



20
22

**WISCONSIN 2022
HEALTH CARE WORKFORCE
REPORT**

Table of Contents

A Message from the WHA Council on Workforce Development Chair.....	1
Executive Summary	2
COVID-19 As a Change Accelerator	4
Wisconsin’s population is aging rapidly and growing slowly	4
Silver Tsunami hits workforce supply and health care demand	5
COVID-19 complicates the health care supply and demand picture	5
Wisconsin’s Hospital and Health System Workforce	9
Vacancy rates stable in 2020	9
The Great Resignation and a massive shift in vacancy rates	10
Accessible and supported career pathways essential to attract and retain employees.....	12
An aging workforce reaches a tipping point.....	13
The workforce emerging from COVID-19	14
Growing health care workforce diversity	15
Provide clinical training in diverse settings to grow and retain the workforce	16
Meeting Wisconsin’s Health Care Needs with the Available Workforce	17
Allow health care professionals and teams to reach their full potential.....	17
Truly leverage technology	18
Reduce regulatory requirements that add to workforce burden	20
Identify and address key drivers of burnout	21
Strengthen the continuum of care to meet patient and community demand	22
Strengthen inadequate public health infrastructure	23
WHA Wisconsin Health Care Workforce Recommendations.....	24
WHA’s Three Ps	24
2022 Recommendations	25
References	26

A Message from the WHA Council on Workforce Development Chair

As chief executive officer of a Wisconsin hospital and chair of the Wisconsin Hospital Association (WHA) Council on Workforce Development, I have been part of the unprecedented experience the COVID-19 pandemic created for health care.



Debra Rudquist

COVID-19 magnified the issues our health care workforce has faced through the second decade of the 21st century. The workforce facing another COVID-19 wave in 2021 was depleted; departures from health care jobs rose over 30% in the early months of 2021, and agency staffing rose by over 130%, driven by the wave of retirements and job changes being called “The Great Resignation.” (1)

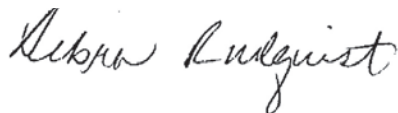
Underlying issues were brought to the forefront as health care providers became not just the last line of defense for an overwhelmed public health and social support system fighting the spread of this virus, but were also forced to fill gaps in the care continuum as lack of post-acute care became a critical issue.

This 2022 Wisconsin Health Care Workforce Report is WHA’s 18th annual report. WHA’s workforce reports utilize national and state data and studies, reports from other experts and the experience and expertise of hospital leaders to provide analysis and offer recommendations for action.

Our Wisconsin health care workforce continues to rise to the challenge of delivering the high-quality, high-value health care that Wisconsin is nationally known for amidst a persistent pandemic straining hospitals and our workforce to their limits. As hospital and health system leaders, we are devoted to protecting, promoting and supporting this workforce so that we can meet the health care needs of the communities we serve.

I am confident my fellow health care leaders, along with Wisconsin’s fine educational institutions, dedicated elected officials and policymakers, remain committed to growing and supporting the health care workforce needed to meet this current crisis and the challenges that lie ahead.

Debra Rudquist



CEO, Amery Hospital & Clinic, Amery
Chair, WHA Council on Workforce Development (2021)

Executive Summary

2021 brought a continuance of many of the challenges faced in 2020 by Wisconsin's health care industry and the professionals who devote their lives to providing health care to their communities.

But Wisconsin hospitals and health systems were tested even beyond the indiscriminate global pandemic that surged back across Wisconsin and the nation in 2021. COVID-19 illuminated and exacerbated long-standing issues and heralded new issues that Wisconsin had previously been able to mitigate, such as widespread nursing shortages and a sudden and almost complete lack of access to post-acute placement for hospitalized patients ready to take the next step in their care.

Throughout 2021, hospitals and health systems and the professionals they employ made dedicated efforts to meet pent-up demand from care delayed early in the pandemic and during the 2020 surge in hospitalizations; deal with another, more prolonged and difficult surge of COVID-19 hospitalizations; and treat those Wisconsinites needing emergency care, hospitalization and vital outpatient services.

Hospitals and health systems also continued to serve important public health functions, vaccinating Wisconsinites with the long-awaited COVID-19 vaccines, continuing to be a major source of COVID-19 testing and providing new monoclonal and anti-viral therapies as they became available.

In 2021, a health care workforce re-shaped by COVID-19 met the challenge of a more virulent coronavirus Delta variant that spread rapidly and caused the hospitalization of younger patients. Mortality rates declined, thankfully, but hospital stays were longer. Throughout the spring, summer and fall of 2021, hospitals saw bigger and more difficult-to-fill workforce gaps. Even with a lower number of COVID-19 cases than in the 2020 surge, hospitals struggled to find medical and intensive care beds for patients and to maintain the staffing levels needed to care for them.

Health care professionals retired, found work outside of the hospital walls away from COVID-19 or even left health care altogether. To ensure care for their communities, hospitals and health systems reached out to staffing agencies to supplement their employed staff in unprecedented numbers.

An aging workforce combined with a spike in worker departures created unprecedented levels of vacancy rates in health care professions in 2021.

This tense environment was additionally challenged by a resurgence of insurance company tactics that further taxed an already strained workforce. Strategies such as white bagging, diagnostic credentialing and retrospective review of emergency care took health care professionals and support staff away from patients just when they were needed most.

As this report shows, COVID-19 accelerated trends that were already stressing Wisconsin's health care workforce—most notably, increasing demand for health care services by an aging population combined with disproportionate retirements of health care workers relative to new professionals entering the field, a phenomenon referred to as the "Silver Tsunami." COVID-19 also created a tipping point for a nursing shortage that Wisconsin has been anticipating, but avoiding, for the past decade.

WHA's workforce analysis and recommendations focus on the targeted and sustained growth needed to address known challenges and to increase capacity with a workforce that cannot grow fast enough and is now falling behind demand.

Wisconsin hospitals must continue to grow our health care workforce in competition with other industries and settings for a shrinking number of workers. Wisconsin health care employers are now challenged as never before to create workplaces and roles that retain current employees while also attracting new talent to Wisconsin and to health care fields at a time of great stress and burnout.

Hospitals and health systems and the health care workforce must at the same time pursue strategies aimed at realizing the full potential of health care teams, leveraging innovative technologies to achieve greater efficiencies and create better connections with patients, and removing regulatory barriers and burnout that impede care delivery and consume precious workforce time and energy.

WHA recommends that health care organizations, educators and policymakers pursue forward-looking health care policy that will support the health care workforce and sustain the excellent health care Wisconsin is known for—specifically, organizational, public and payer policy that will:

- **Build public-private partnerships to “Grow Our Own” Wisconsin health care workforce;**
- **Promote rapid innovations to retain and recruit workers to Wisconsin’s health care workforce;**
- **Break down barriers to top-of-skill practice;**
- **Further bolster acceptance and efficient utilization of telemedicine and technology;**
- **Reduce regulatory burden and increase regulatory flexibility; and,**
- **Support care in the best setting—inpatient, outpatient or post-acute.**

And while enacting these solutions, Wisconsin must also take stock of its public health and payer infrastructure to be better prepared for the inevitable next global health emergency.

COVID-19 as a Change Accelerator

The hospital and health system workforce, from frontline staff to back-office personnel, has experienced an unrelenting COVID-19 pandemic for nearly two years. While the most apparent disruptive force, COVID-19 is just one factor stressing the hospital workforce and hospital capacity. Rising demand, attainment of retirement for a growing number of baby boomers and shifting expectations of the younger generations that now predominate our workforce all play a role.

The surges in hospitalizations and workforce absences created by the coronavirus have produced health care staffing gaps, bed shortages and post-acute care challenges that have led to longer waits in emergency departments, transfers of greater distances for inpatient and ICU care and delays in scheduled visits and procedures.

To overcome these challenges, Wisconsin must grow our health care workforce faster, realize the full potential of that workforce, truly leverage technology and break down barriers that cause burden and burnout.

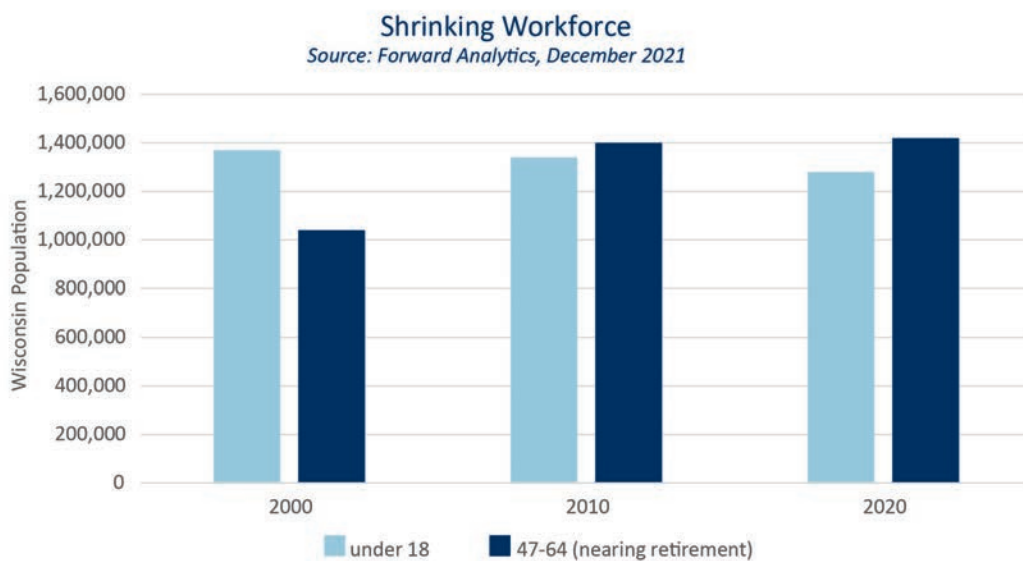
While all industries are challenged by rapidly increasing retirements and a shrinking workforce, health care faces an additional challenge. Unlike other sectors where demand is largely determined by economic forces, demographics are a primary driver of health care demand. As Wisconsin's demographics change, health care will need to adapt to the dual forces of increasing demand and a shrinking workforce.

Wisconsin's population is aging rapidly and growing slowly

In August 2021, the U.S. Census Bureau released the first data from the 2020 census, including age-related and population growth characteristics.

