COVID-19 Pandemic Led to Long Absences, Reduced Hours, and Job Exits Among the U.S. Healthcare Workforce

The COVID-19 pandemic affected nearly all sectors of the U.S. economy, which includes the 22 million workers in the healthcare and social assistance industry. Although the Bureau of Labor Statistics defines healthcare and social assistance occupations as including nonclinical roles, such as technology support and administration, most healthcare workers were engaged in "essential" direct care roles. Thus, during the pandemic, they were at higher risk of contracting SARS-CoV-2, the virus that causes COVID-19.

Work-Related Injuries and Illnesses

Work-related injuries slightly decreased in 2020, but illness increased significantly for people who work full time in healthcare, especially for respiratory conditions related to COVID-19 infections.

Before and during the COVID-19 pandemic, hospitals had twice the rate of work injuries as private industry in general (Figure 1). Work injuries in the healthcare and social assistance industry, as well as private industry in general, decreased about 15% from 2019 to 2020.[1] But illness increased for hospital and nursing/residential care facility workers at a much higher rate than for workers in private industry in general.

From 2019 to 2020, illnesses increased for hospital and nursing/residential care facility workers almost 10-fold and more than 30-fold, respectively, mostly due to respiratory conditions such as COVID-19. Thus, hospitals and nursing and residential care facilities became exponentially more dangerous for workers during the COVID-19 pandemic.

AHRQ Agency for Healthcare Research and Quality

Figure 1. Yearly work injury rates per 100 full-time-equivalent workers (left) and illness incidence rates per 10,000 full-time-equivalent workers (right), 2018-2021

Key: FTE = full-time-equivalent.

Source: U.S. Bureau of Labor Statistics, Occupational Injuries/Illnesses and Fatal Injuries Profiles, 2018-2021.[i] https://www.bls.gov/iif/nonfatal-injuries-and-illnesses-tables.htm#summary.

Note: The Occupational Safety and Health Administration considers an injury or illness work related if an event or exposure in the work environment either caused or contributed to the resulting condition or significantly aggravated a pre-existing condition. See the Bureau of Labor Statistics (BLS) occupational safety and health definitions page (https://www.bls.gov/iif/definitions/occupational-safety-and-health-definitions.htm). BLS defines private industry employment as employment in businesses owned by individuals or groups of individuals. See the glossary at https://www.bls.gov/bls/glossary.htm#P. Private industry excludes farms with fewer than 11 employees.

[i] Data shown in this data spotlight reflect what was available at the time data analysis was conducted. Data for later years were not available at that time. Since then, the Bureau of Labor Statistics has posted more recent data, available at https://www.bls.gov/iif/ (injuries and illness) and https://www.bls.gov (other data).

- The work injury incidence rate for private industry decreased 15% from 2.6 per 100 full-time-equivalent (FTE) workers in 2019 to 2.2 per 100 full-time workers in 2020 (Figure 1).
- The work injury incidence rate for ambulatory healthcare services decreased 19% from 2.1 per 100 FTE workers in 2019 to 1.7 per 100 full-time workers in 2020.
- The work injury incidence rate for the nursing and residential care facilities industry decreased 18% from 5.7 per 100 FTE workers in 2019 to 4.7 per 100 FTE workers in 2020.
- The illness incidence rate for private industry increased 351% from 12.4 per 10,000 FTE workers in 2019 to 55.9 per 10,000 full-time workers in 2020.
- The illness incidence rate for hospitals increased 706% from 35.5 per 10,000 FTE workers in 2019 to 286.3 per 10,000 full-time workers in 2020.
- The illness incidence rate for the nursing and residential care facilities industry increased 3,140% from 20.9 per 10,000 FTE workers in 2019 to 677.2 per 10,000 FTE workers in 2020.

