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Healthcare Systems & Services Practice

Assessing the lingering impact of COVID-19 on the nursing workforce

Analysis suggests potential instability and workforce gaps in the US healthcare sector. A call to action for all stakeholders could help.

by Gretchen Berlin, Meredith Lapointe, Mhoire Murphy, and Joanna Wexler

May 2022

The journey to becoming a nurse often begins with a desire to help improve people's lives. In the years before COVID-19, the United States' healthcare sector—while not without its challenges—had created a steady pipeline for those seeking to become registered nurses (RNs) and licensed practical nurses (LPNs).[1] For example, prepandemic, the number of new nursing licenses continued to grow at around 4 percent per year, infusing additional talent into the workforce to replace talent that retired.[2]

COVID-19 has altered many US nurses' career plans. Over the past two years, McKinsey has found that nurses consistently, and increasingly, report planning to leave the workforce at higher rates compared with the past decade.[3] In our latest McKinsey survey, 29 percent of responding RNs in the United States indicated they were likely to leave their current role in direct patient care, with many respondents noting their intent to leave the workforce entirely.[4]

Even as COVID-19 cases fluctuate, US healthcare providers are still experiencing the workforce and operational challenges exacerbated by the pandemic.[5] Patient demand is expected to rise, given the growing and aging population of the United States. Without addressing this potentially wider divide between patient demand and the clinical workforce, with a specific focus on nurses, the US health sector could face substantial repercussions. For example, as of February 2022, 90 percent of McKinsey COVID-19 Hospital Insights Survey respondents said workforce shortages were a barrier to increasing elective surgery volume, up 11 percentage points from July 2021.[6]

If no actions are taken, there will likely be more patients in the United States who will need care than nurses available to deliver it.

By 2025, we estimate the United States may have a gap of between 200,000 to 450,000 nurses available for direct patient care, equating to a 10 to 20 percent gap (see sidebar, "Our methodology"). To meet this demand, the United States would need to more than double the number of new graduates entering and staying in the nursing workforce every year for the next three years straight. While we do not directly address rapid evolutions in healthcare productivity in this article, we acknowledge it may affect the nursing shortage. These may include evolution in allocation of care team members to ensure constrained nurse time is focused on things they are uniquely qualified for (for example, medication administration or physical assessment), technology-enabled productivity tools, or alternative sites of care settings for patients to receive care. These advances may have a substantial impact in the long term, but our experience suggests these measures may have limited impact over the next three years.

There are strategies that may boost an influx of nurses into the healthcare workforce and address these immediate and medium-term shortages.

In this article, we provide context for how COVID-19 changed the nursing workforce, the long-term implications for nurses and healthcare stakeholders, and actions to consider to increase the odds of closing the gap. In the last section, we highlight how healthcare providers, federal and state governments, the private sector, the nursing workforce, and broader society could encourage those who are training to be nurses.

[1] There were about three million registered nurses, 688,000 licensed practical nurses or licensed vocational nurses, and 727,000 physicians in the United States as of 2020, according to the United States Bureau of Labor Statistics.
[2] Nurse licensure and National Council Licensure Examination (NCLEX) exam statistics, 2016–2019, accessed April 2022.
[3] Gretchen Berlin, Meredith Lapointe, and Mhoire Murphy, "Surveyed nurses consider leaving direct patient care at elevated rates," McKinsey, February 17, 2022.
[4] Survey results show 9 percent of nurses are retiring and 6 percent are leaving the workforce for personal or family goals. For more, see "Surveyed nurses consider leaving direct patient care at elevated rates," February 17, 2022.
[5] "Survey: US hospital patient volumes move back towards 2019 levels," McKinsey, March 17, 2022.
[6] Ibid.

Our methodology

Our methodology relied on the following: registered nurse (RN) supply and demand were calculated by applying trends to the 2019 baseline of RNs in the United States from the Bureau of Labor Statistics and the healthcare demand in days or visits from multiple sources. These reflect the American Hospital Association (inpatient days, emergency department visits, and other outpatient visits); Definitive Healthcare (home health visits, skilled nursing facility days, and hospice days); Centers for Disease Control and Prevention (physician office visits); and the Kaiser Family Foundation (nursing home residents).