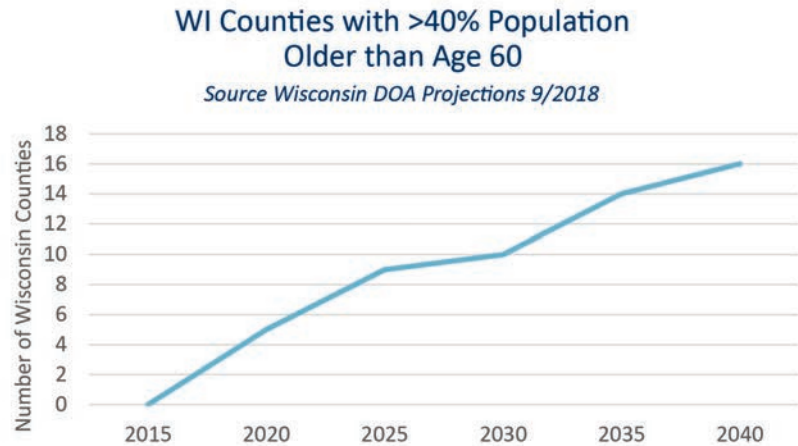
Wisconsin's population growth continues to decline in the 21st century. The 2020 census shows just a 3.6% increase in population from the 2010 census. That growth rate is 40% lower than the growth rate from 2000-2010 and 60% lower than the growth rate from 1990-2000. (2)

Wisconsin's population also continues to age, with those nearing retirement outnumbering those younger than 18 at an increasing pace in the last two decades. Young people are outnumbered by future retirees by about 10%, which means the state's youth population is not large enough to replace retiring baby boomers over the next 20 years. Increasing in-migration and making Wisconsin attractive to health care professionals will be essential to solving health care workforce challenges. (2)



Silver Tsunami hits workforce supply and health care demand

The baby boom generation includes those born between 1946 and 1964. The oldest baby boomer turned 65 in 2011, and the youngest will turn 65 in 2029, putting the nation a bit more than halfway through this large demographic group's workforce exodus. By 2030, one out of every five Americans will be of retirement age; in Wisconsin it's nearly one in four. (3) With average life expectancy in the U.S. reaching 79, the increased health care demand this large generation will create will persist for the next two decades or more.

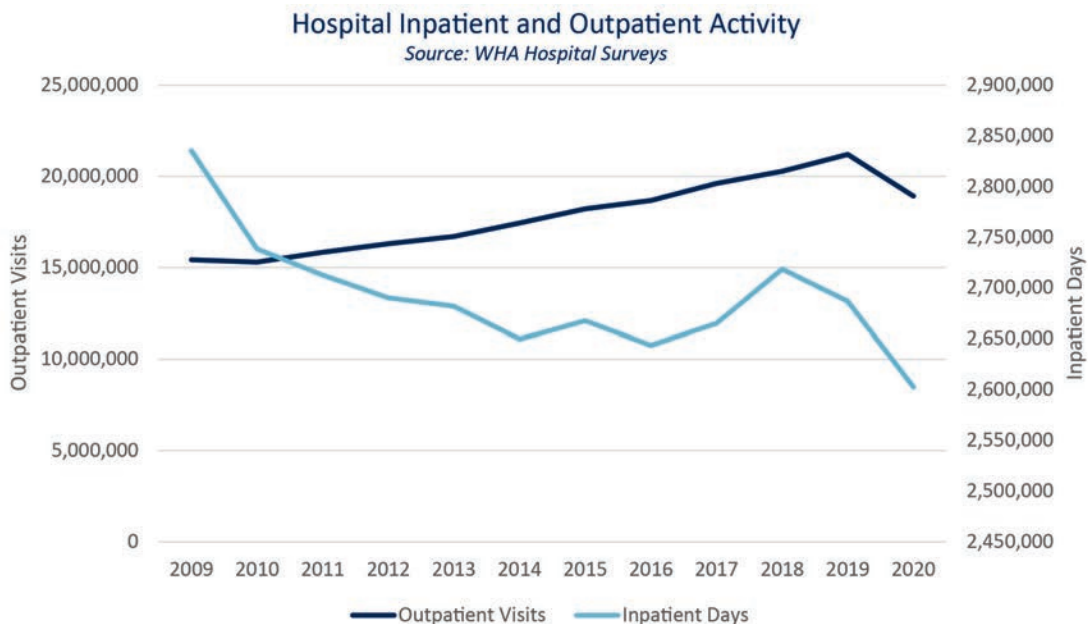


Health care demand increases as age increases, and an aging population requires a larger health care workforce. U.S. citizens over the age of 55 make up 28% of the population, but account for 57% of health care spending. (4) From 2018 to 2033, the U.S. population aged 65 and older is projected to grow by almost 50%, while the population under age 18 will grow by less than 5%. (3)

The state of Wisconsin, following national trends, is aging rapidly. In 2015, Wisconsin had zero counties with more than 40% of the population over age 60. By 2040, projections place 16 Wisconsin counties in this oldest bracket. (5)

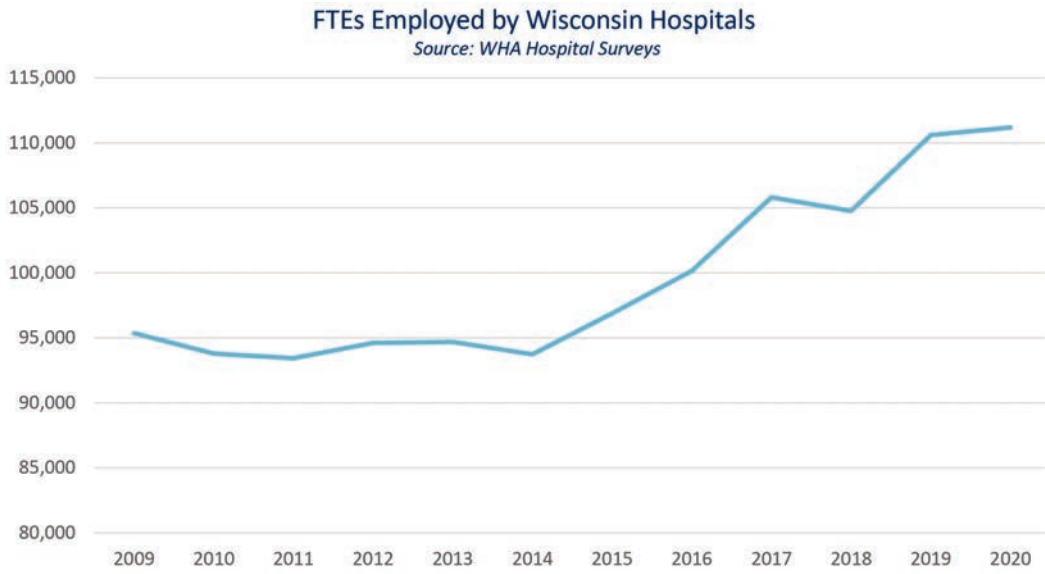
COVID-19 complicates the health care supply and demand picture

In 2020, COVID-19 created additional demand on hospitals and health systems. As hospitals and health systems deferred care early in the pandemic to prepare for a potential surge of patients, inpatient and outpatient volumes dropped.

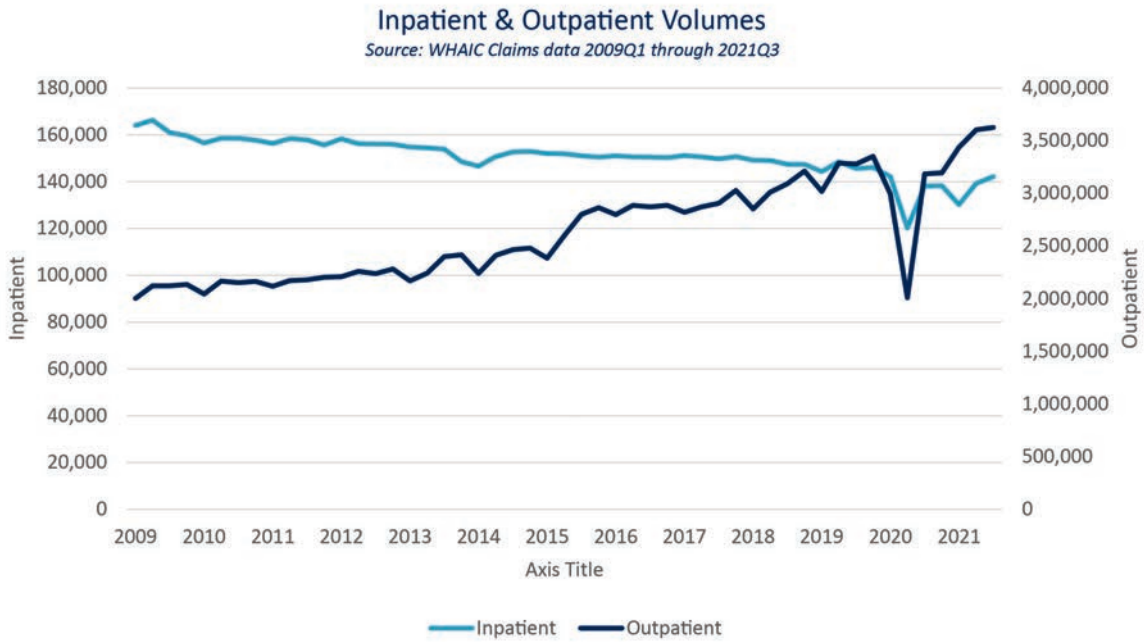


At the same time, hospitals had to increase staffing to provide training on this new virus, to accommodate complex and intense COVID-19 care and to assist with community needs for testing and vaccination.

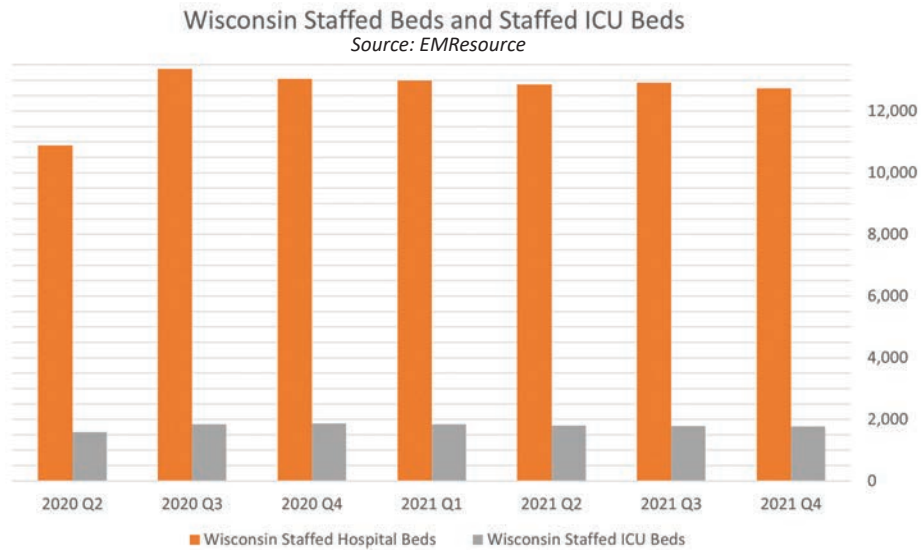
Despite decreased inpatient and outpatient volumes in 2020, hospital employment continued to grow.



