinical team. Shifting care from specialists to primary care or from physicians to advance practice providers allows team members to work at their top of their license and frees specialized providers to focus on more complex patients.
- **Shifting to "one-to-many" models:** Traditional care models require one-on-one interactions between a provider and a patient. Some telehealth modalities, such as Virtual Sitters, enable one-to-many care models that allow one provider to care for multiple patients at a time, increasing the provider's ability to oversee the care of more patients efficiently.
- **Shifting to asynchronous care:** Telehealth programs that rely on secure messaging or remote monitoring allow patient care that traditionally was done in real-time and face-to-face to be done asynchronously. This lessens the pressure on providers' schedules by allowing them to manage routine tasks, such as prescription refills or reviewing labs, outside of a limited supply of appointments and reserve in-clinic time to focus on patients with greater needs.

What is Telehealth?

HRSA defines telehealth as the use of electronic information and telecommunication technologies to support long-distance clinical health care, patient and professional health-related education, health administration, and public health.²⁵

Common uses of telehealth can be classified as occurring **Provider-to-Patient** (i.e., provider administering direct clinical care to a patient—such as a video/audio visit or remote physiologic monitoring) or **Provider-to-Provider** (i.e., providing clinical consultation, education, or oversight between providers).

Telehealth can be further characterized by whether an encounter is **synchronous** (i.e., real-time, two-way encounter) or **asynchronous** (i.e., exchange of information at different times, sometimes called "store-and-forward").

Note: Definitions for common telehealth programs are included in the report Appendix.



2. **Expand the catchment area for providers:** Virtual care reduces the need for geographic proximity, enabling providers to provide services to patients across a wider region. Additionally, virtual mentorship and consultations can support clinical teams who would not otherwise have those services. Virtual care and provider support are especially important for rural and underserved communities, which may lack local access to specialists and/or culturally appropriate care.



3. **Maintain the current workforce:** Providing care remotely is less taxing physically and emotionally, allowing experienced providers to extend their careers and improving the work-life balance for mid-career professionals by providing additional autonomy over location and schedule. Telehealth modalities, such as virtual nursing, create avenues for senior providers who would have otherwise retired to train, mentor, and consult the next generation and encourage a longer career length for both the mentor and mentee.

Figure 7 outlines how common telehealth programs were seen by experts as able to address the workforce crisis in these critical ways. Definitions for the telehealth programs included in the chart can be found in the Appendix.

Figure 7. Impact of Telehealth Modalities on the Workforce Crisis

	Extend Current Workforce			Expand Geography	Maintain Workforce
	Task Shifting	Shifting From 1:1 → 1:many	Shifting From Sync → Async	Extended Clinician Catchment	Make It Easier to Work
Clinician: Patient					
Video & Audio Only Visits				●	◐
Remote Physiologic Monitoring (RPM)	◐	●	◐	●	
eVisit	◐	●	●	●	
Virtual Sitters		●		●	
Virtual Nursing (Admit/Discharge; Rounding)		●		●	●
Clinician: Clinician					
Virtual Nursing (Training)		●		●	●
eConsult (async)	●		●	●	◐
Provider-to-Provider Consult (sync)	●			●	◐
Project ECHO	●	◐		●	◐
Tele-ICU	●	●		●	●

● = meets category criteria ◐ = meets category criteria, but with caveats

How, and to what extent, these solutions address the workforce crisis varies across telehealth programs. While some programs clearly met category criteria, others did so with caveats. For example, remote physiological monitoring (RPM) allows providers to monitor the physiologic data of multiple patients at one time regardless of geography, thus extending the workforce via a “one-to-many” model and extending provider catchment area without qualification. However, while RPM supports task shifting from billing providers to nurses who conduct the day-to-day monitoring, billing providers are still required to oversee this work, thus not fully removing them from the workflow.²⁶ Similarly, while patient RPM data are captured remotely and reviewed asynchronously, provider-to-patient education must be delivered synchronously to facilitate reimbursement.

Challenges to Scale

Despite the potential of telehealth to address workforce challenges, many telehealth programs are not operating at scale, limiting the extent of their impact. Several interconnected factors contribute to the challenge of deploying telehealth at scale:

- **Limited or uncertain reimbursement:** For many telehealth programs, reimbursement is either limited or uncertain, making programs difficult to sustain and creating financial disincentives for wider scale use. The COVID-19 pandemic caused payors, including the Centers for Medicare and Medicaid Services (CMS), to approve payment flexibilities and parity for telehealth reimbursement.²⁷ Those policies have since eroded or been approved for short periods of time, making it difficult for providers to make the business case for further technology or infrastructure investments. Stable reimbursement policies lead to higher telehealth use. A study of community health centers showed that those located in states with telehealth payment parity legislation had a 74% increase in odds of maintaining telehealth use one year after the pandemic than those located in states without parity.²⁸
- **High implementation and operational costs:** Infrastructure and technology investments pose a significant barrier in addition to ongoing operational and staffing costs, especially for providers operating with thin margins. In a survey of rural emergency department leaders, for example, cost was the most cited reason for a lack of telehealth adoption.²⁹
- **Provider comfort with new technology:** Cultural and technical barriers may prevent providers from comfortably delivering care through telehealth. In a meta-analysis looking at barriers to the use of digital health technology among healthcare professionals, personal and psychological barriers were the most commonly noted barriers, second only to technology/infrastructure.³⁰ Adapting to new technology and incorporating it into clinical practice is a challenge for telehealth adoption—particularly as nearly half of the nation’s active doctors are at least 55 years old.³¹ In a 2021 survey, after the initial COVID-19 shutdowns, 20% of providers reported having already decreased their use of telehealth because they preferred to provide care in-person.³²

“Many of our hospitals do not have the infrastructure to support the technology for telehealth. And, with hospitals being in such a precarious spot financially, it is very challenging to consider adding new costs without a clear and immediate ROI.”