For RN supply, we assumed an annual influx of new nurses based on the average historical growth rate of new US RN licenses from the National Council Licensure Examination (NCLEX, 2016–2020). Our number for outgoing nurses was based on nurses who reported leaving direct patient care in our recent surveys (7 percent per year from 2020 to 2022) and the historical retirement rate of about 3 percent per year. We assumed a range of additional nurses who may exit the profession to be 1 to 4 percent in the years 2023 to 2025, given that we expect a decline in the levels of nurses exiting the workforce in future years compared with 2020–22. We assumed the percent of total actively employed RNs who are employed in direct patient care roles remained consistent with prepandemic levels (85 percent) to remain conservative.[1]

For RN demand, we used historical growth rates by work setting (for example, the patient's site of care) to estimate healthcare utilization trends in 2025. We then assumed additional demand from steady-state COVID-19 volume, based on COVID-19 peaks and troughs over the past two years and the potential impact of "long COVID" on inpatient hospitalizations (from 1 to 12 percent of additional inpatient days). We estimated long COVID impact by assuming 20 percent of cases result in long COVID symptoms, of which 1.5 percent are hospitalized (consistent with the flu) at the average length of stay in the United States (4.5 days) to take a conservative estimate of potential demand.

Care delivery models assumed nurses are available to work in direct patient care 38 hours per week, 50 weeks per year, on average, for full-time nurses (about 80 percent of the workforce) and 24 hours per week, 50 weeks per year, for part-time nurses (about 20 percent of the workforce).

[1] Bureau of Labor Statistics, 2019.

How COVID-19 bruised the healthcare workforce

Healthcare leaders worrying about having enough qualified staff is not a new problem. In 2019, for example, around 80 percent of hospital chief executives cited RN shortages among their top three staffing concerns.[7] By 2021, the clinical workforce was the number-one overall concern for hospital CEOs.[8] In February 2022, in addition to the barriers with workforce shortages and elective surgery, 84 percent of respondents in the McKinsey COVID-19 Hospital Insights Survey said a lack of availability of clinical support staff was a barrier to increasing patient volume.[9]

Our analysis indicates that by 2025, the United States may be facing three challenges to effectively meeting patient care needs:

— decreased supply of the absolute RN workforce

— increased inpatient demand from or related to COVID-19

— continued work setting shifts and increased demand due to a growing and aging population

[7] Leslie A. Athey and Elizabeth M. Villagomez, *Addressing personnel shortages in hospitals*, Foundation of the American College of Healthcare Executives, 2020.
[8] Molly Gamble, "Hospital CEOs' no. 1 concern is staffing for 1st time in 17 years," Becker's Hospital Review, February 4, 2022.
[9] "US hospital patient volumes," March 17, 2022.

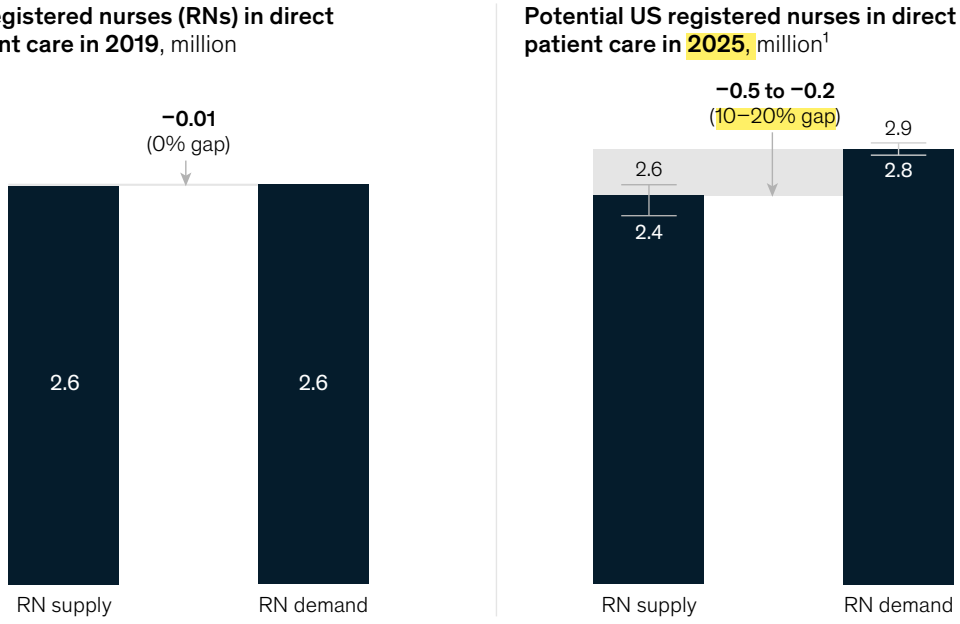
While we devote our focus to the decreased supply of the absolute RN workforce, it is important to note that the problem is not solely limited to RNs. As a group, LPNs, certified nursing assistants (CNAs), and advanced practice nurse respondents all reported a more than 20 percent likelihood of leaving as of fall 2021.[10] Additionally, this analysis looks at head count and may not fully account for capacity impact of potential shifting between full-time, part-time, or per diem status.