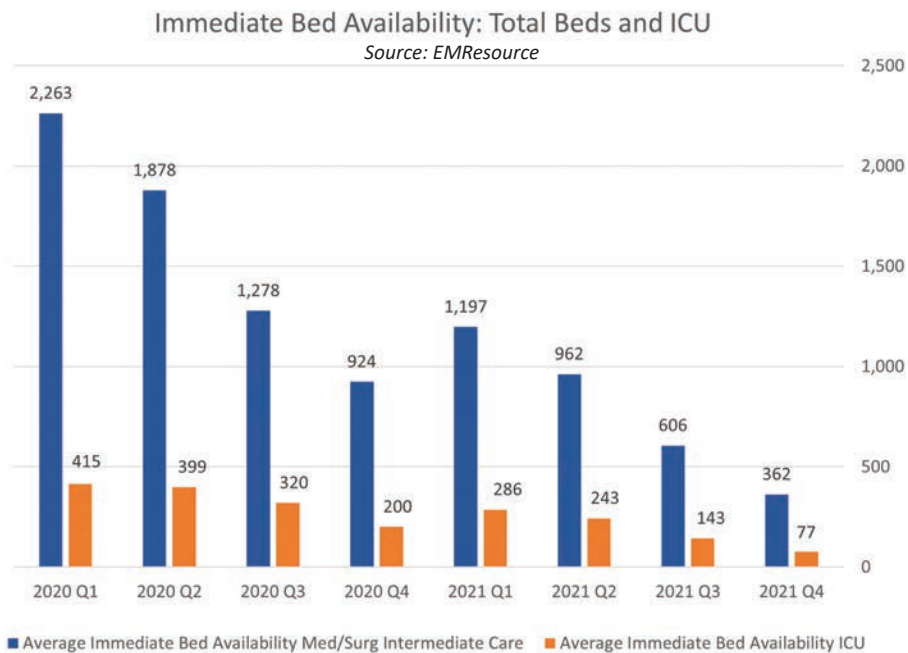
Pent up demand, and a more prolonged surge in COVID-19 brought a rapid rebound in volumes in 2021.



Hospitals increased their staffed beds in 2020 to make room for a COVID surge and worked to fill staffing gaps to sustain an increased number of staffed beds throughout 2021 as they faced pent up demand and a more prolonged surge in COVID hospitalizations. Even with this large number of available beds, immediate bed availability came close to being exhausted in the final quarter of 2021 as workforce shortages became more acute.

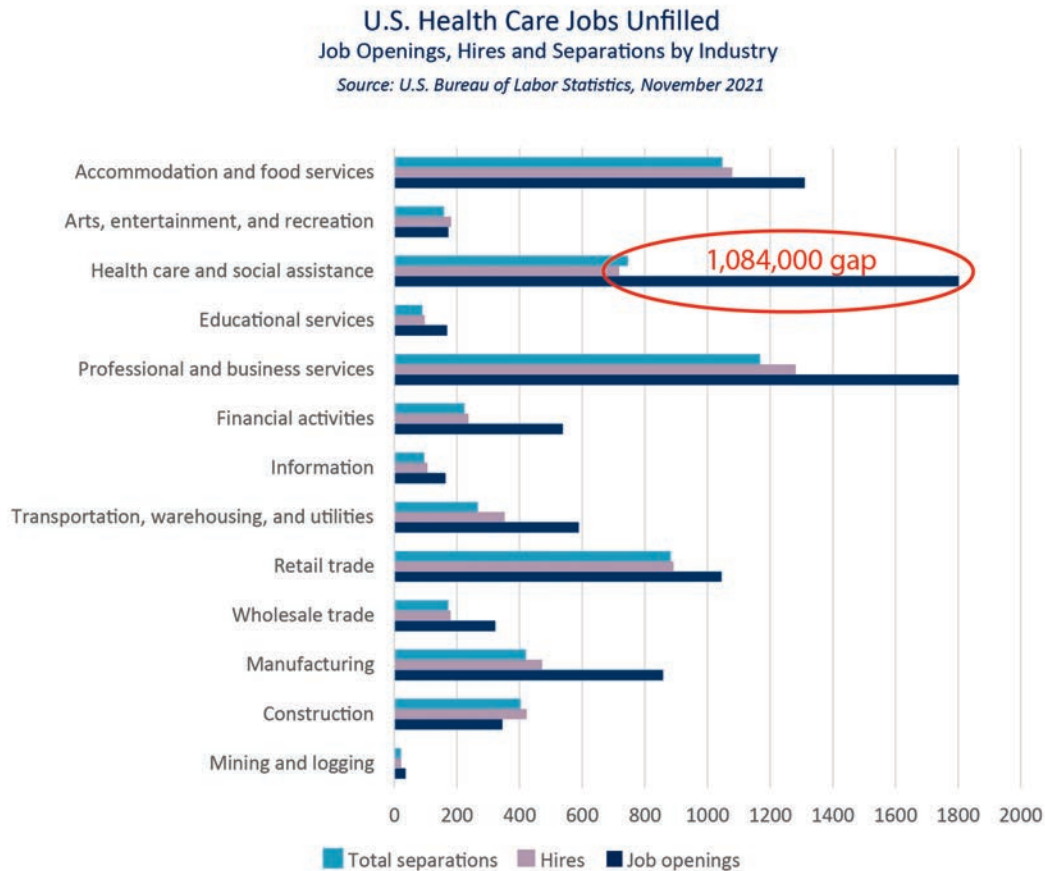


An analysis by Kaufman Hall noted that full-time equivalents per adjusted bed decreased 4.5% from October 2020 to October 2021 while labor costs increased 16.3%, suggesting that national labor shortages are driving labor expenses rather than increased staffing levels. (6) As state and national labor shortages worsened, urban and rural, large and small, hospitals across the state struggled with staffing very full intensive and acute care units and emergency departments.



National data also demonstrates that health care employment continues to grow at a rate faster than employers can fill. Health care became the nation’s largest employer in 2018. (7) The Silver Tsunami and a shrinking workforce means the gap between job openings and hires continues to grow across all sectors.

The gap between “Health care and social assistance” hires and openings doubled from 578,000 in 2019 to over a million by the end of 2021. And gaps between hiring and openings are now widening in many sectors, creating heightened competition for a shrinking workforce.



In response to COVID-19 surging and retreating, health care leaders have moved beyond managing temporary spikes in COVID-19 cases and are now focused on evolving their operations to live with a condition that will likely continue to impact our health system and the health care environment going forward.

Not only will hospitals have to meet the ever-increasing demands for health care created by an aging population, they will also likely need to more drastically flex the workforce to meet peaks in demand attributable to COVID-19 surges in their community, the state and nationally.

Health care is a 24/7/365 business, and hospitals must fill workforce gaps however possible. In 2021, Wisconsin’s health care workforce worked overtime, extra shifts and beside temporary agency staff to meet emergency and acute care needs and keep hospital beds staffed and open for patient care.

Wisconsin's Hospital and Health System Workforce

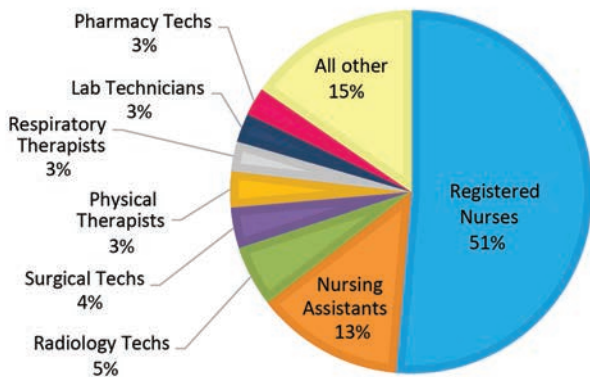
As the demand for urgent, emergent and scheduled care rose throughout 2021, COVID-19, the Silver Tsunami and the Great Resignation created acute workforce shortages for health care employers.

Every hospital in Wisconsin submits a personnel survey to the Wisconsin Hospital Association Information Center (WHAIC) annually. Wisconsin hospitals employ a significant percentage of the state's health care workforce, and as such, hospital survey results can provide a gauge of the status of the health care workforce as a whole.

Each year hospitals are asked to submit survey metrics as of September 30 of that year. Personnel survey results, thus, present a yearly snapshot of Wisconsin's health care workforce.

Workforce Percentage for Selected Wisconsin Hospital Professions

Source: 2020 Hospital Personnel Survey



The annual survey tracks vacancy rates, percentage of workforce 55 years and older and separations for 17 professions that make up 70% of the Wisconsin hospital workforce.

On September 30, 2020, Wisconsin COVID-19 hospitalizations were beginning to surge. The 2020 personnel survey represents the workforce that coped with that first big Wisconsin surge.

Registered nurses continue to comprise more than half of the hospital workforce. By virtue of their education, training and experience, nurses are also equipped to fill several roles on the health care team, and during 2020 and 2021 they filled gaps created by shortages in other segments of the

workforce. The size of the nursing workforce, the many roles nurses fill and the ability of nurses to bridge other workforce gaps makes a nursing shortage disproportionately impactful on hospitals and health care.

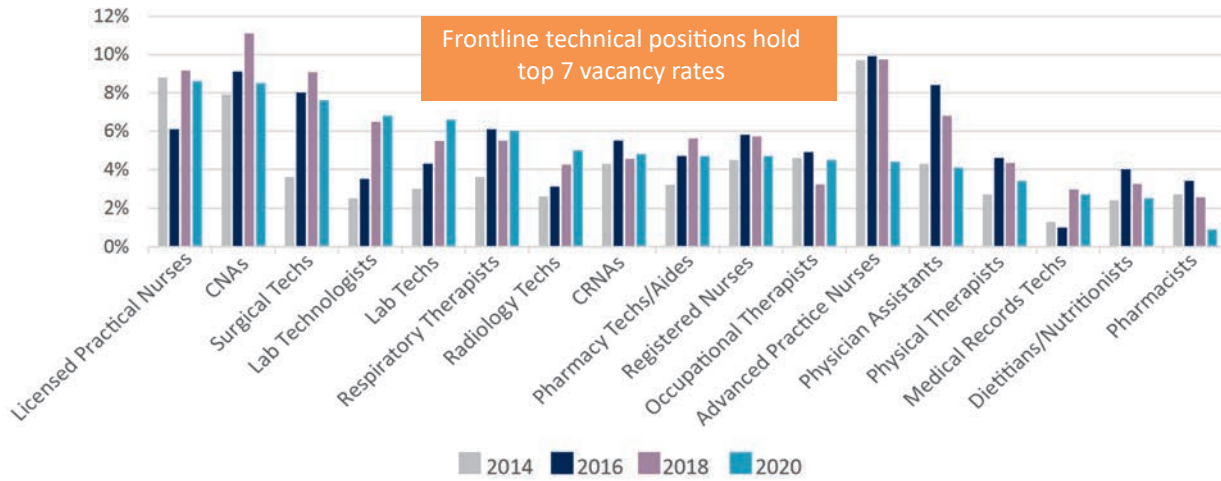
Vacancy rates stable in 2020

Vacancy rates for the hospital workforce in place September 30, 2020, were stable. With health care teams still not sure how COVID would impact their communities, their hospitals and their jobs, many stayed in the workforce to help their communities, their co-workers and their employers cope with COVID-19.

As of September 30, 2020, certified nursing assistant (CNA) vacancy rates trended down, as did vacancy rates for registered nurses (RNs), pharmacists, physical therapists, advanced practice nurses and physician assistants.

