Doi: 10.32481/djph.2023.12.005

Unraveling Healthcare Shortages in Delaware and Charting a Course for Equity and Resilience

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Introduction

A workforce shortage occurs when there is an insufficient number of individuals with the necessary skills in the appropriate locations and times to deliver required services to the intended recipients.[1] The term "healthcare shortage" typically refers to a situation where the demand for healthcare services, including medical professionals, exceeds the available supply. This imbalance can manifest in various forms, such as a shortage of healthcare workers, medical facilities, or specific medical resources.[2] Healthcare shortages can occur on both a global and local scale, affecting different components of the healthcare system. The consequences of these shortages include reduced access to care, longer wait times, and increased strain on healthcare professionals, potentially contributing to health disparities.[2] It is important to note that, in Delaware, talking about shortages on a statewide basis can be misleading. In Delaware, until recently the population was substantially located in New Castle County, while Kent and Sussex Counties were less populated rural areas. Therefore, a significant percent of healthcare practitioners were located in New Castle County, which enjoyed numerical advantages over Kent and Sussex in gross numbers, and in provider to population ratios. These phenomena speaks to a “maldistribution” of providers.[3] This phenomena is global and well as regional and local, as noted by the World Health Organization.[4]

In the United States, the COVID-19 pandemic has intensified stress within the healthcare workforce, leading to acute shortages and heightened burnout, exhaustion, and trauma among healthcare professionals.[5] Importantly, these challenges unfold against a backdrop of persistent workforce shortages and maldistribution, amplifying pre-existing issues of burnout, stress, and mental health problems. In this context, our exploration shifts to the specific challenges faced by the State of Delaware. Examining Delaware's healthcare system allows us to pinpoint where these challenges are particularly pronounced, offering opportunities for targeted interventions and strategies.

Defining Shortage

The U.S. Bureau of Labor Statistics projects a need for more than 275,000 additional nurses from 2020 to 2030, with nursing employment opportunities growing at nine percent, faster than all other occupations from 2016 through 2026.[6] Health Workforce Shortage Areas data from the Health Resources & Services Administration (HRSA) indicates the need for more than 17,600 additional primary care practitioners, 13,000 dental health practitioners, and 8,400 mental health practitioners in the United States.[7]

In Delaware, HRSA recognizes 37 Health Professional Shortage Areas (HPSA) among the primary care, dental and mental health disciplines. Of these areas, 22 are facilities and 15 are population groups (i.e., low-income, homeless, migrant farmworker, and Medicaid eligible).

Each designation is given a score between 0-26, the higher the number the greater the need.[7] New Castle County has 15 facilities and six population groups recognized by HPSA. The highest scoring, and therefore those with the greatest need, are the facilities of Southbridge Medical and Westside Family Healthcare, across all disciplines. Primary care is needed especially in the low-income population groups of Southwest Wilmington (score of 14) and Newark/Wilmington (18). Dental health is needed in Wilmington/New Castle (16) and Newark/Wilmington (17). Mental health is needed in Newark/Stanton (16) and the City of Wilmington (18). In Kent County, there is one HPSA facility and four population groups, all with relatively high scores. Delaware Guidance Services in Dover is the one facility with a score of 17, however it is proposed for withdrawal from HPSA status. The four population groups are all low income and span across all disciplines, with scores ranging from 15-17. Sussex County has six facilities and five population groups. Across all disciplines, La Red Health Center shows the greatest need, with scores ranging from 21-25. Of the five population groups, two are low income under dental and mental health (16 and 17) and three are Medicaid eligible (14-16) one in each discipline.

The American Association of Colleges of Nursing (AACN) projects a need for more than 200,000 new nurses annually until 2026 to fill new positions or replace retiring nurses.[8] The American Association of Medical Colleges (AAMC) predicts a shortage of 37,800 to 124,000 physicians by 2034, driven primarily by demographics, including population growth and aging.[9] During this time, the U.S. population is projected to grow by 10.6%, from about 328 million to 363 million, with a projected 42.4% increase in those aged 65 and above. Therefore, demand for physician specialties that predominantly care for older Americans will continue to increase. More than two of every five active physicians in the U.S. will be 65 or older within the next decade.[9] Their retirement decisions will dramatically affect the magnitude of national workforce shortages. Additionally, according to the AAMC's 2019 National Sample Survey of Physicians, 40% of the country's practicing physicians felt burned out at least once a week before the COVID-19 crisis began—and the issue of increased clinician burnout could cause doctors and other health professionals to reduce their hours or retire sooner.[10]