Decreased supply of the absolute RN workforce

The United States was projected to experience a 9 percent growth in available jobs for registered nurses from 2020 to 2030. This was driven by an aging population and shifting sites of care for patients, creating the need for more nurses.[11] The pandemic has accelerated potential workforce shortages, according to our survey results. If there are no changes in current care delivery models, our research indicates a gap of 200,000 to 450,000 nurses nationwide by 2025 (Exhibit 1). For every 1 percent expansion of capacity, created through changes in care delivery models, technology-enabled productivity tools, or alternative sites of care settings for patients, the number of nurses needed would decrease by about 25,000. Alternatively, we estimate that for every 1 percent of nurses that leave direct patient care, the shortage worsens by about 30,000 nurses.

Exhibit 1

There may be up to a 10–20 percent gap between supply and demand of registered nurses by 2025.



[†]The ranges 2.4–2.6 and 2.8–2.9 indicate values denoted by confidence intervals.
Source: American Hospital Association, 2016–19; Centers for Disease Control and Prevention; Definitive Healthcare data, 2020; Kaiser Family Foundation, 2016–20; Grandview Healthcare Market Size Reports, 2021; David Auerbach et al., "Will the RN workforce weather the retirement of the baby boomers?" *Med Care*, October 2015; National Council Licensure Examination (NCLEX) data, 2016–20; *New York Times*; United States Bureau of Labor Statistics; McKinsey analysis

[10] "Surveyed nurses consider leaving direct patient care at elevated rates," February 17, 2022.
[11] "Effects of COVID-19 pandemic on employment and unemployment statistics," Bureau of Labor Statistics, last updated January 7, 2022.

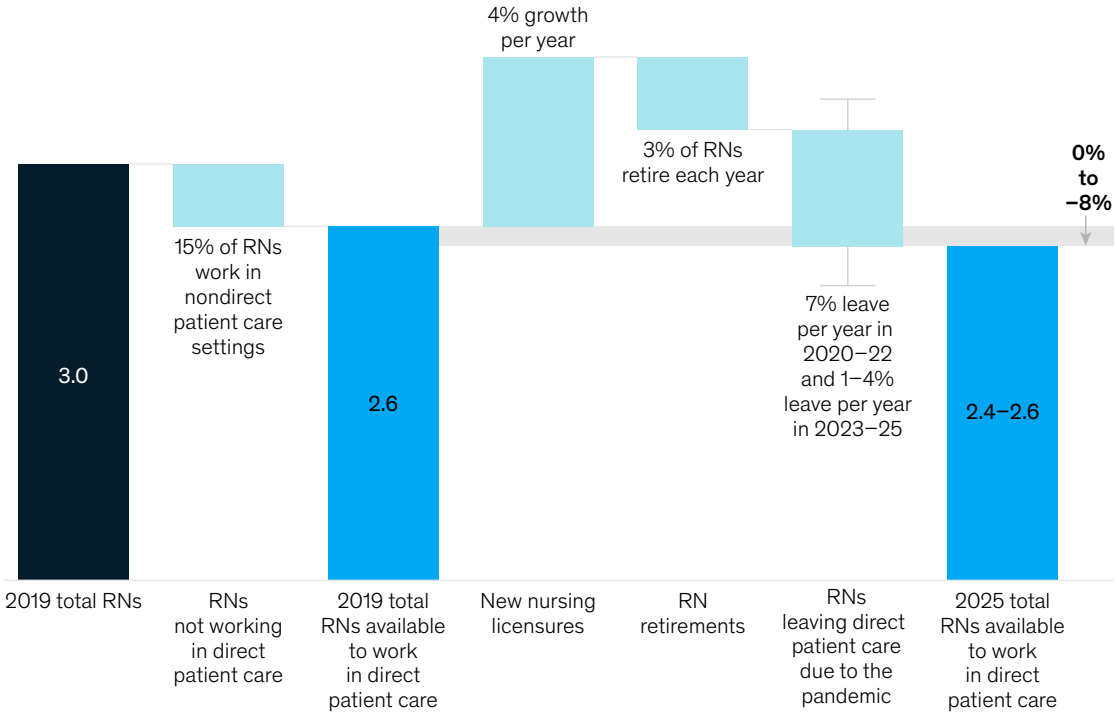
The rates of RN turnover in the United States ticked up over the past five years, growing from 17 percent in 2017 to 26 percent by 2021.[12] McKinsey's Frontline Workforce Survey, conducted in March 2022, found that 29 percent of RN respondents were likely to leave direct patient care.[13] Of those expecting to leave, 15 percent said they intended to leave the workforce entirely.[14] For those who have remained in patient care, 18 percent of surveyed RNs said they had voluntarily left another direct patient care job in the past year and a half.