Vacancy Rates for Selected Wisconsin Hospital Professions

Source: Wisconsin Hospital Personnel Surveys



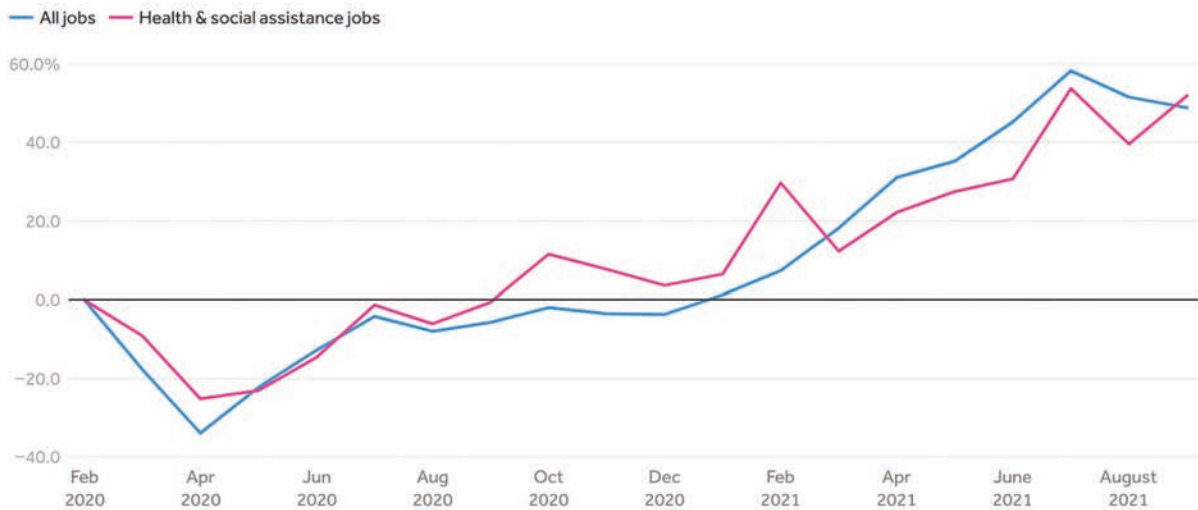
Perhaps an indication of the impact of COVID-19 on professions heavily involved early in the pandemic, vacancy rates for lab professions, radiographers and respiratory therapists crept upward in 2020.

For the first time, advanced practice providers dropped from the top five in WHAIC’s annual survey in 2020, with frontline clinical and technical staff holding all the top vacancy rates.

The Great Resignation and a massive shift in vacancy rates

Starting in late 2020, a wave of job changes, termed the Great Resignation, hit not just Wisconsin and health care, but the entire nation and all industries, as job openings rose steadily throughout 2021. (8)

Cumulative % change in job openings since February 2020, by month, health & social assistance jobs, and all jobs



Note: "All jobs" includes nonfarm jobs only

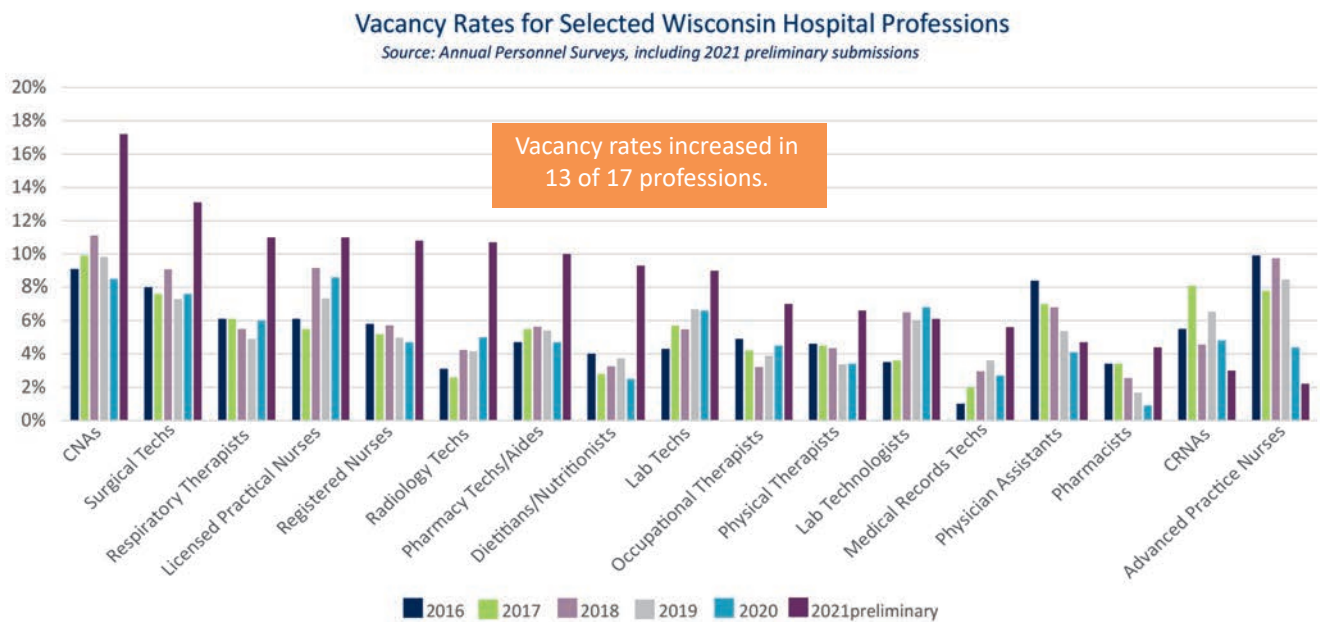
Source: Bureau of Labor Statistics Job Openings & Labor Turnover Survey (JOLTS)

Peterson KFF
Health System Tracker

Early in 2021, WHA began hearing from hospitals and health systems reports of greater and greater difficulty filling gaps in health care teams.

About a quarter of Wisconsin hospitals have a July 1 fiscal year start date and submit their annual survey to WHAIC in December. Forty-one hospitals (27% of all Wisconsin hospitals) submitted personnel survey information in time to be included in this report.

2021 preliminary results from early submissions illuminate the rapid workforce shifts that occurred between September 30, 2020, and September 30, 2021.



Wisconsin annual personnel survey early submissions reported registered nurse (RN) vacancy rates in the double digits for the first time since 2005. The nursing shortage has arrived.

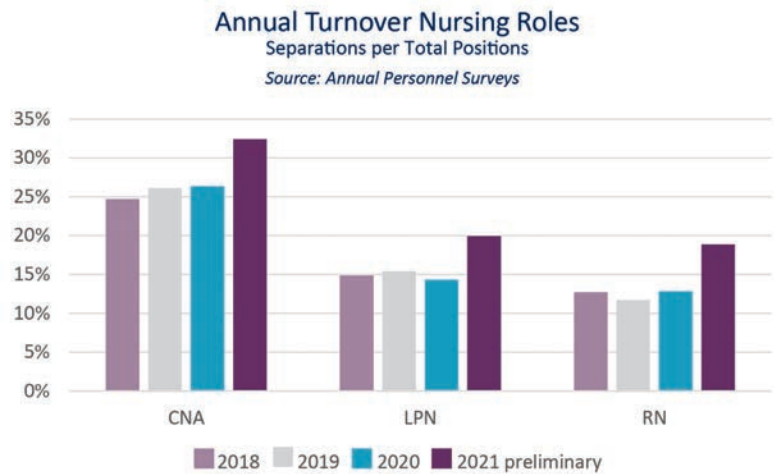
The frontline technical positions of certified nursing assistant (CNA), surgical tech, respiratory therapist and licensed practical nurse (LPN) round out the top five vacancy rates in the 2021 early surveys. Just as in 2020, vacancy rates are highest for frontline clinical and technical staff, and lower in professions with a longer runway to practice, with the exception of occupational and physical therapists, where vacancy rates rose sharply.

The combination of the Silver Tsunami, the Great Resignation and a persistent pandemic that was pushing hospital occupancy beyond its limit created double-digit vacancy rates in 2021 for seven of the 17 professions tracked in WHA’s annual workforce reports.

From 2009 to 2020, only CNAs breached double-digit vacancy rates. From 2005 to 2009, professions with a long educational pathway or a change to a longer educational pathway, such as pharmacy and physical therapy, experienced double-digit vacancy rates. Vacancy rates for pharmacy and physical therapy declined again to single digits with the addition of more Wisconsin education programs.

An examination of turnover rates shows that in 2021 hospitals began to experience the same level of churn in the LPN and RN workforce as they have for the past several years in the CNA workforce.

- Prior to 2021, about 1 in 4 CNAs would change jobs; in 2021 it was 1 in 3.
- CNA turnover far exceeds every other segment of the hospital workforce.
- Prior to 2021, about 1 in 10 RNs changed jobs annually; in 2021 that number was approaching 1 in 5.

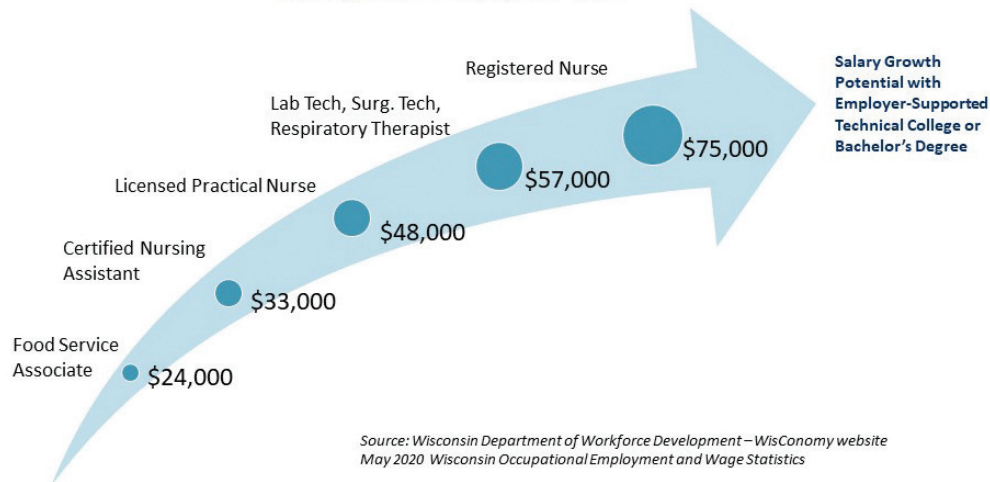


Accessible and supported career pathways essential to attract and retain employees

For CNA and LPN roles, high turnover is acknowledged by hospitals as the investment necessary to grow the health care workforce. A benefit health care offers over other industries is an easily defined and accessible career pathway for several segments of the workforce. Hospitals and their employees can invest time, training and dollars and see their investment double or triple the employee’s earnings while addressing critical workforce shortages for employers and health care teams.

THE POWER OF AN ENTRY-LEVEL HEALTH CARE ROLE

Supported Career Pathways Attractive to Front-line Workforce:
Average Salaries by Career Role



High vacancy rates impact the ability of hospitals to provide care to the communities they serve. High turnover rates impact the financial stability of hospitals and health systems, and the stability of their health care teams. According to Nursing Solutions, Inc.’s (NSI’s) 2021 National Health Care Retention and RN Staffing Report, the average cost of turnover for a bedside RN is \$40,038, and each percent change in turnover costs or saves the average hospital \$270,800 annually (9).

Imbalance in pathways or distribution of the workforce can also drive recruitment and retention efforts. For instance, as nurses pursue advanced practice degrees, or roles in ambulatory settings or temporary employment in staffing agencies, hospitals may need to implement more intense recruitment and retention programs, even though the overall number of nurses is sufficient.