If individuals from marginalized minority populations, residents in rural communities, and those without health insurance were to access healthcare at rates comparable to populations facing fewer barriers, the demand for physicians would require an additional 180,400 practitioners.[9] The COVID-19 pandemic has brought attention to the existing disparities in health and access to care among underserved populations. This analysis emphasizes the systematic variations in healthcare services experienced by insured and uninsured individuals, those residing in urban and rural areas, and individuals of diverse races and ethnicities. Separate from the projections for shortages, these estimates serve to highlight the significant barriers to care, offering an additional reference point for evaluating the adequacy of the physician workforce supply.

Perceptions of Shortages

By the end of 2022, a staggering 145,213 healthcare providers exited the profession, with nurse practitioners witnessing a departure of 34,834 practitioners nationwide. Notably, fields such as internal medicine, family practice, and clinical psychology bore the brunt of staffing shortages from 2021 through 2022.[11] Professionals in these specialties, often at the frontline during the pandemic, faced elevated risks of coronavirus exposure and the heightened pressures and stressors outlined earlier. This is supported by data from HHS and Becker's Hospital Review,

reported in July and September 2023, pinpointed the top states grappling with critical staffing shortages in hospitals and primary care—one of which was Delaware.[12,13]

A survey conducted by the Medical Protection Society (MPS), encompassing 5495 doctors with an 861-response rate (15%), revealed profound concerns within the medical community. A staggering 95% (818) of responding doctors identified staff shortages as a major threat to patient safety, with nearly half (49%, 422) contemplating their career trajectory due to this concern. Over half (54%) expressed that the impact of staff shortages on patient safety was affecting their mental wellbeing, with 79% indicating a moderate to significant effect.[14] Notably, 38% of doctors acknowledged that the fear of medicolegal issues stemming from staff shortages was detrimental to their current mental wellbeing. Anonymous comments from survey participants vividly portrayed the challenges, with one doctor expressing, "It is demoralizing to be continuously unable to provide the standard of care you know patients deserve due to inadequate staffing." Another noted, "Watching patients get suboptimal care is exhausting, and watching colleagues stretched beyond belief is upsetting. People get sick waiting for care as an inpatient and outpatient."[14]

Even before the COVID-19 pandemic, physician shortages were acutely felt across the nation. In 2019, the U.S. Health Resources & Services Administration estimated an additional need for 13,758 primary care physicians and 6,100 psychiatrists to address HPSA designations for areas facing shortages in primary care and mental health.[15] Findings from the 2019 AAMC Public Opinion Research revealed a consistent belief among registered voters, with 65% feeling that the United States lacked sufficient doctors to meet healthcare needs. Notably, 75% of rural area residents shared this sentiment. The survey also highlighted a concerning trend—25% in 2015 to 35% in 2019—indicating an increasing number of people struggling to find a doctor in the past two or three years.[16] Additionally, a majority of voters perceived shortages in both primary care doctors (61%) and specialty physicians (53%)—the highest numbers since the question's inception in 2006. Despite a lack of understanding of the term "social determinants of health" by 51% of the public, majorities believed that factors like homelessness, insufficient food, residing in an unsafe neighborhood, or experiencing poverty could adversely impact a person's health. Impressively, 93% of respondents agreed with the overarching goal of health equity, with seven in ten considering it a top priority for the United States, and 44% attributing the responsibility for achieving health equity to the federal government.[16]

Patient perception of missed care is also a significant driver of a continuing dialog between policy makers and resource distributors and there is always the factor of healthcare quality to consider.[17] It is not enough to simply have all slots occupied by staff, those staff should also have good health outcomes for their patients.[1]

Impact on Health Equity

Healthy People 2030 defines health equity as "the attainment of the highest level of health for all people" and notes that "it requires valuing everyone equally with focused and ongoing societal efforts to address avoidable inequalities, historical and contemporary injustices, and health and health care disparities."[18] Beyond mere access to healthcare, health equity extends to the broader social determinants of health, aiming to ensure a just opportunity for everyone to lead a healthy life. In essence, health equity seeks to eliminate systematic disparities in health and healthcare driven by social, economic, and environmental factors. Pertinently, within the context of shortages, health equity emphasizes the equitable distribution of healthcare resources and

Doi: 10.32481/djph.2023.12.005

services to mitigate disparities among diverse populations. Shortages, be they in workforce, facilities, or resources, have the potential to worsen existing inequalities, impeding the realization of health equity.