Health System Leader

- **Provider training:** Clinical training often lacks standardized curricula for telemedicine, which can limit provider comfort working in virtual environments or effectively utilizing new technology. A 2020 survey of nursing programs found that 55% of prelicensure and 40% of graduate programs had no telehealth curricular content.³³ While there have been increased efforts to incorporate telehealth education into training programs,^{34,35} the lack of focused telehealth education for trainees and the existing workforce remains a challenge to adoption.
- **Lack of evidence base:** While some telehealth programs have a strong evidence base, more nascent telehealth programs, such as virtual nursing, lack robust research demonstrating improvement in patient outcomes, provider well-being, and overall health care costs. Limited clinical and financial evidence demonstrating value stymies the adoption of these innovative care models among both providers and health system financial leaders alike.
- **Patient access to and comfort with technology/internet:** In a survey of over 600,000 Medicare beneficiaries, 26.3% reported not having access to either a computer or smartphone with regular internet access, and the proportion of access was lower among those who were 85 or older, had a high school education or less, were Black or Hispanic, received Medicaid, or had a disability.³⁶ With many lacking adequate internet or technology and others the requisite digital literacy skills to participate in telehealth services, broad and equitable scaling of telehealth remains a challenge.

“When it comes to virtual nursing, there are major gaps in measurement and research. Organizations are quickly standing up programs without capturing the data needed to make the case for maintained financial support for programs.”

Health System Leader

Even with greater adoption, the most promising telehealth programs can only move the needle so far when it comes to the workforce crisis. While each telehealth solution can support workforce challenges at a local or institutional level, they do not expand the overall pool of providers nationally, thereby limiting their potential to fully resolve the nationwide shortage and highlighting the need for additional solutions. Given the scale of the workforce shortage, current models of care—whether delivered in-person or via telehealth—are unable to meet expected patient demand.

“Telehealth is an enablement tool, not a panacea. It must be one tool amongst many to support care team transformation.”

Industry Leader

New Possibilities With Artificial Intelligence

Beyond telehealth, other emerging technologies—and particularly those leveraging AI—may have even greater transformative potential to reduce workforce pressures. AI has the potential to create significant gains in efficiency and to improve health outcomes while simultaneously updating historic assumptions for provider staffing models. Though AI is still new, pilots and adoption in the clinical environment are rapidly increasing. According to a recent survey by the American Medical Association, 66% of physicians surveyed in 2024 reported using AI in their clinical practice, a significant increase from 38% the year prior.³⁷ Further, 68% of physicians see AI as an advantage for patient care, with AI tools being seen as most helpful in areas focused on physician burden and efficiency.³⁸ Both independently and as a tool layered on top of telehealth, AI can assist, augment, and automate activities currently performed by clinical and administrative health care staff, offering significant relief to the workforce:

- **Assisting:** AI can act as a virtual assistant, providing providers with quick access to information, summarizing patient records, and flagging potential issues. This support allows providers to focus on more complex tasks, increasing efficiency and reducing time spent on routine information gathering.
- **Augmenting:** AI can augment human capabilities by analyzing large datasets to identify patterns and insights that might be missed by human providers. This can lead to more accurate diagnoses, personalized treatment plans, and better prediction of patient outcomes.
- **Automating:** AI can automate repetitive and time-consuming tasks, allowing staff to focus on higher-value activities. This includes tasks like scheduling appointments, processing insurance claims, and sending reminders to patients.

As AI becomes a central component in future health care workforce strategies, its impact on and integration with telehealth programs becomes critical when considering telehealth’s capabilities in addressing workforce challenges. This theme was consistently raised by expert stakeholders who described AI as having enormous potential to disrupt current notions of how the health care workforce is utilized.

“I began using AI ambient listening in my practice, and it has transformed my life! It makes me consider going back to full-time practice because the administrative documentation felt less burdensome.”

Health Researcher

Promising Telehealth Programs to Alleviate the Crisis

From the stakeholder interviews and group discussions, three telehealth programs stood out for their potential to address the evolving health care workforce crisis: virtual nursing, eConsult, and video visits. The following section provides descriptions of each program, focusing on their impact on the workforce crisis, barriers to widespread adoption and related mitigation, and opportunities for improvement through the use of AI.

Virtual Nursing	
Description	<p>Virtual nursing leverages remote nurses to provide patient care and peer support through the use of digital communication tools such as video calls, phone calls, and secure messaging. Staffing models vary across institutions; however, in inpatient settings, virtual nurses commonly support:</p> <ul style="list-style-type: none"> • Direct patient care, such as patient education or admit/discharge responsibilities • Administrative tasks, such as patient safety surveillance or documentation quality control • Peer mentoring and training <p>In 2024, 46% of hospital leaders reported piloting or having implemented inpatient virtual nursing and 10% reported having reached a point where virtual nursing is standard part of care delivery.³⁹</p>
Workforce Impact	<p>Extend Current Workforce</p> <p>Optimize Staffing: By enabling nurses to remotely manage patients and support administrative tasks across multiple locations, virtual nursing allows the onsite team to focus on activities where in-person interventions can provide the greatest value.</p>
	<p>Expand Geography</p> <p>Mitigate rural nursing shortages: Virtual nurses can remotely support rural hospital units, which experience higher nursing shortages.</p>
	<p>Maintain Workforce</p> <p>Reduce bedside nurse burnout: By handling tasks like patient education, discharge planning, and medication reconciliation, virtual nurses can free bedside nurses to focus on direct patient care. If implemented to rotate nurses between virtual and bedside care, this can also provide regular respite from more physically and mentally taxing care settings.</p> <p>Augment training and education: Experienced nurses who would have otherwise retired can provide mentorship and support to new nurses via virtual modalities, helping the next generation develop their clinical skills and knowledge.</p> <p>Retain nurse expertise: Virtual nursing often involves less physical activity and can be more flexible in terms of scheduling and location. By offering these options, virtual nursing can help retain experienced nurses who might otherwise leave the profession.</p>