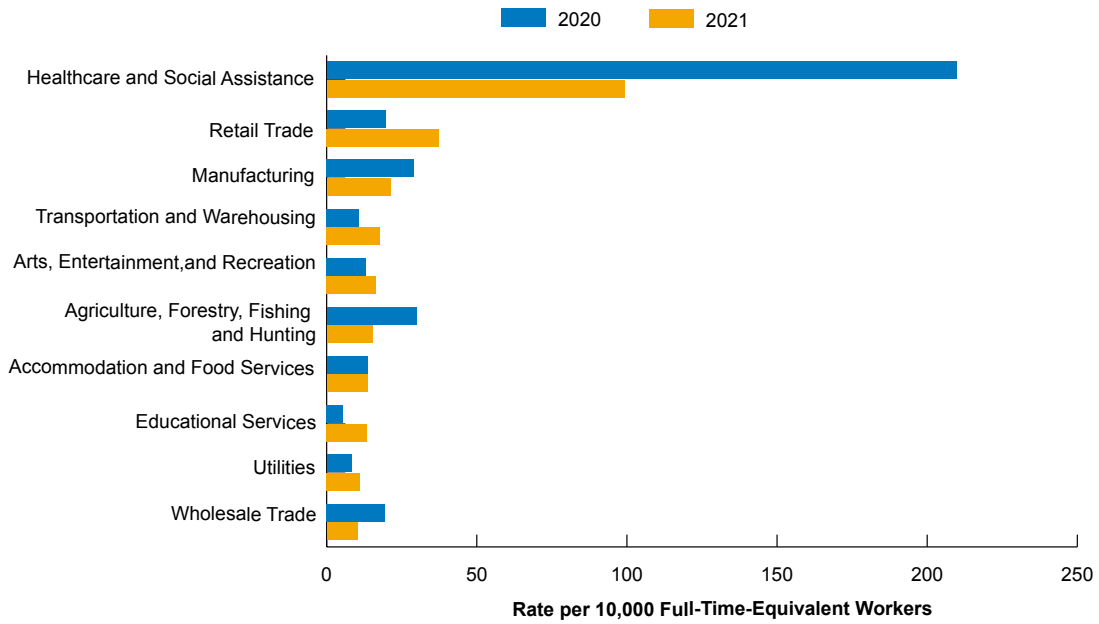
Respiratory Illness

Among all industry sectors, the respiratory illness incidence rate was highest for the healthcare and social assistance sector.

Among all private industry sectors, healthcare and social assistance had the highest respiratory illness incidence rates in 2020 and again in 2021, even with a 50% decrease (Figure 2). However, respiratory illnesses make up a small percentage of cases compared with work-related injuries. As lockdown spread across the country in 2020, some healthcare and social assistance facilities, such as hospitals and nursing homes, remained open while ambulatory care facilities, such as doctor's offices, closed.

After lockdown was gradually lifted, people returned to in-person activities. The retail trade, transportation and warehousing, and educational services industries had the greatest increases in respiratory illness incidence rates in 2021. But the illness incidence rates in those industries remained far below the rates for the healthcare and social assistance sector.

Figure 2. Respiratory illness incidence rates per 10,000 full-time-equivalent workers in private industry by sector, 2020-2021



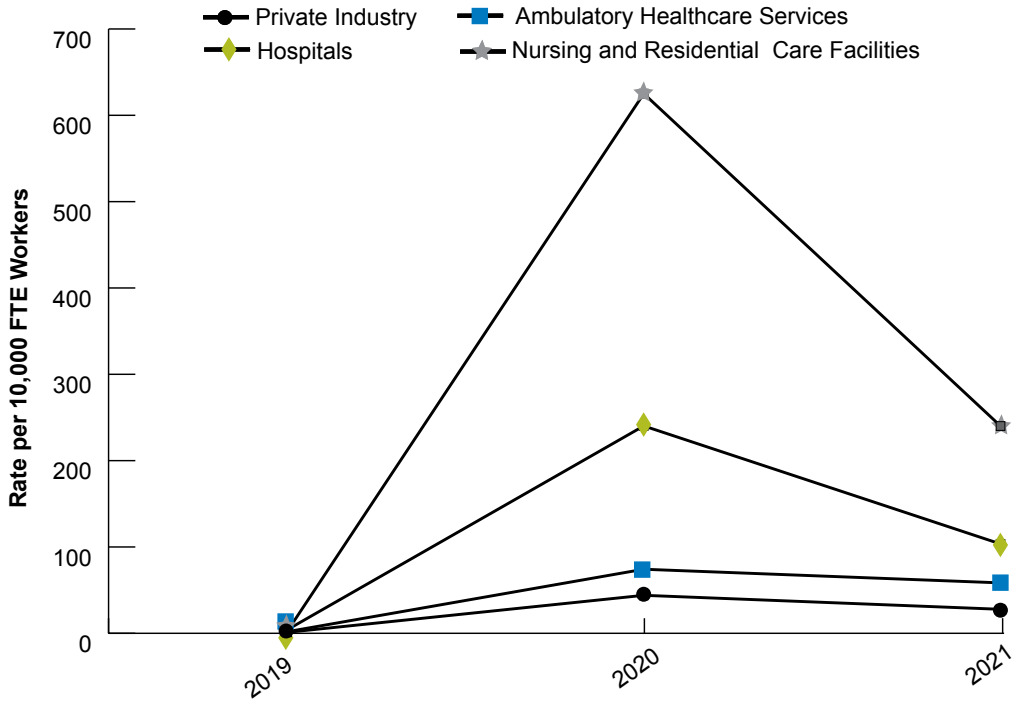
Source: News Release. Employer-Reported Workplace Injuries and Illnesses – 2021. Bureau of Labor Statistics, U.S. Department of Labor, November 9, 2022. Chart 4. https://www.bls.gov/news.release/archives/osh_11092022.pdf.

- Respiratory illness incidence rates for healthcare and social assistance decreased 53% from 209.8 cases per 10,000 FTE workers in 2020 to 99.2 cases per 10,000 FTE workers in 2021 (Figure 2).
- Respiratory illness incidence rates for retail trade increased 91% from 19.6 cases per 10,000 FTE workers in 2020 to 37.5 cases per 10,000 FTE workers in 2021.
- Respiratory illness incidence rates for educational services increased 145% from 5.5 cases per 10,000 FTE workers in 2020 to 13.5 cases per 10,000 FTE workers in 2021.