In 2022, researchers at ECRI, the nation's largest nonprofit patient safety organization, highlighted that "inadequate staffing is actively jeopardizing patient safety. Due to staffing shortages, many patients are waiting longer for care, even in life-threatening emergencies, or simply being turned away."[19] The COVID-19 pandemic underscored the inequities experienced by health workers and those at high risk and in need of care. Challenges with limited personal protective equipment (PPE) disproportionately affected certain workers, such as home health care workers, often earning at or below minimum wage.[20,21] For low-wage health care workers, predominantly women and people of color, challenges extend beyond the workplace to housing instability, food insecurity, childcare issues, lack of health and dental insurance, and, in some cases, racism. Evidence also suggests that Black and other minority health workers faced higher risks of COVID-19 infection.[22]

Impact on Vulnerable Populations

Health equity is intricately tied to the distribution of healthcare resources, and maldistribution plays a pivotal role in shaping disparities across diverse communities. Maldistribution refers to the uneven allocation of healthcare resources—professionals, facilities, and services—across geographic areas or population groups. In the context of shortages, healthcare maldistribution can exacerbate challenges associated with achieving health equity. Uneven distribution of healthcare professionals can lead to greater shortages in certain regions or populations, resulting in disparities in access and quality of care. Maldistribution compounds the impact of shortages, particularly affecting vulnerable or underserved communities.

Maldistribution also poses challenges for rural communities. When certain providers, especially specialists, are lacking in rural areas, patients may have to travel longer distances or forego care if telehealth services are not available. Understaffing contributes to increased workloads, longer shifts, and less flexibility in scheduling, leading to healthcare provider burnout and difficulties in recruitment and retention. Nationally, health professionals per 10,000 population are significantly lower in rural areas than in urban areas, with the most pronounced differences observed in registered nurses (63.9 vs. 95.3) and MD physicians (10.9 vs. 31.7).[23] At the end of September 2023, over 65% of HPSA medical designations were rural across the US, serving over 13.5 million people, and over 5,200 practitioners were needed to address the shortages in these areas. In Delaware, to serve the over 250,000 individuals (approximately 25% of the population) with unmet needs, 75 practitioners are needed to move into these areas.[24] According to HPSA, all rural facilities in Delaware are in Sussex County (i.e., La Red Health Center and Sussex Correctional Institution). All population groups in both Kent and Sussex County are considered partially rural. There are no rural designations in New Castle County.[7]

Nationwide, some racial and ethnic minority groups experience higher rates of various health conditions compared to their White counterparts.[25] In the US, the Black community constitutes 13% of the population, yet only 5.7% of physicians are Black.[26] In 2018, a comprehensive study assessed the economic impact of health inequities among racial and ethnic minority populations, including American Indian and Alaska Native, Asian, Black, Latino, and Native Hawaiian and Other Pacific Islander communities. The findings revealed an economic burden ranging between $421 billion and $451 billion. Notably, the economic impact of health inequities for individuals

without a 4-year college degree was even more pronounced, totaling between $940 billion and $978 billion.[27] The study underscored that the majority of this economic burden stemmed from the poor health outcomes experienced by the Black population. However, it brought to light a concerning pattern where the burden disproportionately affected American Indian or Alaska Native and Native Hawaiian or Other Pacific Islander populations, surpassing their share of the overall population. Despite constituting only 9% of the population, these groups bore a disproportionate 26% of the economic costs.[27]

The State of Delaware faces a notable deficiency in the representation of minority physicians, a challenge shared with many other states across the nation. To illustrate, while non-Hispanic Black individuals constitute 23% of Delaware's population, they are significantly underrepresented among primary care physicians, comprising only 6.6% of this professional group. This disparity highlights a pronounced maldistribution of healthcare professionals within the State.[28] Further accentuating the issue, Delaware witnesses a similar pattern among its Asian population, constituting less than 6% of the total population but making up more than 22% of primary care physicians. This disparity underscores the need for targeted initiatives to address the uneven distribution of healthcare professionals across diverse demographic groups. In addition to Health Professional Shortage Area (HPSA) designations, the Health Resources & Services Administration (HRSA) acknowledges Medically Underserved Areas and Medically Underserved Populations (MUA/P). Within Delaware, there are eight MUA/P designations, with both Kent and Sussex County being recognized as medically underserved areas in their entirety. In New Castle County, the distribution is more clustered, with areas such as Claymont/Edgemoor, Middletown/Odessa, and New Castle identified as either Medically Underserved Population (MUP) low income or MUA.