Opportunities to Alleviate the Health Care Workforce Crisis With Telehealth and Emerging Technologies: Proceedings From an Expert Roundtable

Virtual Nursing		
Illustrative Barriers to Scale and Potential Mitigators	Barriers	Mitigators
	<p>Financial Investment: Implementation of virtual nursing requires significant upfront technology investments, such as virtual-enabled devices in patient rooms, and organizational change.</p>	<p>Continued state or federal grants for telehealth pilots—for example, HRSA’s telehealth network grants—can help refine successful models like virtual nursing by defraying initial costs or elongating pay-back timelines.</p> <p>Hospitals can make step-change investments to prove the value before fully adapting.</p>
	<p>Leadership Buy-In: Lack of peer-reviewed literature on the quality impacts of virtual nursing and financial return on investment (ROI) makes it hard to get leadership buy-in.</p>	<p>Academic medical centers and other research entities can support clinical research that demonstrates the direct and indirect ROI of virtual nursing and its impact on patient outcomes. Metrics to monitor may include reduced nurse turnover, increased patient throughput, improved quality measures, and related reimbursement.</p>
	<p>Intervention Complexity: The introduction of virtual nursing disrupts existing workflows and requires significant change management.</p>	<p>Industry leaders, including health care associations, can develop implementation toolkits outlining staffing models and their impact on the workforce, workflows, financial planning, technology requirements, and key performance indicators to increase broad adoption.</p>
Future Role of AI	<p>Triage and Symptom Assessment: AI chatbots or voice assistants can collect patient symptoms and medical histories, helping nurses prioritize cases.</p> <p>Medication Reminders and Education: AI can send reminders and provide personalized guidance on medication adherence, reducing the burden on nursing staff.</p> <p>Remote Monitoring and Alerts: AI-driven monitoring tools can analyze patient vitals and alert nurses to any concerning trends.</p> <p>Predictive Analytics for Patient Deterioration: AI can analyze patient data in real time to identify early warning signs of sepsis, heart failure, or other conditions, prompting timely intervention.</p> <p>Automated Documentation and Charting: AI can transcribe and summarize patient interactions, reducing the time nurses spend on paperwork.</p>	

eConsult	
Description	<p>eConsult is typically an asynchronous message-based consultation between providers completed to solicit feedback on patient care. eConsults are initiated by the patient’s treating provider (primary care provider or specialist) who shares details from the medical record and requests the opinion and/or treatment advice of a remote consulting provider (specialist). The consulting provider assists the treating provider in caring for the patient (e.g., diagnosis, treatment plan) without face-to-face, in-person contact with either the patient or the treating provider.^{40,41}</p> <p>eConsults improve upfront patient triaging, flagging those who truly need a specialist visit versus those that can remain managed within primary care.</p> <ul style="list-style-type: none"> • A 2022 survey of physicians found that 26.3% of physicians reported the use of eConsult.⁴² • eConsult implementation across 19 specialty clinics in New York City Health & Hospitals showed 13.3% reduction in wait times to see a specialist.⁴³ • Patients who received an eConsult in the Veteran Affairs system experienced a three-month decrease of 4 to 30% in health care costs across 11 specialties, largely driven by a reduction in outpatient costs.⁴⁴
Workforce Impact	<p>Extend Current Workforce</p> <p>Enable primary care providers (PCPs) to manage a broader range of conditions/clinical situations and improve patient triage for specialist care: eConsults empower PCPs to manage more complex cases within their scope of practice, reducing referrals to specialists.</p> <p>Improves efficiency: eConsults streamline care by reducing wait times for specialist appointments, minimizing patient travel, and potentially avoiding unnecessary procedures. Asynchronous eConsults also allow more flexibility in provider schedules for response, rather than having patients go in-person for a consult.</p> <hr/> <p>Expand Geography</p> <p>Ensures more equitable access to specialists: eConsults can prove especially valuable in rural areas allowing specialists to cover a larger catchment area by removing the need for a patient to travel for a consult.</p> <hr/> <p>Maintain Workforce</p> <p>Supports PCPs: eConsults can reduce the cognitive load of PCPs by supporting clinical decision making, improving their knowledge and skills, and empowering them to get patients onto the right care plan.</p>