Within the healthcare and social assistance sector, the respiratory illness incidence rate was highest for nursing and residential care facilities.

Within the healthcare and social assistance sector in 2020, the respiratory illness incidence rate was highest in nursing and residential care facilities. Respiratory illnesses are associated with breathing hazardous biologic agents, chemicals, dust, gases, vapors, or fumes at work. Examples include silicosis, asbestosis, pneumonitis, pharyngitis, rhinitis, farmer's lung, tuberculosis, occupational asthma, chronic obstructive pulmonary disease, hypersensitivity pneumonitis, chronic obstructive bronchitis, and other pneumoconioses.[2] COVID-19 would be counted as breathing hazardous biologic agents. Respiratory illness makes up most of all illnesses.

Figure 3. Respiratory illness incidence rates per 10,000 full-time-equivalent workers in private industry, ambulatory healthcare services, hospitals, and nursing and residential care facilities, 2019-2021



Key: FTE = full-time-equivalent.

Source: U.S. Bureau of Labor Statistics Occupational Injuries/Illnesses and Fatal Injuries Profiles, 2019-2021.

- The respiratory illness incidence rate per 10,000 FTE workers increased tremendously between 2019 and 2020 due to COVID-19:
  - The respiratory illness incidence rate for private industry increased 40-fold in 2020 from 1.1 per 10,000 full-time workers in 2019 to 44.0 per 10,000 FTE workers (Figure 3).
  - The respiratory illness incidence rate for ambulatory healthcare services increased more than 40-fold in 2020 from 1.8 per 10,000 full-time workers in 2019 to 74.2 per 10,000 FTE workers.

- The respiratory illness incidence rate for hospitals increased more than 606-fold in 2020 from 3.9 per 10,000 FTE workers in 2019 to 240.2 per 10,000 FTE workers.
- The respiratory illness incidence rate for the nursing and residential care facilities industry increased nearly 350-fold in 2020 from 1.8 per 10,000 FTE workers in 2019 to 625.1 per 10,000 FTE workers.

- The respiratory illness incident rate per 10,000 FTE workers decreased noticeably between 2020 and 2021, but rates were still much higher than in 2019:
  - The rate for private industry decreased 37% in 2021 from 44.0 per 10,000 FTE workers in 2020 to 27.8 per 10,000 FTE workers.
  - The rate for ambulatory healthcare services decreased 21% in 2021 from 74.2 per 10,000 FTE workers in 2020 to 58.4 per 10,000 FTE workers.
  - The rate for hospitals decreased 57% in 2021 from 240.2 per 10,000 FTE workers in 2020 to 103.5 per 10,000 FTE workers.
  - The rate for the nursing and residential care facilities industry decreased 62% in 2021 from 625.1 per 10,000 FTE workers in 2020 to 240.1 per 10,000 FTE workers.

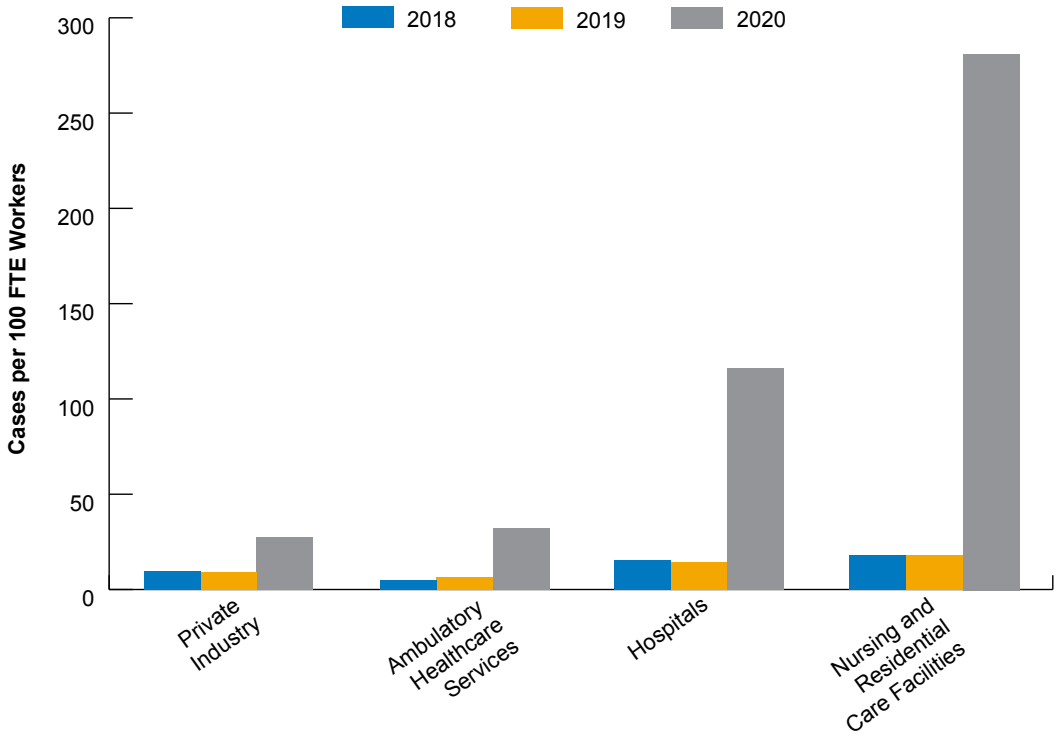
Long Work Absences

The rate of cases involving 11-20 days away from work increased for healthcare workers.