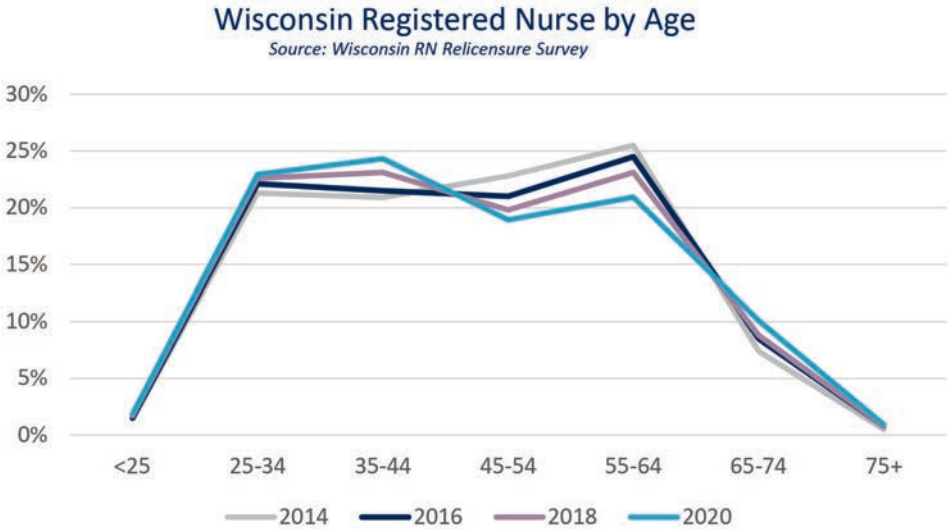
Throughout 2021, hospitals and health systems utilized every strategy immediately available to grow and retain their workforce; strategies like retention bonuses, recruitment incentives, overtime and critical needs pay. Hospitals turned to staffing agencies for temporary workers as never before, and agency costs increased sharply. NSI’s annual RN staffing report showed that utilizing 20 fewer travel RNs in January 2021 would eliminate on average \$3,084,000 in labor expense. (9)

Despite intense efforts, as COVID-19 surged through Wisconsin in the last quarter of 2021, hospitals struggled to maintain patient flow amidst high volumes and staffing shortages. Patients encountered long waits in emergency rooms for inpatient beds, long ambulance rides to hospitals where staffed beds were available, or long waits for a delayed procedure as demand for health care exceeded the available supply of clinicians and support staff.

When COVID-19 hospitalizations subside, and COVID-19 “seasons” become more discernible, health care employers, educators and other key stakeholders will need to determine which trends represent true shortages and which reflect maldistribution between settings or changes in employment models and determine the best strategies to cope with the peaks and valleys of COVID-19 and the Silver Tsunami.

An aging workforce reaches a tipping point

As greater numbers of the baby boom generation retire each day, and millennials, Generation X and Generation Z all join the workforce, we have reached a tipping point in which employers must react and appeal to their workforce in new ways.



Prior to 2020, Wisconsin’s RN workforce was noted to be “aging well,” with about half of the workforce younger than 45 and about half older—a good mix of experience and innovative ideas. A key shift occurred in 2020. The 25-44 age bracket has become the predominant age category represented in Wisconsin’s employed RN workforce. Prior to 2020, the 45-64 age group held sway, with the highest percentage of RNs in the 55-64 age bracket. (10)

This tipping point is being acutely felt by hospitals and health systems as younger generations of nurses, respiratory therapists and physicians find themselves attracted to more flexible employment free of holiday, weekend and shift work and as they compete for ambulatory surgery, clinic and agency jobs.

The good news is that there is continued and renewed interest in health careers. The American Association of Colleges of Nursing reports that nursing enrollments increased in 2020 and 2021. These enrollments will keep growth rates of the RN profession on pace with the national 29% increase from 2008 to 2018 in actively licensed nurses living in the United States, according to the latest Health Resources and Services Administration (HRSA) National Sample Survey of Registered Nurses. (11) And according to the Association of American Medical Colleges (AAMC), the number of students applying to U.S. medical schools for 2021 nationally grew by nearly 18%; astounding growth when year-over-year increases for the decade prior averaged less than 3%. (12)

The workforce emerging from COVID-19

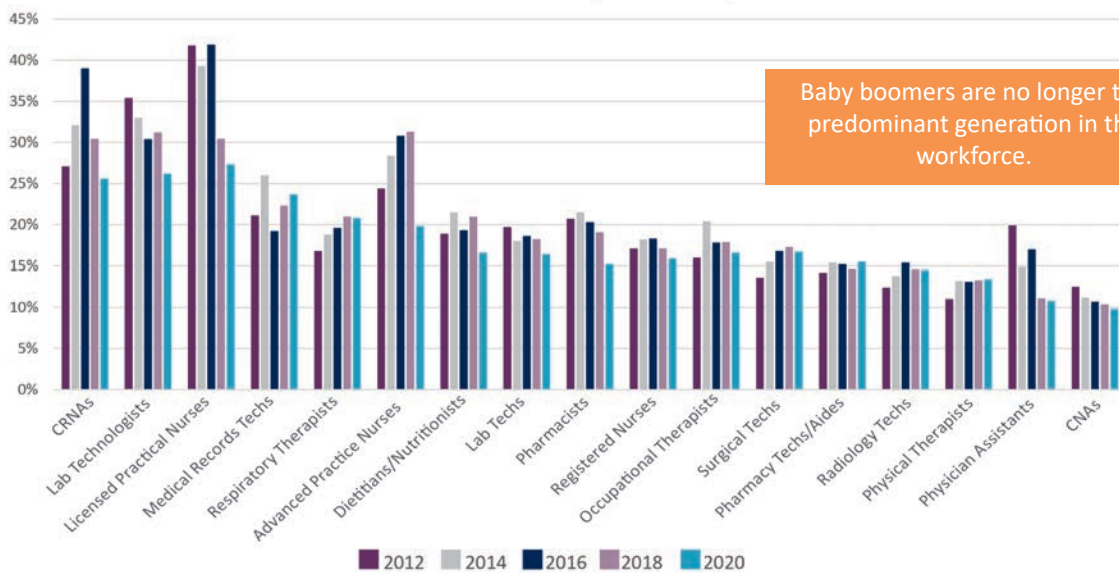
The COVID-19 pandemic is driving fundamental changes in how we live and work, and generational changes will further reshape workplace expectations. The emerging workforce embraces sustainability, flexibility and equity, prioritizing empathy and economic fairness. (13)

With a shrinking workforce, the new shape of work must also include greater productivity.

Annual personnel survey trends show the hospital workforce has also reached a generational tipping point. WHA’s annual survey tracks the percentage of health care professionals 55 years and older for key segments of the workforce. The focus for the past several years has been on preparing for impending retirements by growing educational pathways in professions with an “older” workforce.

Percent of WI Health Care Workforce at Least 55 Years Old

Source: Wisconsin Hospital Personnel Surveys



Baby boomers are no longer the predominant generation in the workforce.

With declines in the percentage of personnel at least 55 years old in 13 of 17 workforce categories, that focus must now include strategies to recruit and retain a younger workforce.

The large shifts in certified registered nurse anesthetists, advanced practice nurses, pharmacists, physician assistants and lab personnel and the year-over-year decreases in RN and CNA percentages are linked to rapid expansion of the workforce in advanced practice clinician fields; churn, as CNAs and other support staff pursue pathways or leave health care; and retirements, as a high number of individuals older than 55 are now retiring.

In all segments of the workforce except licensed practical nurses, lab technologists and CRNAs, fewer than 1 in 4 employees are 55 or older. For all the professions followed in the annual personnel survey, the overall percent of employees 55 and older has declined year-over-year for the last five years, from 21% in 2015 to just 14% in 2020.

As the large baby boom generation retires, employees and employers are experiencing a generational career crunch. (13) Recruitment and retention strategies must appeal to a multi-generational and inclusive workforce. Not only is this key to competing for and retaining the younger workforce needed to care for an aging population, but communities benefit also when cared for by health care teams that reflect the populations they serve.

THE GENERATIONAL CAREER CRUNCH

Baby Boomers would stay longer – 72% intend to work past retirement age, but only 37% feel they are adequately supported.

Gen X feels unable to advance – 55% say opportunities to progress in their careers are limited.

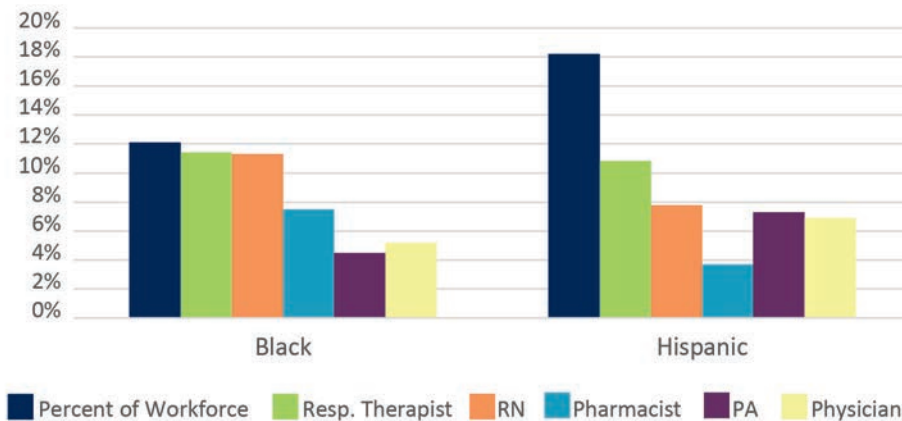
Gen Y can't step up or sideways – only 47% feel there is a supportive structure for employees to go through a career change.

Gen Z expects to move quickly – 43% want to be eligible for a promotion after being in a given role 12 months or less, and 53% think their company policy reflects this timeline. (13)

Growing health care workforce diversity

Workforce Estimates of Health Diagnosing and Treating Practitioners as Compared to Total Percent of Workforce

Source: 2019 American Community Survey Data



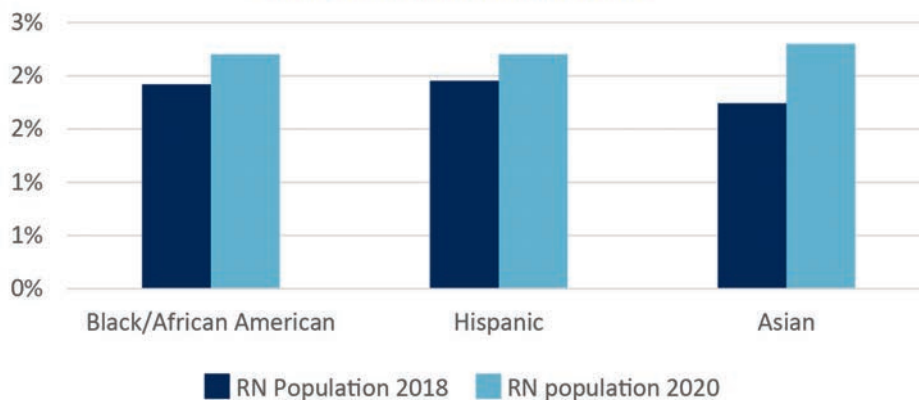
Although there has been some improvement nationally, non-White and Hispanic populations continue to be underrepresented in the health care workforce compared with their representation in the general workforce and the population. (14) Comparisons of racial and ethnic diversity in key health care professions demonstrate this underrepresentation, which increases as the length of the educational pathway increases.