Opportunities to Alleviate the Health Care Workforce Crisis With Telehealth and Emerging Technologies: Proceedings From an Expert Roundtable

eConsult		
Illustrative Barriers to Scale and Potential Mitigators	Barriers	Mitigators
	Provider culture shift: eConsult implementation requires a significant culture shift for both PCPs (managing more complex cases) and specialists (providing remote recommendations). ⁴⁵	Health systems implementing eConsult should focus on PCPs already managing complex patients with limited referral options and specialists already engaged in “curbside consults,” supportive of the primary care mission.
	Limited and Varied Reimbursement: eConsult coverage and reimbursement varies by state and payer, and payment is typically low, incentivizing in-person care.	Payers can establish or increase reimbursement for eConsults in fee-for-service models but can continue to incentivize through funding of innovative care models (e.g., value-based care arrangements).
	Administrative burden: eConsults have potential to add to workflow and administrative burden experienced by providers.	Health systems can standardize workflows, build templates, dedicate staff to support eConsults, and incentivize participation processes.
	Technology integration: Lack of integration with electronic health record can add to eConsult administrative burden, especially for community providers on different electronic health records (EHRs) than specialists. ⁴⁶	Federal and state programs can support large regional eConsult platforms to provide a centralized location for managing eConsults, regardless of the EHR system used by participating institutions.
Future Role of AI	<p>Summarize patient medical records: This allows consulting physicians to quickly grasp the patient’s history, reducing time spent reviewing lengthy documents.</p> <p>Populate forms with patient data: This streamlines the initiation of consultations, minimizing manual data entry.</p> <p>Analyze eConsult and suggest potential diagnoses or treatment options: This provides the consulting physician with valuable insights, accelerating the decision-making process.</p>	

Video and Audio Only Visit	
Description	<p>Real-time, two-way communication between a patient and a health care provider via video conferencing or audio-only methods. Audio-only telehealth visits have emerged as an important alternative to video visits, especially for patients who may lack access to the technology, internet connectivity, or digital literacy required in a video visit.⁴⁷</p> <ul style="list-style-type: none"> • Since 2021, video and audio-only visits have consistently accounted for nearly 5% of all encounter claims.^{48,49} • In 2022, approximately 74.4% of physicians reported use of telehealth video or audio-only visits in their practice.⁵⁰
Workforce Impact	<p>Extend Current Workforce</p> <p>Limited impact on workforce efficiency as visits still relies on 1:1 patient care.</p>
	<p>Expand Geography</p> <p>By removing geographical barriers for patients seeking care, video and audio-only visits address the maldistribution of providers, which can be particularly important for rural communities seeking specialist or mental health care.</p>
	<p>Maintain Workforce</p> <p>Telehealth based care may be slightly more streamlined than in-person visits, allowing providers to see patients. These visits also offer more flexibility in scheduling and allow providers to work from home, offering enhanced work-life balance, which may encourage them to continue working.</p>

Video and Audio Only Visit		
Illustrative Barriers to Scale and Potential Mitigators	Barriers	Mitigators
	<p>Reimbursement Uncertainty: Uncertainty regarding stable reimbursement for video and audio-only visits remains a significant barrier to broader scaling. Without consistent and predictable reimbursement, providers are hesitant to invest in telehealth infrastructure and staffing models.</p>	<p>Strategic policy initiatives could address the financial uncertainty and regulatory burden hindering broader video and audio-only use. These include:</p> <ul style="list-style-type: none"> Regulators can solidify the expansions in telehealth coverage enacted during COVID-19. Medicare’s temporary telehealth reimbursement expansions need to be made permanent or long-term, including coverage for telehealth in urban areas, the patient’s home as an originating site, and audio-only visits for those without video. Congress and states can work together on solutions like an interstate compact expansion or federal licensure for telehealth for Medicare beneficiaries to reduce the friction clinicians face in delivering virtual care across state lines; and States can adopt payment parity (paying telehealth the same as in-person for equivalent services) to encourage adoption.
	<p>Regulatory Hurdles: Regulations regarding video and audio-only visits (e.g., state licensure laws, prescribing of controlled substances) varies by state, payer, and modality and can prove cumbersome to navigate, further hindering widespread adoption of video and audio-only visits.</p>	
	<p>Challenges With Hybrid Care: Blending telehealth and in-person care within a clinic can prove complex, requiring careful consideration of workflows, staffing, technology, and resource allocation to be successful. Constant task shifting between virtual and onsite care may also exacerbate provider burnout.</p>	<p>Health systems and health care associations can develop best practice guides to support clinics implementing hybrid care models in addressing implementation, workflow, interoperability, and resource allocation challenges.</p>
	<p>Digital Divide: Lack of access to internet connectivity and video technology and limited digital literacy can be barriers for many patients’ use of telehealth, particularly in rural and low-income communities.</p>	<p>The government (at federal and state levels) can expand funding for rural broadband (e.g., through the Federal Communications Commission and infrastructure bills) to support high-speed infrastructure in underserved communities, as well as support programs that provide low-cost devices to patients.</p> <p>Health care organizations can partner with community groups to provide telehealth and digital literacy education to patients.</p>
Future Role of AI	<p>Task Shifting to Technology and Make it Easier to Work: Many of the same AI tools already leveraged in in-person clinical visits can be applied to video or audio-only visits. While there are likely efficiencies gained by deploying AI tools, those tools can also reduce the cognitive burden on providers and making it easier for them to focus on providing care to patients:</p> <ul style="list-style-type: none"> Streamlined Clinical Documentation: AI-powered natural language processing tools can transcribe, summarize, and auto-populate clinical notes in real time, allowing providers to focus on patient engagement rather than administrative tasks. Enhanced Decision Support: Integrated, AI-driven clinical decision support systems can analyze patient data during the visit, offering real-time insights, risk stratifications, and evidence-based recommendations that enable more precise, data-informed care without adding cognitive load to the provider. Workflow Automation: AI algorithms can handle pre-visit data collection, patient triage, and post-visit follow-ups, ensuring that providers enter each encounter fully prepared. Automating routine administrative tasks can improve efficiency and throughput without compromising care quality. 	