Strategies and Interventions

Mitigating shortages in Delaware's healthcare system requires a comprehensive approach, blending workforce development initiatives and policy recommendations to create a resilient and equitable environment. On the workforce development front, a key focus should be on enhancing training opportunities for aspiring healthcare professionals within the state. Collaborative efforts between educational institutions and healthcare facilities can ensure a steady influx of skilled professionals, while retention programs must address burnout and foster supportive work environments. Drawing inspiration from successful programs in other regions is crucial. Examining initiatives that have effectively increased the number of healthcare professionals, improved skillsets, and enhanced job satisfaction can provide valuable insights. Examples such as mentorship programs, tuition reimbursement, and innovative training modalities should be explored for adaptation to Delaware's context.

In terms of policy recommendations, addressing regulatory barriers is paramount. Proposals should streamline licensing and accreditation processes, making it easier for qualified healthcare professionals to practice in Delaware. Additionally, financial incentives, such as student loan forgiveness programs or tax incentives for those committing to working in underserved areas, can be introduced. Learning from successful models in other states, these financial incentives have proven effective in attracting and retaining healthcare talent. Expanding telehealth services is another critical policy consideration. Advocating for policy changes that support telehealth expansion can increase access to healthcare in remote or underserved areas. Referencing successful telehealth policies implemented in similar contexts can inform Delaware's approach.

Doi: 10.32481/djph.2023.12.005

Encouraging collaboration between government bodies, healthcare institutions, and educational entities is essential for comprehensive policy initiatives. Policies that incentivize partnerships between urban and rural healthcare facilities can efficiently distribute resources. By strategically combining these workforce development initiatives and policy recommendations, Delaware can pave the way for a more resilient and equitable healthcare system, ultimately mitigating shortages and fostering a thriving healthcare environment for both professionals and patients.

Conclusion

Delaware faces multifaceted challenges in its healthcare system, with shortages posing significant threats to the well-being of both healthcare professionals and the communities they serve. The definition of a workforce shortage extends beyond numerical inadequacies, encompassing issues of skill distribution, geographic disparities, and systemic barriers that hinder the delivery of quality healthcare. The adverse impacts of shortages are exacerbated by the pre-existing conditions of burnout, stress, and mental health challenges, a scenario intensified by the COVID-19 pandemic.

The examination of Delaware's healthcare landscape reveals distinct shortages in primary care, dental, and mental health disciplines, with Health Professional Shortage Areas (HPSA) designations highlighting areas of critical need. The shortage of healthcare professionals, compounded by maldistribution, poses a significant hurdle in achieving health equity. Vulnerable populations, including minorities and those residing in rural areas, bear a disproportionate burden of these shortages, further widening existing health disparities. Perceptions of shortages, evidenced by workforce departures and critical staffing gaps, underscore the urgent need for intervention. The strain on healthcare professionals' mental well-being and the potential threat to patient safety necessitate a reevaluation of strategies to address shortages comprehensively. Public opinion reflects a growing awareness of healthcare inadequacies, emphasizing the need for innovative solutions to bridge the widening gap between supply and demand.

Delaware's path forward involves exploring potential strategies and interventions to mitigate shortages. Workforce development initiatives, including training programs and retention strategies, can fortify the healthcare workforce. Drawing inspiration from successful programs elsewhere provides a roadmap for adaptation, ensuring these initiatives align with Delaware's unique context. Policy recommendations emerge as a pivotal aspect of the mitigation efforts. Addressing regulatory barriers, introducing financial incentives, expanding telehealth services, and fostering collaborative policy initiatives are essential steps. Learning from successful policies implemented in analogous contexts equips Delaware with valuable insights to tailor interventions effectively.

In navigating these challenges, the overarching goal is to achieve health equity — the highest level of health for all. The maldistribution of healthcare resources, exacerbated by shortages, underscores the imperative to create a fair and just healthcare system. Delaware's journey towards mitigating shortages involves a strategic blend of workforce development and targeted policy changes, aiming not only to alleviate immediate pressures but also to lay the foundation for a resilient and equitable healthcare future. As the state charts its course, the experiences and lessons shared by others provide guidance, offering hope for a healthcare landscape characterized by accessibility, quality, and equity.

Doi: 10.32481/djph.2023.12.005

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