Trends related to registered nurses, the largest segment of the health care workforce, provide an indicator of general health care workforce trends. While the Wisconsin RN workforce is more diverse in 2020, it does not yet reflect the diversity of Wisconsin's population.

Data from the 2020 U.S. Census and the 2020 Nursing Workforce Survey demonstrate this lag. While 81% of Wisconsin’s population is White, 91% of the state’s RN workforce is White. Correspondingly, Black, Hispanic and other racial and ethnic groups are under-represented in the state’s nursing workforce. (10)

Diversity of Wisconsin Nursing Population

Source: Wisconsin RN relicensure survey



Growing a more diverse workforce in health professions targeted to the needs of Wisconsin citizens will benefit the health of the state’s overall population (15), and tapping into a talent pool that includes underrepresented groups will help grow Wisconsin’s health care workforce.

Provide clinical training in diverse settings to grow and retain the workforce

Just as a diverse workforce better serves a diverse population (15), diverse clinical training opportunities have an impact on recruitment and retention to diverse settings. WHA’s “Grow Our Own” equation acknowledges the link between where you are from, where you train and where you work.

The “Grow Our Own” Equation



Since 2013, Grow Our Own grants have created public-private partnerships dedicated to creating and expanding clinical training opportunities for health care professions. The Silver Tsunami and the Great Resignation create even greater urgency for targeted growth in key segments of the health care workforce.

It works!! As of December 2018, 91% of physician graduates from the Wisconsin Academy of Rural Medicine (WARM) practice in Wisconsin. (16)

COVID-19 did not stop Wisconsin hospitals, health systems and health coalitions from pursuing Grow Our Own grant opportunities. Four more allied health professional training grants, five more advanced practice clinician training grants and five more graduate medical education (GME) grants totaling more than \$3.7 million were awarded in 2021. Because grantees must match the grant amount, this equates to over \$7 million invested in clinical training programs across the state.

Since the initial creation of GME Grow Our Own grants through 2013 Act 20, closely followed by Advanced Practice Clinician (APC) and Allied Health training grants through 2017 Act 57, the Wisconsin Department of Health Services (DHS) has awarded 75 total grants, spurring an over \$40 million investment in new and expanded clinical training programs in Wisconsin.

- 21 APC grants have been awarded in the APC specialties of nurse practitioner, physician assistant and certified registered nurse anesthetist.
- 17 Allied Health grants have been awarded to create more training opportunities for certified nursing assistants, certified medical assistants, sonographers, lab professionals, surgical technicians, mental health counselors, clinical social workers, psychologists and substance abuse counselors.
- 37 GME grants have been awarded for family medicine, psychiatry, addiction medicine, general surgery, obstetrics-gynecology, emergency medicine, dermatologic oncology and hematology-oncology.

By 2023, GME Grow Our Own grants will create 136 additional GME residency positions in Wisconsin. When this resident pipeline is full, there will be 47 additional new physicians each year.

Growing our own health care workforce is essential to meet the demands of an aging population and to keep pace with the retirements of the baby boom generation.

Even with intense efforts to grow our physician workforce faster, the Wisconsin Council on Medical Education and Workforce projections predict a physician shortfall of more than 3,000 physicians in the state by 2035 and a 2% decline in Wisconsin's physician workforce in that same timeframe as physicians retire faster than they can be replaced. (17)

Health care employers, educators and policymakers must continue to invest in growing our workforce faster, creating programs that attract new participants to the workforce and policies that foster faster growth.

Just as COVID is here to stay in one form or another, so too are the innovations needed in employment models driven by generational changes and the experience of COVID-19. It will be incumbent on health care employers to appeal to the needs of a younger workforce to fill the positions required to sustain Wisconsin's high-quality, high-value health care.

Meeting Wisconsin's Health Care Needs with the Available Workforce

Even with concerted and targeted effort by employers, educators, policymakers and health care professionals, it is unlikely that a shrinking workforce will be able to grow fast enough to meet the rising demand of the Silver Tsunami and the future surges of COVID-19 that will need to be accommodated.

Hospital and health system teams must be able to work to their full potential, providing care at the top of their skill level for patients in the best setting, enabled by technology and relieved of unnecessary regulatory burden.

Allow health care professionals and teams to reach their full potential

Key to enhancing care for patients and capacity for the workforce is allowing all team members to perform at the top of their skill level. Tasks historically performed by primary care physicians are now being performed by advanced practice clinicians. Entry-level team members safely and effectively deliver services delegated to them by the primary care provider.

COVID-19 created the need for teams to function more effectively than ever before. Team members supported each other to maximize their skill sets and minimize consumption of scarce resources like personal protective equipment (PPE), time and clinician expertise.

Team members working in settings such as ambulatory surgery crossed over to help meet the demand for care in hospital emergency departments and inpatient units. Administrative and office staff moved into patient-facing roles to support clinicians. Hospitals and health systems used every strategy possible to hire more frontline staff.

COVID-19 highlighted the gains that can be made when every team member can contribute to the top of his or her skill level. Waivers enacted to support the need to care for a large number of patients with a finite workforce removed barriers to allow health care teams to achieve their greatest potential.

Current rules can limit providers like APCs from delegating to other professionals or providing care their license, education, training and experience has prepared them for. WHA, health care professionals, employers and policymakers must continue to pursue opportunities like 2019 Wisconsin Act 90. Act 90 recognizes the ability of advanced practice nurses and physician assistants to provide determinations of incapacity to activate patients' wishes under their living will or advanced directive, if such determinations are within the training, education and experience of the advanced practice clinician.



Certification and training requirements can prohibit individuals from seeking caregiver opportunities. Wisconsin's training requirements for certified nursing assistants now mirror federal and neighboring state requirements. Temporary innovations prompted by COVID-19 may help employers and educators create new models to recruit and train new CNAs to the Wisconsin workforce, and to apply these new models to other in-demand entry-level positions.

Complex or slow licensure processes can leave health care providers frustrated and leave Wisconsin at a competitive disadvantage to neighbor states. State agencies must implement new laws in a manner that realizes the potential intended by the Legislature and the administration. The success of 2021 Act 10 is an example of a law that allowed the state's licensing agency, the Wisconsin Department of Safety and Professional Services, to welcome providers more quickly to Wisconsin by allowing those licensed in another state to begin working in Wisconsin while their Wisconsin license is being processed.

Rulemaking underway by the newly formed Physician Assistant Affiliated Credentialing Board to eventuate 2021 Wisconsin Act 23 changes to physician assistant (PA) licensure, discipline and practice provides an opportunity to create rules that are flexible and consistent with the new law and support PA practicing to the full extent of their education, training and experience.

State laws, agency rules and licensure requirements must facilitate safe and efficient entry into health care professions and must be modernized to reflect the current practice and capabilities of health care professionals and health care teams. Hospital and health systems must also carefully weigh internal policies to ensure their health care teams can reach their full potential to safely meet ever-increasing demand.

Truly leverage technology

COVID-19 has broken down silos of care as patients and providers discovered that care traditionally provided in hospitals could occur in outpatient settings, drive-through sites or in a patient's home, often assisted by technology. This remote care, though, can be labor-intensive.

With fewer workers available, truly leveraging technology means improving interventions and outcomes for patients and families and, at the same time, decreasing the amount of time and effort required by clinicians and the teams that support care.

Engaging patients in performing tasks with technology's assistance has become not just a possibility, but even a patient expectation. As phones become smarter and patients experience the benefits of having scheduling, ordering, payment and delivery processes at their fingertips, health care can utilize technology to automate patient-facing processes like registration and scheduling, so team members can focus on activities that require their full skills, such as helping patients find the right provider for their needs, ensuring that care flows smoothly and quickly communicating with patients in ways they experience in other industries. Such strategies impact both patient and staff experience and lighten the load for the workforce. (18)

Technology can also help better support care at the bedside and at home, but the improvements gained in outcomes are not always paired with improvements in workforce time and effort.

A 2021 study discovered that nurses remotely monitoring patients with type 2 diabetes and hypertension were doing more work than nurses completing in-person monitoring. This increased workload resulted in patients receiving more guidance to help them monitor their levels and medications more closely and resulted in better outcomes. (19) The challenge health care and technology developers must meet now is to implement technology to improve outcomes within the bounds of current and future workforce availability.

Remote monitoring and technology can reduce the strain on bedside caregivers. For example, the 2017 WHA Wisconsin Health Care Workforce Report included a story from UW Health's University of Wisconsin Hospital about a video monitoring program that not only kept patients safe, but also freed up valuable nursing assistants from constant observation duties.

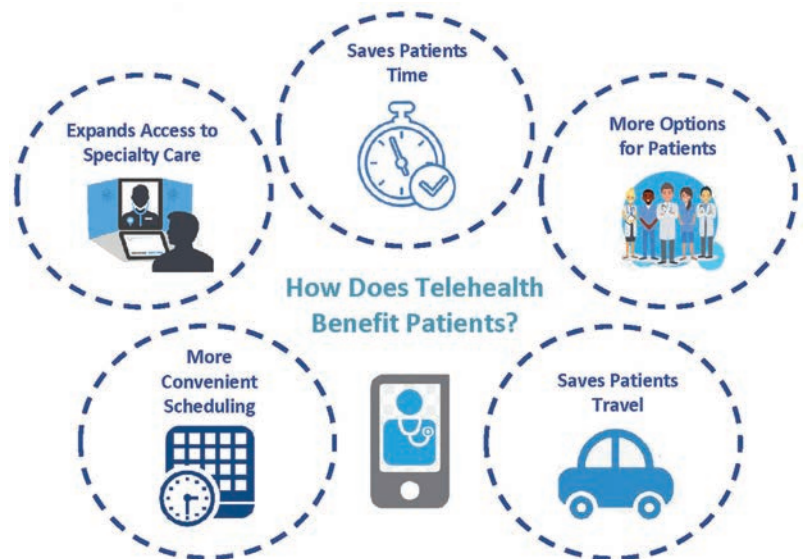
Another remote model pairs centralized staff at an offsite virtual nursing digital center to offer support and coordination to bedside teams. Virtual nurses monitor physician orders and test results, participate in meetings with physicians and families and communicate frequently with bedside teams. Patients and their families and nursing staff have expressed great satisfaction with the program, and the inpatient nurses have been better able to care for more patients with fewer available staff. Patient outcomes have improved, and patient engagement scores have increased. (20)

Telehealth was a lifeline during the early days of COVID-19 and has remained a convenient, effective and increasingly popular way of accessing care.

COVID-19 helped demonstrate the effectiveness of a more direct and less labor-intense connection between patients and providers via technology, sometimes even technology as simple as a wired phone connection, regardless of patient or provider location.

Telemedicine has a proven ability to extend access and benefit to patients, but its use has been hindered by lagging policy.

In Wisconsin's 2019-2020 budget, Governor Tony Evers, the Joint Finance Committee and Wisconsin's Legislature broke down some barriers to telehealth by passing a WHA-proposed health care policy to allow for remote patient monitoring and provider-to-provider consultation.