Considerations Looking Forward

Looking Beyond Technology

Technology itself is not enough to address the workforce crisis. Stakeholders emphasized that broader policy and industry changes are needed, not only to better attract, optimize, and retain talent, but also to redesign how we think of the workforce all together.

- **Enhance incentives for the health care workforce:** Financial and workplace incentives such as increased pay, professional development opportunities, time off, and flexible schedules are crucial for attracting and retaining qualified health care professionals. Continuing to shift reimbursement to payment for outcomes will also enable the industry to shift to more efficient modalities of care.
- **Prioritize provider well-being:** Health care systems must prioritize provider well-being through dedicated wellness initiatives, streamlining administrative tasks (“eliminating the stupid stuff”),⁵¹ and establishing dedicated wellness champions, like the Chief Wellness Officer.⁵² This has been an increased focus across the industry, with programs like AMA Steps Forward providing resources to guide the implementation of programs targeting burnout.⁵³
- **Expand the team to include other personnel and community members:** When considering opportunities to redesign care delivery, solutions should incorporate a wider range of staff beyond providers. Other staff (e.g., chaplains, financial counselors, front desk staff) and community members (e.g., family, faith communities) can be integrated to support aspects of patient care. For example, providers are increasingly leveraging community health workers and peer support specialists to help meet patient behavioral health and health-related social needs.⁵⁴
- **Re-evaluate policies regulating clinical education, licensing, and clinical practice:** As evidence on the effectiveness of new care models emerges, policies related to clinical education, licensing, and practice should be examined to ensure they support, rather than stymie, evolving care delivery strategies.
- **Re-Balance systemic change with incremental progress:** While systemic redesign may be necessary, it’s important to acknowledge that health care often evolves incrementally. Efforts to address the workforce crisis must balance the need for transformative change with the realities of gradual implementation.

“We cannot keep operating under the assumption that 10 years from now we’ll be working in the same system where doctors spend all day in patient charts. We need to be thinking about how to get rid of unnecessary work and allow doctors to focus on clinical care.”

Industry Leader

“When talking about the workforce issue, we need to think beyond just clinical providers. It’s the full care team. Every part of the care team needs to be included in transformation efforts and care redesign—chaplains, financial services, registration staff—the whole team.”

Industry Leader

“We could use RNs much more broadly, especially experienced ones, if it weren’t for some of the regulatory hurdles about what they can and cannot do.”

Association Leader

Conclusion

The U.S. health care system is grappling with a significant workforce crisis that threatens patient access and quality of care. Telehealth modalities—particularly virtual nursing, eConsults, and video visits—offer the potential to mitigate some of these challenges by extending the current workforce, expanding the geographic reach of providers, and maintaining the existing workforce by reducing burnout and improving work-life balance. These particular modalities surfaced as having the greatest potential due to their ability to address many of the underlying drivers of the workforce crisis and their ability to most efficiently increase patient access to care.

Even at full scale, telehealth alone will not meaningfully address today's workforce challenges. Telehealth can solve organizational shortages, though at the national level, the mismatch in provider supply and demand requires a broader range of solutions. Technology—particularly AI—has transformative potential to reduce workforce pressures by creating significant gains through automation. Advances in AI, paired with policy interventions to address supply/demand imbalances offer the potential to address the workforce crisis.

Appendix: Telehealth Modality Definitions

Modality	Description
Video & Audio Only Visits	Real-time, two-way communication between a patient and a health care provider via video conferencing or audio-only methods.
Remote Physiologic Monitoring (RPM)	Use of digital devices to collect and analyze patient physiologic health data remotely. Data can be used to inform patient treatment plans. Common examples include monitoring weight, blood pressure, glucose levels, oximetry, and respiratory flow rates.
eVisit	Secure, electronic communication between a patient and a provider through an online portal, typically initiated by a patient to address a health concern. eVisits often are asynchronous or “store-and-forward” but can involve chat or video components, depending on the platform.
Virtual Sitters	Use of digital communication tools to allow a single remote staff member to monitor multiple patients at once for safety concerns (e.g., falls, self-harm). Sitters can redirect patients or alert bedside staff members that intervention is needed.
Virtual Nursing	Leveraging remote nurses to provide patient care and peer support through use of digital communication tools (e.g., video calls, phone calls, secure messaging). In inpatient settings, virtual nurses are commonly used to alleviate bedside nurse workload through a) direct patient care (e.g., patient education, patient admit/discharge), b) administrative duties (e.g., patient safety surveillance, documentation quality control), and c) peer mentoring and education.
eConsults (asynchronous)	Secure messaging via a platform that enables providers (typically PCPs) to asynchronously consult with others (typically specialists), without requiring the patient to be directly involved.
Provider-to-Provider Consults (synchronous)	Real-time, two-way communication between providers—one of which is typically a specialist—to collaborate on treatment plans and provide specialty-advised care to a patient (e.g., tele-stroke, virtual rounding, tele inpatient consultations).
Project Echo	Collaborative tele-mentoring and capacity-building program where specialists (“hubs”) share their expertise with PCPs and other health care professionals (“spokes”) in remote or underserved communities, helping them gain the knowledge and skills to manage complex conditions locally. Project ECHO providers connect via video conferencing sessions, where they engage in case-based learning, present real patient cases, and receive guidance on best practices.
Tele-ICU	Digital communication tools such as video calls, remote monitoring systems, and secure messaging platforms that allow health care professionals to provide intensive care, monitoring, and support to critically ill patients remotely and advise local bedside staff.