With high respiratory illness rates and increased injuries for healthcare workers at hospitals and nursing homes, it is not a surprise that healthcare workers had a higher rate of days away from work than private industry in 2020. In 2020, the rate of cases with days away from work increased 291% for registered nurses, driven by an increase in cases due to exposure to harmful substances or environments, including COVID-19.[3]

Increases in cases of days away from work were observed for absences of 6-10 days (data not shown) and 11-20 days in hospitals and nursing and residential care facilities. The initial guideline for isolation after exposure to COVID-19 was 10 days regardless of symptoms. As the COVID-19 vaccine rolled out and COVID-19's incubation and transmission period was better understood, the isolation period was shortened to 5 days, depending on the symptoms and patient's condition.[4]

Figure 4. Cases involving 11-20 days away from work per 100 full-time-equivalent workers in private industry, ambulatory healthcare services, hospitals, and nursing and residential care facilities, 2018-2020



Key: FTE = full-time-equivalent.

Source: U.S. Bureau of Labor Statistics Occupational Injuries/Illnesses and Fatal Injuries Profiles, 2018-2020.

- The rate of cases involving 11-20 days away from work in private industry nearly tripled from 9.3 per 100 FTE workers in 2019 to 27.3 per 100 FTE workers in 2020 (Figure 4).
- The rate of cases involving 11-20 days away from work in ambulatory healthcare services more than quintupled from 6.3 in 2019 to 32.2 in 2020.
- The rate of cases involving 11-20 days away from work in hospitals in 2020 was about eight times the rate in 2019 (116.3, up from 14.4).
- The rate of cases involving 11-20 days away from work in nursing and residential care facilities in 2020 was nearly 16 times the rate in 2019 (281.7, up from 17.9).

Annual Work Hours

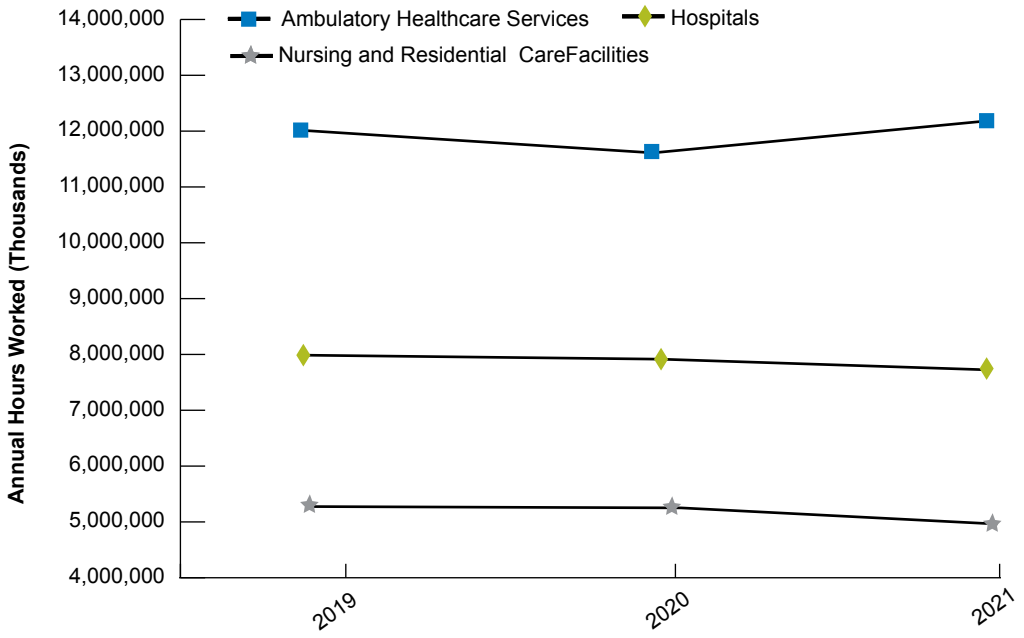
Annual work hours decreased for nursing and residential care facilities during the COVID-19 pandemic due to staff shortages.

At the onset of the COVID-19 pandemic in spring 2020, revenues and employment in private industry decreased sharply due to lockdown. Leisure, entertainment, and hospitality industries were affected most, with an 18% decrease in hours worked from 2019 to 2020 and an additional decrease of 3% from 2020 to 2021.[5] During the same time, hospitals and nursing homes continued providing care to patients at fairly consistent staffing levels.