The federal public health emergency temporarily lifted statutory restrictions that otherwise prevent health care providers from receiving Medicare reimbursement for telehealth delivered in the home or in urban settings. Congress could and should make these changes permanent.

State and federal policymakers must continue to break down barriers for technology that benefits patients in many ways and that is beginning to gain ground in reducing workforce burden, truly leveraging technology for the benefit of patients and the health care workforce.

Reduce regulatory requirements that add to workforce burden

Just as initial ventures in remote patient monitoring and telemedicine can increase workforce burden, electronic health records (EHRs) and billing and data submission requirements have had a profound impact on the workflow of health professionals who are, as a 2017 study published in the *Annals of Family Medicine* noted, “tethered to the EHR.” This study reported, “Primary care physicians spend more than one-half of their workday, nearly six hours, interacting with the EHR during and after clinic hours.” (21)

A 2018 study published in *Family Medicine* tracked components of patient visits with their primary care physicians and found that family physicians in direct ambulatory patient care spent more time working in the EHR than they spent in face-to-face time with their patients. This study noted that “the majority of family physicians worked through lunch, stayed late at the clinic or took their work home to complete the day’s EHR work.” (22)

Contrast this with a study in the U.K., where the face-to-face time general practitioners spent with patients was three times as much as EHR time, and where the entire U.K. visit time was less than the time U.S. counterparts spend in the EHR. (22)

Health care professionals, health systems, hospitals and post-acute care providers confront the daunting task of complying with a growing number of regulations, and evidence of compliance is often through expanding documentation in electronic health records.

Regulation is intended to ensure that patients receive safe, high-quality care. Not all the rules improve care or safety, and all of them require time and action by our health care workforce. Patients have less time with their caregivers and must navigate unnecessary hurdles to receive care.

Regulatory compliance is a major drain on the health care workforce. An average size hospital dedicates 59 full-time equivalent workers (FTEs) to regulatory compliance, and 1 in 4 of those engaged in regulatory compliance is a doctor or nurse, making these clinicians unavailable to patients. (23)

Perhaps the promise of EHRs to make data more accessible and of technology to lighten the load has even made it seem more acceptable to add regulatory requirements, but the reality is that unnecessary regulation carries a time commitment our health care workforce cannot afford.

COVID-19 brought additional time-consuming data gathering requirements as state and federal government strived to trace, track and contain the virus. Data was also intended to help prioritize support needs, such as FEMA assistance. But even with the best data, as COVID-19 surged in 2021, FEMA resources were insufficient to bridge the gap in every state that needed help. The effort required to gather and report data was not matched by the benefit obtained. A post-COVID assessment should include how utilizing data already tracked could result in similar outcomes, rather than creating new, substantial requirements for an already strained workforce.

Regulatory compliance is a major drain on the health care workforce. An average size hospital dedicates 59 full-time equivalent workers (FTEs) to regulatory compliance, and 1 in 4 of those engaged in regulatory compliance is a doctor or nurse, making these clinicians unavailable to patients.

2021 also heralded a revival of payer practices that unnecessarily and/or inadvertently derailed, delayed or denied care—practices such as backend denials of emergency care, white bagging and mid-contract changes in provider and patient requirements. (24)

Revenue cycle departments are in direct contact with payers, but doctors, nurses, case managers and clinical leaders are often pulled away from patient care to provide information, assistance and support to revenue cycle staff and to the patients impacted by these practices.

Policymakers, payers, proponents of care improvement or emergency preparedness initiatives, and clinicians themselves must ensure that the benefit outweighs the additional work required before adding regulations or documentation requirements. They must also actively seek to reduce regulatory burden on teams needed to care for patients—teams that are burning out under the burden.

Identify and address key drivers of burnout

COVID-19 brought rapid and extended surges in hospital occupancy requiring more staff and intensive and innovative care processes. As workforce shortages worsened and volumes kept climbing, staff worked extra shifts and overtime. Even with a COVID-19 mortality rate in Wisconsin lower than the national rate, in 2020 and 2021 hospital staff in the state witnessed more patients dying than they had previously experienced, which took an emotional toll on health care teams.

The extra hours and the emotional drain at work were often matched by concerns outside of work. Many health care providers themselves fell ill or had family members who were sickened with COVID-19, while school and childcare closures caused additional worry.

Physical and emotional fatigue cause burnout, and health care workers retired, left the field or took contract jobs in increasing numbers, further depleting the workforce and increasing stress on remaining employees. (25)

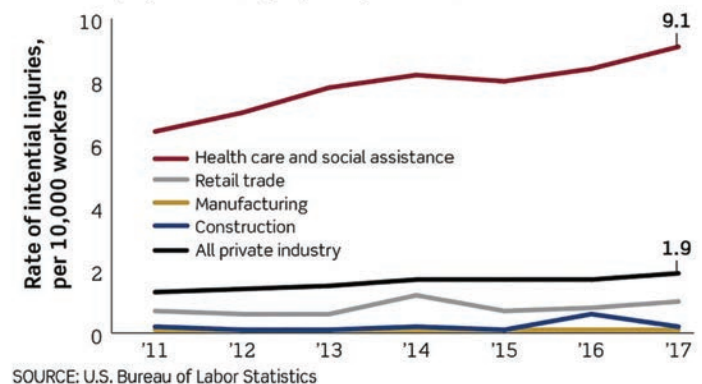
Health care employers understand the importance of a safe and supportive environment at work. COVID-19 has brought a new focus and urgency to these efforts, and employers are strengthening their support strategies, including the need to assess workforce stress and identify specific drivers; build a resilient organization; ensure appropriate workload distribution; develop supportive institutional policies; provide meals, childcare and pet care; provide PPE; pay attention to emotional and mental well-being; and provide staff social support. (25)

Assessing key drivers of burnout helps identify underlying correctable causes employers, health care professionals and policymakers can address. Regulatory burden is one underlying correctable cause already identified that employers, health care teams and policymakers can address together.

Another known contributor to burnout is the higher level of workplace violence that confronts health care workers. Already unacceptably high before the stress of a prolonged pandemic (26), experiences reported by WHA members suggest COVID-19 further exacerbated the verbal and physical aggression directed at hospital staff, not just in the emergency department, but in clinics, birthing centers, intensive care units, medical and surgical units and at entrances and registration desks.

Intentional worker injuries on the rise

Health care and social assistance workers experience intentional injuries by another person at far greater rates than the private industry overall. This includes only injuries involving days away from work.



State and federal agencies and accrediting organizations require hospitals to maintain a safe environment of care, including violence prevention and response policies and practices. The Joint Commission's (TJC's) 2018 Sentinel Event Alert 59 provides an overview of TJC and Medicare Conditions of Participation expectations and recommendations for preventing violence in hospitals.

Hospitals and health systems are taking additional action to ensure the safety of those they employ and those who visit their facilities. Just as there is not a one-size-fits-all hospital or health system in Wisconsin, there is not a one-size-fits-all solution to eliminating violence in the health care workplace.

In 2021 WHA and the WHA Council on Workforce Development created a portal for WHA members to access regulatory and subject matter expert resources and to share their own strategies with their peers.

Hospitals and health systems implement their own internal strategies to prevent workplace violence. Professional associations advocate for and educate their members about workplace violence prevention. There are also legal protections for staff who experience violence in health care settings. Individuals who are victims of violence should be encouraged by their employers and other health care professionals to report these occurrences to law enforcement. Enhanced penalties can help encourage reporting.

Enhanced penalties for violence against health care workers in statute were strengthened in 2019 through Act 97 passed by Wisconsin's Legislature and signed into law by Governor Evers as Act 97. State policymakers, law enforcement, employers and professional organizations must continue to seek other ways to encourage reporting and reduce violence in the health care workplace.

Strengthen the continuum of care to meet patient and community demand

Too many Wisconsin hospital patients experience extended inpatient stays because of a lack of access to post-acute care. Many of these "avoidable days," a hospital day in which the patient is ready for discharge but there is a barrier that prolongs the patient's hospital stay, are out of the hospital's control when post-acute care facilities cannot or will not accept the patients.

As COVID-19 hospitalizations surged in 2021, a bottleneck in the care continuum created by a limited number of post-acute care options reduced the number of staffed hospital beds available for patients who needed acute care services. As hospital occupancy rose throughout the summer and fall, patients who were ready to be discharged but were waiting for a post-acute care placement filled hundreds of hospital beds. These delayed discharges not only affected acute care capacity, but also meant patients were not receiving care in the most appropriate setting.

Post-acute care access challenges existed before but intensified during the COVID-19 pandemic. The focus on these challenges has led to a fresh understanding that access to this needed care will not recover without new and innovative thinking and reforms.

The pandemic also underscored the importance of addressing the worker shortages that contributed to reduced access to post-acute care. During the pandemic, the Wisconsin Department of Health Services (DHS) worked to expand access to nurse aide training programs and provide flexible training options to help nursing homes and other post-acute care providers respond to staffing challenges. DHS is also supporting an updated WisCaregiver Careers program that will provide nurse aide employment, training and testing support and retention bonuses as another part of efforts to address long-term care workforce needs. The University of Wisconsin System provided a \$500 tuition credit as an incentive for about 1,000 nursing and other students to work in nursing homes and other health care facilities on a short-term basis. Importantly, to



help decompress the bottleneck in hospitals caused by the lack of access to post-acute care options, Wisconsin National Guard service members trained as nurse aides and deployed to nursing homes across the state with the goal of opening 200 additional nursing home beds.

The health care community appreciated these key short-term actions taken in response to the pandemic. But there is a growing view that the weaknesses in the health care continuum exposed by the pandemic must be addressed urgently with longer-term solutions.

Evaluation of reimbursement options for hospital stays prolonged by lack of post-acute care, legislation to address guardianship issues and ongoing support of hospital care at home programs are examples of actions to break up bottlenecks in the care continuum and help ensure hospitals, health systems and others have the tools available to address factors that are barriers to patients receiving the right care in the right setting.

Strengthen inadequate public health infrastructure

Early in the pandemic, it became clear that national and state supply chain and infrastructure were inadequate to care for the high volume of testing, tracing and support needed to contain COVID-19. Widespread testing was initially hamstrung by a lack of validated testing methods.

When testing methodologies became available, there were few options for collecting specimens from Wisconsin citizens and completing lab analysis for mass surveillance testing. Community testing sites were inadequate to meet the spikes in demand created by rising coronavirus activity, schools opening or closing, vacations, sporting events and other needs as Wisconsin and the nation learned to co-exist with COVID-19.

The public health and community infrastructure also became overwhelmed with the need to provide notification and tracing for community members desiring the test but unreceptive to tracing and isolation and quarantine requirements of close contacts. And state and national agencies struggled to explain complex and continuously evolving guidance on the safety precautions needed. Hospital and health system staff were subject to even more stringent requirements than the general public at the same time they were burdened with trying to explain complex and ever-changing guidelines to their community members and employers because public health failed to fulfill this role.



Health care providers became inundated with requests for testing, vaccination and information from their communities as well as appeals for assistance from their overwhelmed public health partners. The local hospital was often the only source of testing in rural communities and an unfunded resource drawn upon to fulfill requirements for notification and data gathering that accompany COVID-19 testing.