Opportunities to Alleviate the Health Care Workforce Crisis With Telehealth and Emerging Technologies: Proceedings From an Expert Roundtable

- ¹ National Center for Health Workforce Analysis. *Health Workforce Projections*, Bureau of Health Workforce, <https://bhw.hrsa.gov/data-research/projecting-health-workforce-supply-demand>. Accessed 20 Mar. 2025.
- ² National Center for Health Workforce Analysis. *Health Workforce Projections*, Bureau of Health Workforce, <https://bhw.hrsa.gov/data-research/projecting-health-workforce-supply-demand>. Accessed 20 Mar. 2025.
- ³ GlobalData PLC. *The Complexities of Physician Supply and Demand: Projections From 2021 to 2036*, Association of American Medical Colleges, Mar. 2024, <http://www.aamc.org/media/75236/download>.
- ⁴ *Health Care Workforce: Key Issues, Challenges, and the Path Forward*, U.S. Department of Health and Human Services Office of the Assistant Secretary for Planning and Evaluation, Oct. 2024, <https://aspe.hhs.gov/sites/default/files/documents/82c3ee75ef9c2a49fa6304b3812a4855/aspe-workforce.pdf>.
- ⁵ "Nurse Workforce Projections, 2022-2037." Health Workforce, HRSA, Nov. 2024, bhw.hrsa.gov/sites/default/files/bureau-health-workforce/data-research/nursing-projections-factsheet.pdf.
- ⁶ "Physician Workforce: Projections, 2022-2037." Health Workforce, HRSA, Nov. 2024, bhw.hrsa.gov/sites/default/files/bureau-health-workforce/data-research/physicians-projections-factsheet.pdf.
- ⁷ GlobalData PLC. *The Complexities of Physician Supply and Demand: Projections From 2021 to 2036*, Association of American Medical Colleges, Mar. 2024, <http://www.aamc.org/media/75236/download>.
- ⁸ GlobalData PLC. *The Complexities of Physician Supply and Demand: Projections From 2021 to 2036*, Association of American Medical Colleges, Mar. 2024, <http://www.aamc.org/media/75236/download>.
- ⁹ Berg, Sara. "The COVID-19 Emergency's over, but 1 in 2 Doctors Report Burnout." *American Medical Association*, 23 June 2023, <https://www.ama-assn.org/practice-management/physician-health/covid-19-emergency-s-over-1-2-doctors-report-burnout>.
- ¹⁰ Scott, Bruce A. "More Medicare-Supported GME Slots Needed to Curb Doctor Shortages." *American Medical Association*, 4 Oct. 2024, www.ama-assn.org/about/leadership/more-medicare-supported-gme-slots-needed-curb-doctor-shortages.
- ¹¹ National Center for Health Workforce Analysis. *Health Workforce Projections*, Bureau of Health Workforce, <https://bhw.hrsa.gov/data-research/projecting-health-workforce-supply-demand>. Accessed 20 Mar. 2025.
- ¹² Berg, Sara. "Physician Burnout Rate Drops below 50% for First Time in 4 Years." *American Medical Association*, 2 July 2024, <http://www.ama-assn.org/practice-management/physician-health/physician-burnout-rate-drops-below-50-first-time-4-years>.
- ¹³ "Pulse on the Nation's Nurses Survey Series: COVID-19 Two-Year Impact Assessment Survey Younger Nurses Disproportionally Impacted by Pandemic Compared to Older Nurses; Intent to Leave and Staff Shortages Reach Critical Levels." *Nursing World*, American Nurses Foundation, Mar. 2022, <http://www.nursingworld.org/practice-policy/work-environment/health-safety/disaster-preparedness/coronavirus/what-you-need-to-know/covid-19-impact-assessment-survey---the-second-year/contentassets/covid-19-two-year-impact-assessment-written-report-final.pdf>.
- ¹⁴ "New Study: Behavioral Health Workforce Shortage Will Negatively Impact Society." *National Council for Mental Wellbeing*, 25 Apr. 2023, <http://www.thenationalcouncil.org/news/help-wanted>.
- ¹⁵ Kane, Leslie. "'I Cry but No One Cares': Physician Burnout & Depression Report 2023." *Medscape*, 27 Jan. 2023, <http://www.medscape.com/slideshow/2023-lifestyle-burnout-6016058?faf=1>.
- ¹⁶ Landers, Susan. "Burnout in Healthcare Workers: A Growing Crisis and How to Address It." *Managing Medical Workplace Stress: Burnout in Healthcare Workers*, Sept. 2024, susanlandersmd.com/managing-stress-in-medicine-burnout-in-healthcare-workers.
- ¹⁷ Han, Shasha, et al. "Estimating the Attributable Cost of Physician Burnout in the United States." *Annals of Internal Medicine*, U.S. National Library of Medicine, 4 June 2019, pubmed.ncbi.nlm.nih.gov/31132791/.
- ¹⁸ Hodkinson, Alexander, et al. "Associations of Physician Burnout with Career Engagement and Quality of Patient Care: Systematic Review and Meta-Analysis." *BMJ (Clinical Research Ed.)*, U.S. National Library of Medicine, 14 Sept. 2022, pubmed.ncbi.nlm.nih.gov/36104064/.