Nursing and residential care facilities had one of the highest incidence rates of nonfatal occupational injury and illness cases with days away from work between 2019 and 2021.[1] Because these workers had the highest respiratory illness rates in the healthcare sector, their work hours were expected to decrease due to mandatory isolation rules for COVID-19.

Depending on the type of care provided and the healthcare setting, hours worked decreased or increased. For example, ambulatory healthcare services and dentist offices decreased work hours when their offices were closed during lockdown, as patients avoided in-person visits to avoid contracting COVID-19. After lockdown was lifted, ambulance services increased annual work hours to transport COVID-19 patients. Nursing and residential care facilities decrease annual work hours due to staff shortages (Figure 5).

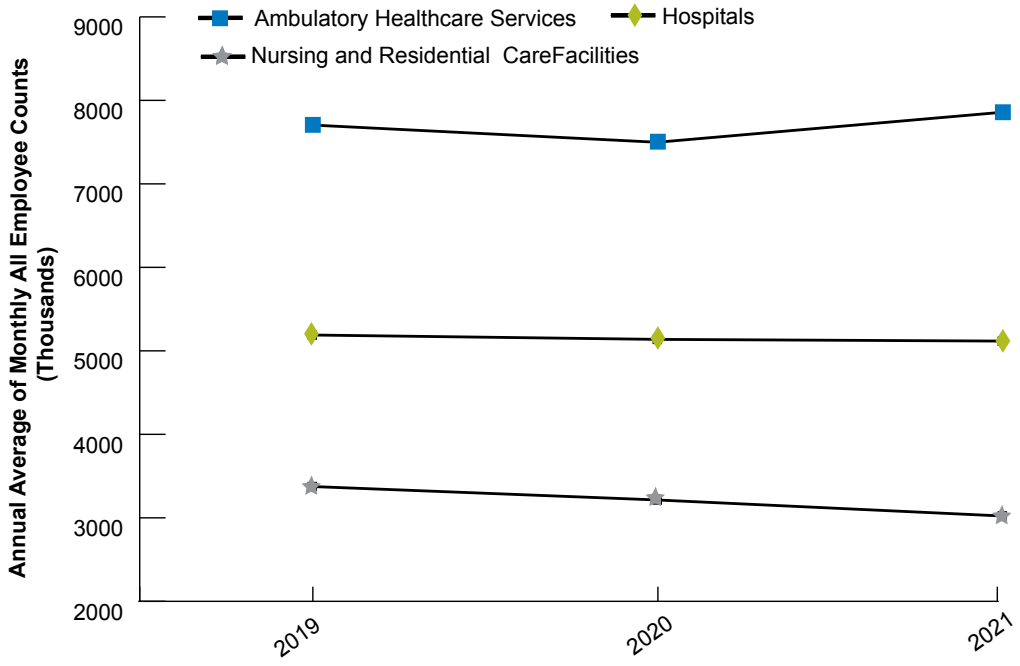
Figure 5. Annual number of hours worked (in thousands) in ambulatory healthcare services, hospitals, and nursing and residential care facilities, 2019-2021



Source: U.S. Bureau of Labor Statistics Injuries, Illnesses, and Fatalities, 2019-2021. Summary Tables, Table 3 (for each year). https://www.bls.gov/iif/nonfatal-injuries-and-illnesses-tables.htm#summary.

- The annual number of work hours in thousands in ambulatory healthcare services decreased 3.5% from 11,974,895 in 2019 to 11,549,873 in 2020 and increased 3.1% from 11,549,873 in 2020 to 11,911,958 in 2021 (Figure 5).
- The annual number of work hours in thousands in hospitals decreased 0.7% from 8,038,246 in 2019 to 7,983,788 in 2020 and decreased 0.9% from 7,983,788 in 2020 to 7,915,590 in 2021.
- The annual number of work hours in thousands in nursing and residential care facilities increased 0.9% from 5,150,653 in 2019 to 5,198,702 in 2020 and decreased 6.8% from 5,198,702 in 2020 to 4,844,867 in 2021.

Figure 6. Annual average of monthly all employee counts in ambulatory healthcare services, hospitals, and nursing and residential care facilities, 2019-2021



Source: U.S. Bureau of Labor Statistics Employment, Hours, and Earnings From the Current Employment Statistics Survey (National), 2019-2021. https://data.bls.gov/cgi-bin/dsrv?ce.

- A decrease in work hours due to staff shortages in nursing and residential care facilities was reflected in the monthly average of all employees per year, which decreased 6.0% from 3,214,000 in 2020 to 3,022,000 in 2021 (Figure 6).

Healthcare Worker Attrition

Healthcare workers are leaving faster than they can be replaced.