There are not currently enough graduating nurses to replace the nurses who are leaving. From 2016 to 2019, new registered nursing licenses grew by about 4 percent per year, but in 2020 the growth rate was only about 1 percent.[15] Due to the pandemic, 2020 may have been an anomaly in new license issuances. But even using prepandemic rates, assuming the percentage of nurses remaining in direct patient care roles is constant and retirement rates remain at historical levels of about 3 percent per year, the rates are likely not sufficient to grow the nursing workforce at pace with rising demand (Exhibit 2). Plus, new nurses will not yet have the knowledge or experience of the nurses that are leaving the workforce. Additionally, new nursing licensures may not even continue to grow at a steady rate if there are not sufficient educators to train new nurses.

Exhibit 2

There are several factors influencing the supply of registered nurses through 2025.

US registered nurse (RN) head count, million



Source: David Auerbach et al., "Will the RN workforce weather the retirement of the baby boomers?" *Med Care*, October 2015; National Council Licensure Examination (NCLEX) data, 2016–20; United States Bureau of Labor Statistics; McKinsey analysis

[12] *2022 NSI national health care retention & RN staffing report*, NSI Nursing Solutions, March 2022.
[13] "Surveyed nurses consider leaving direct patient care at elevated rates," February 17, 2022.
[14] Survey results show 9 percent of nurses are retiring and 6 percent are leaving the workforce for personal or family goals.
[15] Nurse licensure and NCLEX exam statistics, 2016–2020, accessed April 2022.

Increased inpatient demand from or directly related to COVID-19

There is also a second challenge: as COVID-19 shifts to its endemic phase, additional pressure is likely to persist on healthcare providers in the United States for at least the next three years. More Americans are expected to be in need of care, with an estimated 1 to 12 percent increase in inpatient hospitalization days in 2025 relative to 2019.[16] This increase may reflect patients who contract COVID-19 (similar to annual flu rate spikes); those who survived COVID-19 but have "long COVID" (symptoms such as chronic breathing problems); or those who have serious symptoms because of contracting the virus (for example, kidney damage caused by COVID-19 that would require dialysis).

Even beyond these numbers, it is unclear how much the effects of delayed care between 2020 and 2022 will affect inpatient hospitalizations and care across settings. It is also unknown when the backlog of outpatient procedures will winnow. What is clearer, based on research, is that a delay in timely preventative care during the pandemic changed inpatient volume and life expectancy.[17]

Continued site-of-care shifts and increased demand due to a growing and aging population

Prior to the pandemic, healthcare leaders were already grappling with the challenge of caring for an aging population with an increasing number of chronic care needs. Shifting sites of care for patients and the aging population were causing greater demand for nurses in most settings. These needs are only expected to expand. Additionally, as ambulatory and outpatient settings rise in popularity, visits are expected to grow (Exhibit 3).