Opportunities to Alleviate the Health Care Workforce Crisis With Telehealth and Emerging Technologies: Proceedings From an Expert Roundtable

- ¹⁹ Newitt, Patsy. "Physicians per Capita in All 50 States." *Becker's ASC Review*, 1 Nov. 2023, http://www.beckersasc.com/asc-news/physicians-per-capita-in-all-50-states/?oly_enc_id=8907D8369567D7C.
- ²⁰ *Health Care Workforce: Key Issues, Challenges, and the Path Forward*, U.S. Department of Health and Human Services Office of the Assistant Secretary for Planning and Evaluation, Oct. 2024, aspe.hhs.gov/sites/default/files/documents/82c3ee75ef9c2a49fa6304b3812a4855/aspe-workforce.pdf.
- ²¹ *Health Care Workforce: Key Issues, Challenges, and the Path Forward*, U.S. Department of Health and Human Services Office of the Assistant Secretary for Planning and Evaluation, Oct. 2024, aspe.hhs.gov/sites/default/files/documents/82c3ee75ef9c2a49fa6304b3812a4855/aspe-workforce.pdf.
- ²² Verma, Seema. "Early Impact of CMS Expansion of Medicare Telehealth During COVID-19." *Health Affairs*, 15 July 2020, <http://www.healthaffairs.org/content/forefront/early-impact-cms-expansion-medicare-telehealth-during-covid-19>.
- ²³ *The Evolution of Telehealth during the COVID-19 Pandemic: A Multiyear Retrospective of FAIR Health's Monthly Telehealth Regional Tracker*, FAIR Health, 14 June 2022, s3.amazonaws.com/media2.fairhealth.org/brief/asset/The Evolution of Telehealth during the COVID-19 Pandemic-A FAIR Health Brief.pdf.
- ²⁴ *Monthly Telehealth Regional Tracker*, FAIR Health, <http://www.fairhealth.org/fh-trackers/telehealth>. Accessed Feb. 2025.
- ²⁵ *What is Telehealth?* Health Resources & Services Administration, Mar. 2022, <https://www.hrsa.gov/telehealth/what-is-telehealth>.
- ²⁶ "Billing for Remote Patient Monitoring." *Telehealth and Remote Patient Monitoring*, Health Resources & Services Administration, 17 Jan. 2025, telehealth.hhs.gov/providers/best-practice-guides/telehealth-and-remote-patient-monitoring/billing-remote-patient.
- ²⁷ Verma, Seema. "Early Impact of CMS Expansion of Medicare Telehealth During COVID-19." *Health Affairs*, 15 July 2020, <http://www.healthaffairs.org/content/forefront/early-impact-cms-expansion-medicare-telehealth-during-covid-19>.
- ²⁸ Erikson, Clése, et al. "Association between State Payment Parity Policies and Telehealth Usage at Community Health Centers during COVID-19." *Journal of the American Medical Informatics Association: JAMIA*, U.S. National Library of Medicine, 12 Sept. 2022, [pmc.ncbi.nlm.nih.gov/articles/PMC9384471/](https://pubmed.ncbi.nlm.nih.gov/articles/PMC9384471/).
- ²⁹ Zachrison, Kori, et al. "Understanding Barriers to Telemedicine Implementation in Rural Emergency Departments." *Annals of Emergency Medicine*, 29 Mar. 2020, [http://www.sciencedirect.com/science/article/abs/pii/S0196064419305360](https://www.sciencedirect.com/science/article/abs/pii/S0196064419305360).
- ³⁰ Borges do Nascimento, Israel Júnior, et al. "Barriers and Facilitators to Utilizing Digital Health Technologies by Healthcare Professionals." *Njp Digital Medicine*, Nature, 18 Sept. 2023, <https://www.nature.com/articles/s41746-023-00899-4>.
- ³¹ Boyle, Patrick, et al. "What's Your Specialty? New Data Show the Choices of America's Doctors by Gender, Race, and Age." AAMC, 12 Jan. 2023, <http://www.aamc.org/news/what-s-your-specialty-new-data-show-choices-america-s-doctors-gender-race-and-age>.
- ³² "AMA: 2021 Telehealth Survey Report ." *American Medical Association*, Mar. 2022, <https://www.ama-assn.org/system/files/telehealth-survey-report.pdf>.
- ³³ Eckhoff, Dawn O., et al. "Telehealth across Nursing Education: Findings from a National Study." *Journal of Professional Nursing*, 2022, <https://www.sciencedirect.com/science/article/abs/pii/S8755722322001132>.
- ³⁴ Noronha, Craig, et al. "Telehealth Competencies in Medical Education: New Frontiers in Faculty Development and Learner Assessments." *Journal of General Internal Medicine*, Society of General Internal Medicine (SGIM) Education Committee, 26 Apr. 2022, pubmed.ncbi.nlm.nih.gov/35474505/.
- ³⁵ Rutledge, Carolyn, et al. "Telehealth Competencies for Nursing Education and Practice: The Four P's of Telehealth." *Nurse Educator*, U.S. National Library of Medicine, 2021, pubmed.ncbi.nlm.nih.gov/33481494.
- ³⁶ Roberts, Eric T., and Ateev Mehrotra. "Assessment of Disparities in Digital Access Among Medicare Beneficiaries and Implications for Telemedicine." *JAMA Internal Medicine*, 3 Aug. 2020, jamanetwork.com/journals/jamainternalmedicine/fullarticle/2768771.
- ³⁷ "AMA: Physician Enthusiasm Grows for Health Care AI." *American Medical Association*, 12 Feb. 2025, www.ama-assn.org/press-center/press-releases/ama-physician-enthusiasm-grows-health-care-ai.