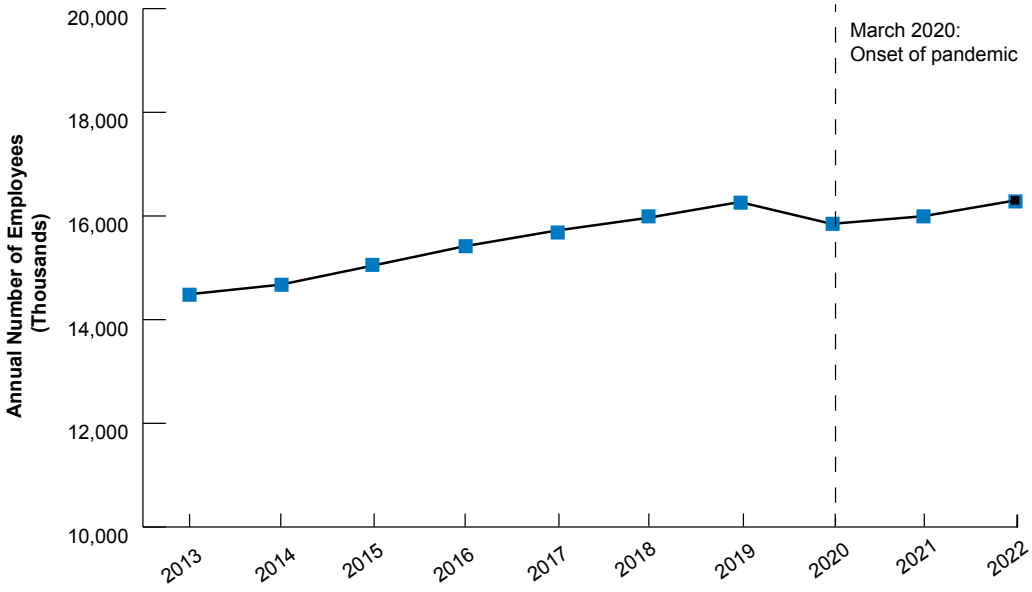
The COVID-19 pandemic forced people to reconsider their job and make voluntary or involuntary career moves. The healthcare sector was no exception. In addition, healthcare organizations were experiencing staff shortages even before the COVID-19 pandemic.[6] The reduced number of healthcare workers is concerning because it can influence the quality of healthcare services provided to patients and their families.

The healthcare industry is very complex, with more than 60 occupations based on the Standard Occupational Classification (SOC) system, and those occupations require a wide range of education levels, years of training, and experience. Because of how the healthcare system operates, a shortage in one profession could lead to stress on another worker in the same position with additional workloads or new roles. For example, when a lab technician is out sick, their work can go to another technician in the same lab, or the lab might delay reporting the test result to a physician who needs to diagnose a patient.

During the COVID-19 pandemic, patients learned the critical roles all healthcare workers played, not just physicians and nurses. Everyone, not just patients and their families, learned about the complexity of the healthcare system and the importance of individual healthcare workers.

Healthcare provider counts were expected to return to the capacity before the COVID-19 pandemic, but some healthcare professions were still decreasing after 2020. Gaps in representation of minority racial and ethnic groups among healthcare professions also became wider.[7]

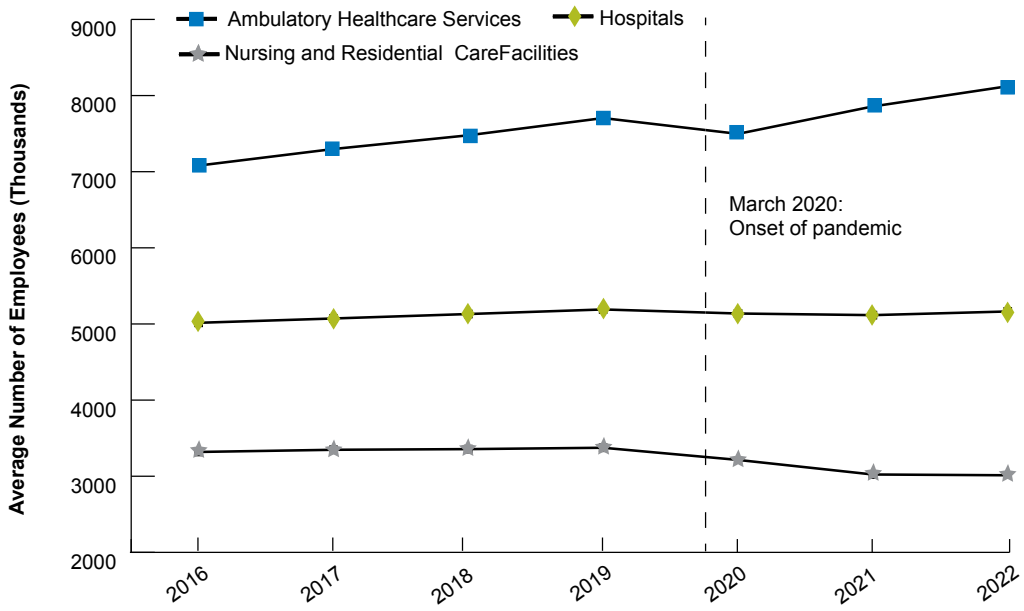
Figure 7. Yearly average count of all healthcare industry monthly employees (in thousands), 2013-2022



Source: U.S.Bureau of Labor Statistics, Current Employment Statistics - National, All Employee Count, 2013-2022.