Actions to consider

There is no one-size-fits-all solution to the workforce challenges that are likely to persist over the short and medium term. However, respondents from the McKinsey Frontline Workforce Survey in March 2022 who had left direct patient care said a more manageable workload, increased total compensation, ability to take time off, and being more valued by an organization would be the most important factors they would consider when evaluating a return.[18]

Comprehensive support for the existing nursing workforce could help retention or allow those RNs who left to contemplate a return. Additionally, large-scale solutions could boost entrants to the nursing field, with a focus on sustainable career paths and flexibility in care delivery models and operations.

We offer four potential opportunities to address the challenge:

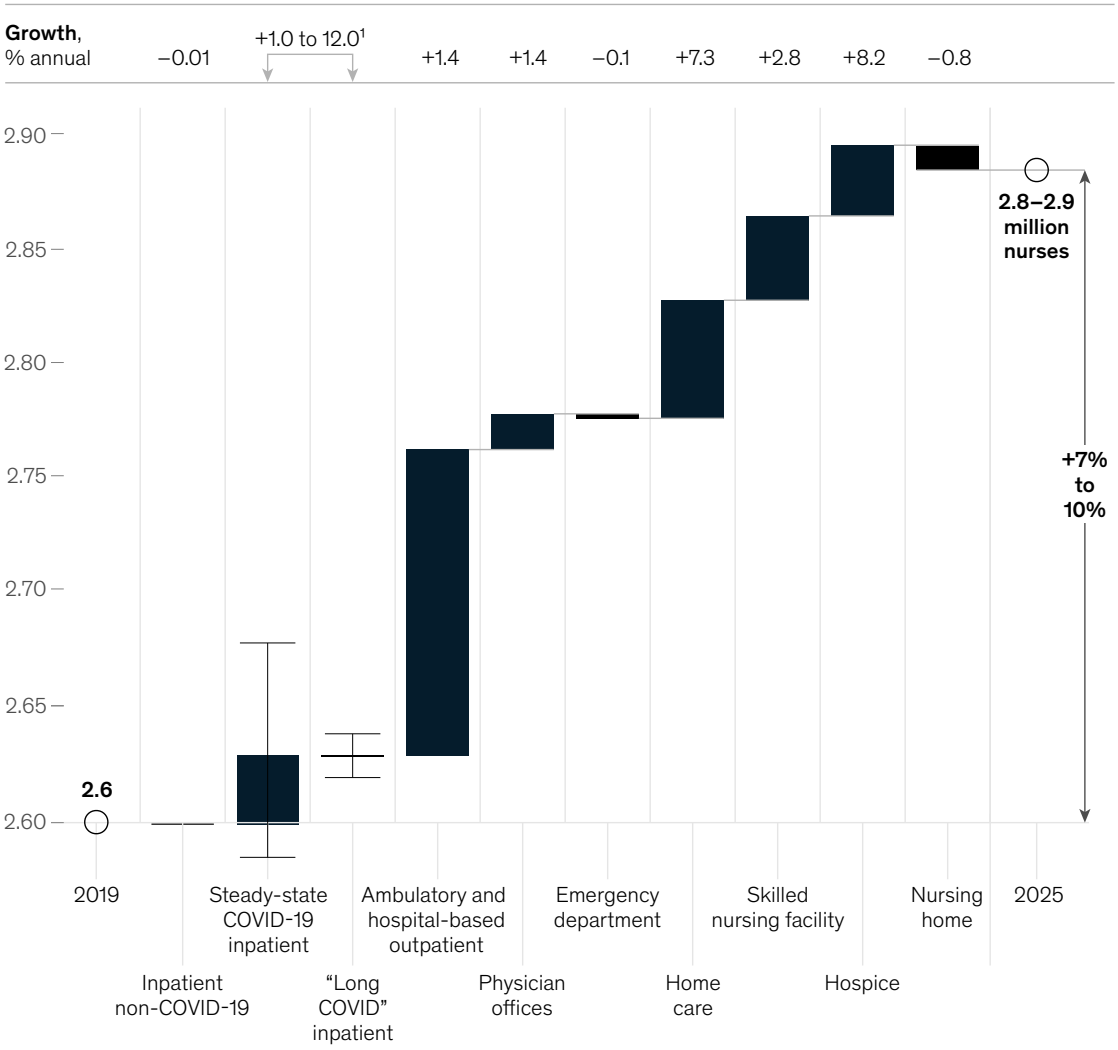
1. **Attracting more people to nursing roles.** Casting nursing as an attractive and exciting career opportunity could help more people understand how they could thrive in the profession. Making the value proposition and pathways for a nursing career more visible and clear for high school students and midcareer joiners may also help. That may start with educational institutions promoting a traditional nursing path (to aide, LPN, or RN), as well as encouraging allied health professionals (such as technicians) to consider nursing. It could also require institutions to identify and train new sources of talent (for example, from adjacent industries and from international programs). Innovative partnerships might create the opportunities—via education programs, funding support, and skills training—for individuals new to nursing and healthcare to gain skills and credentials.