Hospitals and health care providers became the bearers of COVID-19 news and information, an association that unfortunately bred some resentment within their communities and created an additional challenge for the health care workforce.

The sheer volume of demand for health care and public health intervention related to COVID-19 further demonstrated in 2021 that Wisconsin's medical infrastructure is a finite resource that cannot assume both the health care and public health mantle for the state.

As COVID-19 evolves toward endemicity, Wisconsin and the nation must create an infrastructure for public health and emergency preparedness that can stand up to future outbreaks and emergencies.

WHA Wisconsin Health Care Workforce Recommendations

The Wisconsin hospital and health system workforce battling COVID-19 and striving to deal with pent-up demand in 2021 was an altered workforce.

Hospitals and health systems had to increasingly turn to staffing agencies to fill bigger and bigger gaps in their employed workforce as nurses, respiratory therapists, certified nursing assistants and other members of health care teams retired or resigned in unprecedented numbers.

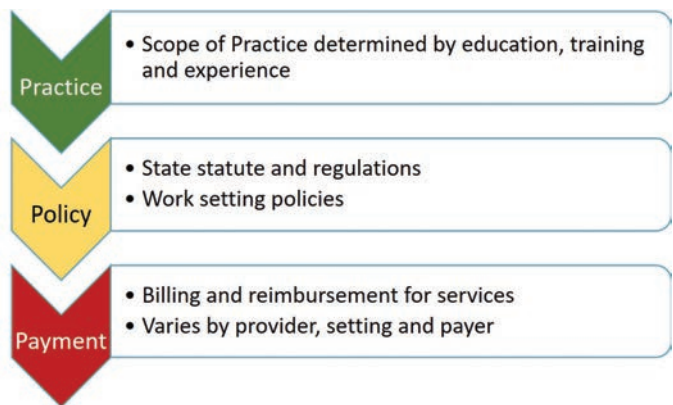
2020 was also a tipping point for a generational shift in hospital employment, and hospitals found themselves increasingly on the losing end of recruitment as they sought to replace a surge of boomer retirements, while millennials, Gen Xers and boomers turned away from on-call, weekend, holiday and shift work and accepted roles in ambulatory surgery centers, clinics or remote work.

Going forward, Wisconsin’s hospitals and health systems must be able to accommodate the COVID-19 peaks and valleys in demand while meeting the health care needs of the communities they serve—needs that cannot be suspended if COVID-19 surges persist. This will require a workforce that can flex to demand in new ways and will require innovation in recruitment, retention, education, regulation and reimbursement for a new generation of workers.

WHA’s Three Ps

The Wisconsin Hospital Association’s Three Ps framework—aligning practice, policy and payment—creates a pathway for health care organizations, educational institutions, policymakers, community leaders and other key stakeholders to assess recommendations and determine priorities, evaluate feasibility, foresee barriers, and take steps to translate recommendations into policy, practice and payment changes.

The WHA conceptual model outlines three major elements that impact, influence and ultimately determine what specific patient care is delivered in many settings. The Three Ps—practice, policy and payment—are meant to be understood from the top down, progressively narrowing conditions that can limit or enhance the amount of patient care delivery associated with various health care professions. All three elements of the model apply to all health care occupations and professions that have recognized and agreed-upon scopes of practice and are allowed to bill for their services. The first two Ps apply to all health care occupations and professions. The third P, payment, applies to all health care occupations where the provider bills for their services, and how and where that payment occurs.



Practice

“Practice” pertains to scope of practice. Scope of practice describes the procedures, actions and processes that a health care practitioner is permitted to undertake in keeping with the terms of their professional license. The scope of practice is limited to that which the law allows for specific education, experience and demonstrated competency. This “education, experience and training” model is generally accepted as defining scope of practice for providers in Wisconsin, and language mirroring this definition is evident in several key Wisconsin rules and regulations such as Chapter N8, the Wisconsin rule that defines and regulates the practice of advanced practice nurses.

Policy

“Policy” pertains to all policy that further defines, clarifies or restricts the first P, practice. These policies may be statutes, rules or regulations imposed by lawmakers or policymakers or may include policies instituted and maintained by hospitals, health systems and other health care employers. For instance, state statute may allow a clinician to continue to provide care while his or her Wisconsin licensure or renewal is pending, but employer policy or payer limitation may set time limits or other restrictions on when this state policy can or cannot be followed.

Payment

“Payment” in the Three P model may be the final determination of how actual patient care is delivered. If a service or treatment is allowed by the professional’s scope of practice and allowed by related statutes, rules, regulations and organizational policies, but is not a service in which payment will be received, this particular treatment or service may be provided by a clinician able to receive payment rather than other professionals allowed by scope and policy to provide the care.

The use of surgeons and advanced practice clinicians, instead of surgical assistants as “first assists” is driven by clinician preference and clinical need but may also be impacted by the third P, since surgeons and advanced practice clinicians can bill for these services, and surgical assistants cannot.

Payment also recognizes the expected site of care. Hospitals, clinics, nursing homes and home health are reimbursed for “allowable” services. When the continuum of care is disrupted, this can result in hospitals providing care they cannot and will not be reimbursed for when that care cannot be obtained elsewhere. Because hospitals provide a complex range of care and employ a highly skilled workforce, hospitals and health systems can often meet not only health care needs but also care and services intended to be provided by public health, long-term care or community settings.

Good health care policy supports high-quality health care. As health care organization leaders and trustees, health care professionals, health care educators, policymakers, community leaders and other key stakeholders make important decisions impacting the health care workforce, the Three Ps provide a pathway to good health care policy.

2022 recommendations

To meet growing demand with a shrinking workforce, urgent action is needed. Policymakers, educators, employers and health care professionals should act to:

1. Break down barriers to entering and remaining in the health care workforce, including legal, regulatory and payer barriers, burden and burnout.
2. Identify practice, policy and payment reforms to advance team-based care and allow health care professionals and teams to reach their full potential.
3. Truly leverage technology to both improve care and reduce workforce demands.
4. Create and make clear educational and occupational pathways to attract new entrants to frontline technical and clinical positions in the health care workforce.
5. Define innovative and sustainable strategies to meet the evolving workforce expectations to recruit and retain the health care workforce necessary to meet rising demand.
6. Reshape the continuum of care, and the public health and emergency preparedness infrastructure to mitigate over-reliance on hospitals, health systems and the health care workforce to meet post-acute and public health needs.

References

1. PINC AI. *PINC AI Data Shows Hospitals Paying \$24B More for Labor Amid COVID-19 Pandemic*. [Online] 2021. <https://www.premierinc.com/newsroom/blog/pinc-ai-data-shows-hospitals-paying-24b-more-for-labor-amid-covid-19-pandemic>
2. Forward Analytics. *Slowing Down, Wisconsin's Waning Population Growth*. December 2021.
3. Association of American Medical Colleges. *The Complexities of Physician Supply and Demand: Projections from 2017 to 2032*. 2019.
4. Ortaliza, J., McGough, M., Wagner, E., Claxton, G., and Amin, K. *How do health expenditures vary across the population?* Peterson-KFF Health System Tracker. 2021.
5. Wisconsin Department of Administration. *Percent of Projected Population Ages 60 and Older, 2015-2040*. [Online] 2018. <https://www.dhs.wisconsin.gov/publications/p01803.pdf>
6. Kacik, A. *Health Systems Reconfigure Workforce Amid Shortages*. Modern Healthcare, November 30, 2021.
7. Thompson, D. *Health Care Just Became the U.S.'s Largest Employer*. [Online] 2018/ <https://www.theatlantic.com/business/archive/2018/01/health-care-america-jobs/550079/>.
8. Wagner, E., Amin, K., Cox, C., and Hughes-Cromwick, P. *What impact has the coronavirus pandemic had on health employment?* Peterson-KFF Health System Tracker. 2021.
9. NSI Nursing Solutions. *2021 NSI National Health Care Retention & RN Staffing Report* [Online] 2021. [NSI_National_Health_Care_Retention_Report.pdf](https://www.nsinursingsolutions.com/2021-NSI-National-Health-Care-Retention-Report.pdf) (nsinursingsolutions.com)
10. Zahner, S., Kowalkowski, J., Henriques, J., LeClair, J., Merss, K., and Cho, H. *Wisconsin 2020 RN Workforce Survey Report*. Wisconsin Center for Nursing. 2021.
11. U.S. Department of Health and Human Services, Health Resources and Services Administration, National Center for Health Workforce Analysis. *Brief Summary Results from the 2018 National Sample Survey of Registered Nurses*. 2019.
12. Coutre', L. *Interest in Healthcare Jobs is on the Rise*. Modern Healthcare, May 3, 2021.
13. Tate Mahoney, C. *The New Shape*. Milwaukee Commerce, Spring, 2021.
14. Salsbert, E. Richwine, C., Westergaard, S., et al. *Estimation and Comparison of Current and Future Racial/Ethnic Representation in the U.S. Health Care Workforce*. JAMA Netw Open. 2021;4(3):e213789.doi:10.1001/jamanetworkopen.2021.3789
15. Cooper, L., and Powe, N. *Disparities in Patient Experiences, Health Care Processes, and Outcomes: the Role of Patient-Provider Racial, Ethnic, and Language Concordance*. The Commonwealth Fund. 2020.
16. Schragger, S. *Rural Health in Wisconsin – Looking to the Future*. Wisconsin Medical Journal, 2018, Vol. 117 (5).
17. Wisconsin Council on Medical Education and Workforce. *The Future of Wisconsin's Healthcare Workforce*. 2021.
18. Modern Healthcare. *Short on staff?* [online]. 2021. <https://www.modernhealthcare.com/labor/short-staff-efficiency-not-hiring-may-be-best-answer>
19. Davis, C. *Telehealth Increases Nurses' Workload*. HealthLeaders, April 30, 2021.
20. Davis, C. *Gamechanger: Virtual Nursing Model Creating Positive Outcomes for MercyOne*. HealthLeaders, June 14, 2021.
21. Arndt, B., et al. *Tethered to the EHR: Primary Care Physician Workload Assessment Using EHR Event Log Data and Time-Motion Observations*. The Annals of Family Medicine, 2017, Vol. 15 (5).
22. Young, R. *A Time-Motion Study of Primary Care Physicians' Work in the Electronic Health Record Era*. Family Medicine, 2018, Vol. 50 (2).
23. U.S. Ways and Means Committee. *Medicare Red Tape Relief Project*. [Online] June 2018. https://waysandmeansforms.house.gov/uploadedfiles/red_tape_relief_final_-_v4.pdf.
24. Vizient. *Survey on the Patient Care Impact and Additional Expense of White/Brown Bagging*. [online] 2021. <https://newsroom.vizientinc.com/new-vizient-data-estimates-us-hospitals-spend-310-million-annually-on-management-whitebrown-bagging-requirements-for-specialty-pharmaceuticals.htm?pressrelease>
25. U.S. Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response, Healthcare Emergency Preparedness Gateway. *Healthcare Provider Shortages: Resources and Strategies for Meeting Demand*. November 2021.
26. Coutre', L. *Healthcare Workers Face Violence Epidemic*. Modern Healthcare, March 11, 2019.



The Wisconsin Hospital Association, PO Box 259038, Madison, WI 53725-0938 | 608.274.1820 | www.wha.org