- The yearly average of all healthcare employees for 2022 was 16.3 million, still slightly above 16.27 million in 2019 after a big drop in 2020 to 15.8 million (Figure 7).
- Based on the upward trend in the number of healthcare employees before the COVID-19 pandemic, we estimate the demand for healthcare workers to be around 17.5 million in 2023. This forecast is about 8% more than the prepandemic number and 7% more than the 2022 number.

Figure 8. Yearly average count of all monthly employees in ambulatory healthcare, hospitals, and nursing and residential care facilities, 2016-2022



Source: U.S.Bureau of Labor Statistics All Employee Count, 2016-2022.

- The yearly average of employees in ambulatory healthcare services decreased 3% from 7.7 million in 2019 to 7.5 million in 2020 (Figure 8). (Percentages are based on unrounded data).
- The yearly average of employees in hospitals decreased 1% from 5.2 million in 2019 to 5.1 million in 2020.
- The yearly average of employees for nursing and residential care facilities decreased 5% from 3.4 million in 2019 to 3.2 million in 2020.
- Despite the dip in 2020, the yearly average of employees in ambulatory healthcare services increased 15% from 7.1 million in 2016 to 8.1 million in 2022.
- The yearly average of employees in hospitals increased 3% from 5.0 million in 2016 to 5.2 million in 2022.
- **The yearly average of employees in nursing and residential care facilities decreased 9% from 3.3 million in 2016 to 3.0 million in 2022.**

Discussion

The healthcare workforce has been greatly affected by the COVID-19 pandemic and had the highest respiratory illness rate, especially in nursing home facilities. Within the healthcare and social assistance sector, the respiratory illness incidence rate was highest for nursing and residential care facilities. Lower employee counts led to decreases in annual work hours for nursing and residential care facilities, which can be interpreted as staff shortages.

Having appropriate staffing is critical to providing high-quality, safe healthcare. Healthcare workers had been leaving their jobs before the pandemic, especially younger professionals, but the COVID-19 pandemic accelerated the separation.

Nearly one-third (31%) of healthcare workers considered leaving and 19% have said they have thought about leaving the healthcare field completely.[8] Healthcare workers might be less willing to continue working in healthcare due to burnout, unsafe working environments, and insufficient pay:

- A large number of healthcare workers decided to leave healthcare because of stress and burnout related to the pandemic. Burnout is described as a workplace "syndrome characterized by high emotional exhaustion, high depersonalization (e.g.., cynicism), and low sense of personal accomplishment."[9] Job burnout can affect one's physical and mental health.[10] Raising awareness is essential to handle the stress and to encourage workers to seek support from coworkers, leaders, friends, and family.
  Limited data are available on burnout among healthcare workers even though it has been well known among healthcare professions and expected. According to the 2022 results from AHRQ's Surveys on Patient Safety Culture® (SOPS®) Workplace Safety Supplemental Item Set for Hospitals, 34% of respondents from 40 hospitals experienced symptoms of burnout. Respondents completed the survey between May 2021 and July 2022.
- Only a quarter of the 21,200 union and nonunion nurses in all 50 states recently surveyed by National Nurses United thought their employers provided a safe workplace during the pandemic.[11] Concerns about obtaining personal protective equipment (PPE) and reuse of single-use PPE persisted throughout the pandemic. In addition, staff shortages resulted in nursing reassignments to new care areas that required new skills or competencies. More than 40% (42%) of those nurses felt their reassignment hindered their ability to do their job safely. Violence against nurses and other frontline staff also challenges healthcare workers to stay in their professions. No federal law protects healthcare employees from workplace assault or intimidation. In contrast, federal laws criminalize assault and intimidation against airline employees.[12] Therefore, healthcare workers are pushing for federal protection for themselves.[13]
- Average wages for low-wage workers employed in healthcare settings have increased significantly compared with physicians and nurses since the beginning of the pandemic, but it is uncertain if that is enough to retain the healthcare workforce. The transportation industry had the biggest increase (8.5%) in wage growth, which is much higher than the national average (4.4%). The education and healthcare sector increased only 3.6% while information (6.5%) and professional services (6.3%) also had higher wage growth than the national average.[14] Pursuing healthcare professions can leave many individuals burdened with student loans due

to the extensive education and training required for healthcare professions.[15] High student loan balances can influence the career choices of healthcare workers, leading them to accept higher paying jobs in nonclinical settings instead of providing patient care.

The federal public health emergency for COVID-19 expired on May 11, 2023, but the healthcare workforce is still recovering.[16] While the number of workers employed at hospitals and physician offices have returned to prepandemic levels, the number of workers employed at nursing homes and elder care facilities continues to remain significantly below prepandemic levels.[17]

Especially in rural areas, hospital closures continued in 2020 due to financial challenges associated with the COVID-19 pandemic, staff shortages, and other reasons.[18] This development is threatening patient access to care because patients need to travel long distances to receive needed healthcare.