[16] Based on trends from 2020 to today.
[17] Mark É. Czeisler et al., "Delay or avoidance of medical care because of COVID-19–related concerns — United States, June 2020," *Morbidity and Mortality Weekly Report*, Centers for Disease Control and Prevention, September 11, 2020, Volume 69, Number 36; Usha Lee McFarling, "The COVID cancer effect," *Nature*, November 26, 2021.
[18] "Surveyed nurses consider leaving direct patient care at elevated rates," February 17, 2022.

Exhibit 3

There are several factors influencing the demand for registered nurses through 2025.

US registered nurse (RN) head count, million[1]



[1]COVID-19 volume is not an annual growth rate, but it's growth in inpatient (IP) nurses from 2019 to 2025, based on 2020–22 share of IP beds occupied by COVID-19 (steady-state) and assumptions of long COVID rates from literature review.
Source: American Hospital Association data, 2016–19; Centers for Disease Control and Prevention; Definitive Healthcare data, 2020; Kaiser Family Foundation, 2016–20; Grandview Healthcare Market Size Reports, 2021; *New York Times*

2. **Increasing the number of academic and clinical spots.** Even if there was a huge increase in high school or college students seeking nursing careers, they would likely run into a block: there are not enough spots in nursing schools and there are not enough educators, clinical rotation spots, or mentors for the next generation of nurses. To increase the number of spots, higher education institutions could increase resources and healthcare providers could find ways to support training while still often managing their own staff shortages. Regulators also may consider additional flexibility in how to accredit programs and on streamlining timely licensure processes.

Progress may depend on creating attractive situations for nurse educators, a role traditionally plagued with shortages.[19] This may involve creating incentives, monetary and other, for educators. It also could involve clearly defined career pathways or flexibility in different teaching models, such as part-time and rotational teaching or special positions in partnerships.[20]

3. Reimagining clinical education. Academic institutions could consider partnering with healthcare providers to identify and address skill gaps and to connect potential candidates with employers. For instance, an employer collaborative of Cleveland Clinic, MetroHealth, and University Hospitals in Ohio partnered with Cuyahoga Community College as part of the Workforce Connect Healthcare Sector Partnership (HSP). The partnership's goal is to hire 100 entry-level full-time workers by June 2022.[21] Among the projects of the HSP is a training program called Healthcare Career On-Ramp, where students complete virtual or on-site training over eight days. Those who finish are guaranteed at least one interview, and the program provides six months of job training to new hires.

   Shorter programs also may jump-start interest. For example, Portland Community College, through a Title III Rises grant, offers a two-week, 20-hour course called "On-Ramp to Healthcare" at no cost to participants.[22]

   The federal Health Profession Opportunity Grants program offers another example of on-ramp training. Of more than 14,000 participants who began healthcare training in September 2015, 88 percent completed or were still enrolled in the program by the end of its third year. Sixty-seven percent of participants who completed healthcare training went on to earn a professional license or certification, while three-fifths started a job or were promoted in their current healthcare job.[23] Finally, local higher educational institutions could partner with providers to support nurses. One example: Advocate Aurora Health and the Mennonite College of Nursing (Illinois State University) let Advocate Aurora's RNs complete the college's online RN to BSN (Bachelor of Science in Nursing) program at zero cost.[24]

   Last, virtual classes and simulation-based learning activities could help fill two challenges. First, these efforts could count or partially count toward credit hours more consistently, as deemed appropriate by educational and credentialing bodies. Second, the activities could be designed to help students and trainees gain confidence and comfort with new situations and concepts.