- ³⁸ “Physician Sentiments around the Use of AI in Health Care: Motivations, Opportunities, Risks, and Use Cases; Shifts from 2023 to 2024.” *AMA Augmented Intelligence Research*, Feb. 2025, <http://www.ama-assn.org/system/files/physician-ai-sentiment-report.pdf>.
- ³⁹ “Survey: Despite Progress in Virtual Nursing Adoption, Most Providers Remain in Early Stages.” *AvaSure*, 3 Dec. 2024, <https://avasure.com/news/survey-despite-progress-in-virtual-nursing-adoption-most-providers-remain-in-early-stages/>.
- ⁴⁰ Dworkowitz, Alexander, et al. “CMS Authorizes Medicaid/CHIP Coverage and Reimbursement for eConsults.” *Manatt, Phelps & Phillips, LLP*, 18 Jan. 2023, <https://www.manatt.com/insights/newsletters/health-highlights/cms-authorizes-medicaid-chip-coverage-and-reimburs>.
- ⁴¹ Quick Reference Guide: Making Care Primary e-Consult (MEC) Code, *Center for Medicare & Medicaid Services*, 11 Mar. 2024, <https://www.cms.gov/files/document/mcp-mec-code.pdf>.
- ⁴² Carder, Danielle, et al. “Telehealth Modality Usage by US Physicians in 2022.” *Journal of General Internal Medicine*, U.S. National Library of Medicine, 14 Jan. 2025, pubmed.ncbi.nlm.nih.gov/39809963/.
- ⁴³ Gaye, Marema, et al. “Association of eConsult Implementation With Access to Specialist Care in a Large Urban Safety-Net System.” *JAMA Network, JAMA Health Forum*, 21 May 2021, <https://jamanetwork.com/journals/jama-health-forum/fullarticle/2780298>.
- ⁴⁴ Whittington, Melanie, et al. “Cost Savings Associated with Electronic Specialty Consultations.” *The American Journal of Managed Care*, U.S. National Library of Medicine, 1 Jan. 2021, pubmed.ncbi.nlm.nih.gov/33471464/.
- ⁴⁵ Osman, Mohamed A, et al. “Barriers and Facilitators for Implementation of Electronic Consultations (eConsult) to Enhance Access to Specialist Care: A Scoping Review.” *BMJ Global Health*, U.S. National Library of Medicine, 13 Sept. 2019, [pmc.ncbi.nlm.nih.gov/articles/PMC6747903](https://pubmed.ncbi.nlm.nih.gov/articles/PMC6747903).
- ⁴⁶ Osman, Mohamed A, et al. “Barriers and Facilitators for Implementation of Electronic Consultations (eConsult) to Enhance Access to Specialist Care: A Scoping Review.” *BMJ Global Health*, U.S. National Library of Medicine, 13 Sept. 2019, [pmc.ncbi.nlm.nih.gov/articles/PMC6747903](https://pubmed.ncbi.nlm.nih.gov/articles/PMC6747903).
- ⁴⁷ Uscher-Pines, Lori, and Lucy Schulson. “Rethinking The Impact of Audio-Only Visits On Health Equity.” *Health Affairs Forefront*, 17 Dec. 2021, <https://www.healthaffairs.org/content/forefront/rethinking-impact-audio-only-visits-health-equity>.
- ⁴⁸ The Evolution of Telehealth during the COVID-19 Pandemic: A Multiyear Retrospective of FAIR Health’s Monthly Telehealth Regional Tracker, *FAIR Health*, 14 June 2022, s3.amazonaws.com/media2.fairhealth.org/brief/asset/The Evolution of Telehealth during the COVID-19 Pandemic-A FAIR Health Brief.pdf.
- ⁴⁹ Monthly Telehealth Regional Tracker, *FAIR Health*, <http://www.fairhealth.org/fh-trackers/telehealth>. Accessed Feb. 2025.
- ⁵⁰ Kane, Carol K. “Telehealth in 2022: Availability Remains Strong but Accounts for a Small Share of Patient Visits for Most Physicians.” *Policy Research Perspectives, American Medical Association*, 2023, <https://www.ama-assn.org/system/files/2022-prp-telehealth.pdf>.
- ⁵¹ Berg, Sara. “5 Steps Physicians Can Take to Get Rid of ‘Stupid Stuff.’” *American Medical Association*, 11 Jan. 2021, <https://www.ama-assn.org/practice-management/physician-health/5-steps-physicians-can-take-get-rid-stupid-stuff>.
- ⁵² Herron, Andrea. “Rise of the Chief Well-Being Officer.” *WebMD Health Services*, 24 Apr. 2024, <https://www.webmdhealthservices.com/blog/trend-watch-rise-of-the-chief-wellness-officer>.
- ⁵³ “AMA STEPS Forward® Program.” *American Medical Association*, <https://www.ama-assn.org/practice-management/ama-steps-forward>. Accessed 20 Mar. 2025.
- ⁵⁴ Counts, Nathaniel. Medicare Reforms Support Behavioral Health by Expanding Access to Peer Support Specialists and Community Health Workers, *The Commonwealth Fund*, 16 Feb. 2024, <https://www.commonwealthfund.org/blog/2024/medicare-reforms-support-behavioral-health-expanding-access-peer-support-specialists-and>.

manatt

Manatt, Phelps & Phillips, LLP [manatt.com](https://www.manatt.com) © 2025