To strengthen the healthcare industry and protect America from future pandemics, it will be important to assess changes in the healthcare workforce and continue efforts to retain the current workforce, decrease turnover, and decrease shifts to fields other than healthcare.

References

1. U.S. Bureau of Labor Statistics Occupational Injuries/Illnesses and Fatal Injuries Profiles, 2018-2021. https://www.bls.gov/iif/nonfatal-injuries-and-illnesses-tables.htm#summary. Accessed March 6, 2024.
2. U.S. Bureau of Labor Statistics. Injuries, Illnesses, and Fatalities. BLS OSH Definitions. Last modified September 2016. https://www.bls.gov/iif/definitions/occupational-safety-and-health-definitions.htm. Accessed March 6, 2024.
3. U.S. Bureau of Labor Statistics. Nonfatal injuries and illnesses resulting in days off work among nurses up 291 percent in 2020. The Economics Daily. 2022 May 6. https://www.bls.gov/opub/ted/2022/nonfatal-injuries-and-illnesses-resulting-in-days-off-work-among-nurses-up-291-percent-in-2020.htm. Accessed March 6, 2024.
4. Centers for Disease Control and Prevention. Isolation and Precautions for People With COVID-19. Updated May 11, 2023.
5. Bureau of Labor Statistics, U.S. Department of Labor. Number of hours worked and percent relative standard errors by detailed industry, 2019-2021. https://data.bls.gov/cgi-bin/dsrv?ce. Accessed March 1, 2024.
6. Tulane University School of Public Health and Tropical Medicine. The Impact of Hospital Staff Shortages on Patients. November 11, 2022. https://publichealth.tulane.edu/blog/hospital-staff-shortages/. Accessed March 6, 2024.
7. U.S. Bureau of the Census. American Community Survey, Health Workforce by Race and Ethnicity, 2020-2021. https://www.census.gov/programs-surveys/acs. Accessed March 6, 2024.
8. Wilensky GR. The COVID-19 pandemic and the U.S. health care workforce. JAMA Health Forum. 2022 Jan 4;3(1):e220001. https://doi.org/10.1001/jamahealthforum.2022.0001. Accessed March 6, 2024.

9. Stephenson J. National Academy of Medicine outlines plan to curb burnout, bolster health workforce well-being. JAMA Health Forum. 2022;3(10):e224549. https://doi.org/10.1001/jamahealthforum.2022.4549. Accessed March 6, 2024.
10. Mayo Clinic. Job Burnout: How To Spot It and Take Action. November 30, 2023. https://www.mayoclinic.org/healthy-lifestyle/adult-health/in-depth/burnout/art-20046642. Accessed March 6, 2024.
11. Mensik H. Nurses union survey finds most still feel unsafe at work amid pandemic. Healthcare Dive. 2020 Jul 29. https://www.healthcaredive.com/news/nurses-union-survey-finds-most-feel-unsafe-at-work-COVID/582474/. Accessed March 6, 2024.
12. American Hospital Association. Fact Sheet: Health Care Workplace Violence and Intimidation, and the Need for a Federal Legislative Response. June 2022. https://www.aha.org/fact-sheets/2022-06-07-fact-sheet-workplace-violence-and-intimidation-and-need-federal-legislative. Accessed March 6, 2024.
13. Mensik H. ER providers push for federal protection against rising health worker violence. Healthcare Dive. 2022 May 5. https://www.healthcaredive.com/news/workplace-violence-prevention-healthcare-workers-bill-pandemic/623244/. Accessed March 6, 2024.
14. Popli N. These industries saw the greatest pay bumps in 2021. Time. 2022 Feb 3. https://time.com/6144877/industry-pay-increases-2021/. Accessed March 6, 2024.
15. Marvel Medical Staffing. How Student Loans Affect Healthcare Professionals. https://marvelmedstaff.com/how-student-loans-affect-healthcare-professionals/. Accessed March 6, 2024.
16. U.S. Department of Health and Human Services. Fact Sheet: End of the COVID-19 Public Health Emergency. May 9, 2023. https://www.hhs.gov/about/news/2023/05/09/fact-sheet-end-of-the-covid-19-public-health-emergency.html. Accessed March 6, 2024.
17. Telesford I, Wager E, Hughes-Cromwick P, Amin K, Cox C. What are the Recent Trends in Health Sector Employment? Peterson-KFF Health System Tracker. December 13, 2023. https://www.healthsystemtracker.org/chart-collection/what-impact-has-the-coronavirus-pandemic-had-on-healthcare-employment/. Accessed March 6, 2024.
18. American Hospital Association. AHA Report: Rural Hospital Closures Threaten Patient Access to Care. September 8, 2022. https://www.aha.org/news/headline/2022-09-08-aha-report-rural-hospital-closures-threaten-patient-access-care. Accessed March 6, 2024.

AHRQ Publication No. 24-0045
March 2024
www.ahrq.gov