4. Innovating care delivery models to reduce burden on nurses. To maximize nurses' time and energy, providers could prioritize innovating their care delivery models. They may learn from other industries. Airlines, for example, have been moving toward a customer-centric model where seamless integration of data and flight options has nearly eliminated the need for staff to spend time on simple tasks related to flight bookings and communications. In a healthcare setting, sensitive healthcare information and interpretation are often analyzed via digital platforms that only require clinician intervention in extreme circumstances. Internationally,

[19] Robert Rosseter, "Nursing faculty shortage," American Association of Colleges of Nursing (AACN), last updated September 2020.
[20] *Preparing nurse faculty, and addressing the shortage of nurse faculty and clinical preceptors: National Advisory Council on Nurse Education and Practice 17th report to the Secretary of Health and Human Services and the U.S. Congress*, Health Resources and Services Administration, December 2020; Data Spotlight, 2021 Nursing Shortage.
[21] "Workforce Connect Healthcare Sector Partnership develops new On-Ramp training program to connect Cuyahoga County residents with work opportunities," University Hospitals, March 31, 2022.
[22] "On-Ramp to Healthcare," Portland Community College, last accessed April 21, 2022.
[23] Pamela Loprest and Nathan Sick, *Health Profession Opportunity Grants 2.0: Year three annual report (2017–18)*, OPRE Report No. 2019-64, Office of Planning, Research, and Evaluation, Administration for Children and Families, United States Department of Health and Human Services, April 2019.
[24] "A preferred educational partner with Advocate Aurora Health," Mennonite College of Nursing, Illinois State University, accessed April 21, 2022.

providers have launched innovations such as self-dialysis, which can enable patients to perform their own dialysis in dialysis centers or at home and allow clinicians to remotely follow up with low-risk patients.[25]

The goal of innovation is to improve patient engagement and outcomes while allowing nurses to focus their care on those who need their help most. Healthcare providers may consider enabling such change through digital, clinician, regulatory, and labor union collaboration.

Beyond the specific opportunities and actions described above, healthcare stakeholders across the spectrum have a role to play in boosting the nursing workforce. These stakeholders include healthcare providers, federal and state governments, private-sector organizations, and broader society.

Healthcare providers

Healthcare providers could begin by using more analytics to find greater effectiveness and efficiency in workforce planning and deployment. Predictive analytics may allow healthcare providers to ensure optimal resourcing, while AI-enabled workforce planning may help match talent with expected needs.

Creating more virtual-learning opportunities may also attract more nurse educators, allowing them greater flexibility. Providers could consider revamping the hiring process to attract more talent to healthcare at a faster pace. This process begins by mapping the current hiring experience. Leaders could paint a comprehensive picture of the current experience and touchpoints from both the candidate's point of view and the recruiter or hiring manager's point of view. One element may include job postings that more explicitly outline the value proposition of a healthcare career. For example, providers may want to state in a listing that a new director of nursing may be eligible for a specific sign-on bonus or outline how the healthcare provider's culture prioritizes mentorship and collaboration. The goal is to relieve pain points and hire qualified candidates faster.

Healthcare executives may evaluate how to amplify support for all nurses, ranging from those who joined the profession during the onset of COVID-19 to those who are tenured and those who may join the field. By building out clinical pathways and demonstrating how to progress in the field, nurses could see their potential paths illuminated. That may not only attract potential nurses to the role but also help to retain nurses by showing them their possible career progression and growth in the profession.

Healthcare providers and their leadership executives may consider three actions to accomplish this amplification. One, they can develop and implement thoughtful total rewards and total support for nurses to support them throughout their careers. Some examples could include benefits such as providing dependent care support, offering flexible programs to improve nurses' work–life balance, and building in rotational and mobility options for nurses. Two, they may rethink clinical support mechanisms. These may include novice clinician support, a "phone a friend" program, or targeted leadership development programs throughout a nurse's career. They may also consider flexibility, which may include easier shift changes, same-day pay, or rotations. Three, they may envision ways to support nurses who want to return to bedside or direct patient care roles. This could include streamlining the process within the nursing licensure boards to allow nurses who are retired or who have become unlicensed to be reissued licenses. Other ideas—such as sign-on bonuses, increased clerical support, or increased benefits for part-time workers—could help bring back long-tenured nurses.

[25] *National care program for self-care in dialysis*, Swedish Kidney Association, Swedish Society of Nephrology and Swedish Nephrology Nurses Association, 2019.

Finally, nurses themselves also have a role to play. They should feel encouraged to submit ideas on how to retain and recruit. They will likely benefit from a platform that allows them to tell others why they love their careers.

Federal or state governments

Governments may evaluate their needs for nurses by considering their broader local healthcare workforce needs and ask how they could help stem the gap. Public entities may consider launching educational campaigns that highlight nursing through social media, print media, email marketing, or television slots. These materials could then be distributed at career fairs, webinars, or other in-person or virtual events that highlight a need for healthcare professionals.

Another strategy could be incentives created for current and prospective nurses. This could include enhanced financial support, tuition reimbursement, student loan forgiveness for nurses or dependents of nurses, or other strategies to promote nursing education. For example, a state could consider offering a childcare stipend for nurses enrolled full-time in school. Financial incentives also could help public institutions take in more students or new graduates into clinical programs. For example, increased funding could allow additional preceptors or trainers. States or counties could evaluate whether nursing graduates are eligible for financial incentives if they work with at-risk or low-income populations in specific hard-to-hire settings.

Private sector

The private sector may be able to fast-track innovation in ways that support the nursing workforce. For example, the private sector may continue to develop digital technology that can reduce paperwork or redundancies in a patient's medical information or continue to innovate shift-scheduling software to address supply and demand. New technology could be developed or scaled to focus on nurses' physical and mental well-being.

The private sector could also offer resources to healthcare providers and educators in the United States, for example, by developing or loaning in-person training spaces or investigating ways to offer mentorship outside the healthcare universe.

Businesses could consider supporting continuing-education programs for employees who want to transition into medical roles. Rather than seeing those seeking to leave retail or entry-level jobs as a loss to one industry, certain companies could reimagine themselves as healthcare partners for the next generation of workers.

Broader society

Society itself may examine how it shows its appreciation for nurses. Individuals could show gratitude and respect both within a healthcare facility and in daily life, such as with nurses that are family members or friends. Businesses could consider discounts for nurses or other ways to materially show appreciation. Family members also may encourage each other to consider a career in nursing, highlighting the need and demand for and the salary and value of a career in direct patient care. In all avenues, individuals could expand their vision and understanding of all nurses can, and will, do for patients. In addition to a commitment to patients, nursing careers can also be financially attractive.[26] The median RN salary in the United States was around $77,600 in 2021.[27] Comparatively, the median household income was $67,521 in 2020.[28]

[26] Robert Gebeloff, Eduardo Porter, and Dionne Searcey, "Health care opens stable career path, taken mainly by women," *New York Times*, February 22, 2015; "Occupational outlook handbook: Registered nurses," Bureau of Labor Statistics, US Department of Labor, April 18, 2022.
[27] "Occupational outlook handbook," April 18, 2022.
[28] Emily A. Shrider et al., *Income and poverty in the United States: 2020*, US Census Bureau, September 14, 2021.

Addressing the short-term workforce challenges and avoiding a major gap in the future is likely dependent on appropriate incentives and conditions for keeping nursing a desirable and supported profession. If these steps are put into motion, patient outcomes and the stability of the healthcare workforce could improve, improving the overall US healthcare sector. From what we have seen—and the resilience shown throughout the pandemic—healthcare, academic, and community leaders are up for the challenge but could use help from every part of society. Without action, every part of the healthcare sector, notably patients and those who care for them, could be at risk.

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The authors wish to thank the entire healthcare workforce, including everyone on the front line. The authors also wish to thank Bonnie Dowling, Connor Essick, Han Hu, Jessica Lamb, Benjamin Levy, Faith Lyons, Angela Sinisterra-Woods, Page West, Catherine Wilkosz, and Aurora Xu for their contributions to this article.

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