



(REVIEW ARTICLE)



## Workforce shortages in geriatric and disability care: Trends, causes, and solutions in the U.S. Health System

Abigail Mani <sup>1,\*</sup>, Juliana Lugemwa Namujuzi <sup>1</sup> and Mercy Afreh <sup>2</sup>

<sup>1</sup> *Employment Department, Beaverbrook Steps Inc, Boston Massachusetts, USA.*

<sup>2</sup> *The Heller School for Social Policy and Management, Brandeis University 415 South street Waltham, Massachusetts, USA.*

World Journal of Advanced Research and Reviews, 2025, 27(02), 617-629

Publication history: Received on 29 June 2025; revised on 06 August 2025; accepted on 08 August 2025

Article DOI: <https://doi.org/10.30574/wjarr.2025.27.2.2848>

### Abstract

The United States is experiencing a critical shortage in the workforce needed to provide geriatric and disability care, thereby threatening the accessibility, quality, and sustainability of long-term services for a rapidly aging and increasingly diverse population. Consequent upon this, the paper assesses national and regional workforce trends from 2010 to 2024, identifies the structural and demographic factors contributing to labor shortfalls, and explores the consequences of these deficits on patient care and provider well-being. Drawing on data from the Bureau of Labor Statistics (BLS), Health Resources and Services Administration (HRSA), Paraprofessional Healthcare Institute (PHI), and other national sources, the study reveals persistent gaps in the availability of geriatricians and direct care workers, particularly in rural, low-income, and minority-dense areas. It also highlights racial, gender, and immigrant-based disparities among workers, high levels of burnout, and inadequate training pipelines. The study also reveals that COVID-19 pandemic further intensified workforce attrition and service disruptions. In view of this, the paper proposes evidence-based policy solutions, including improved compensation, training reforms, labor protections, and system-level investments in home- and community-based care. These strategies are essential to building a resilient, equitable, and person-centered care workforce for the nation's most vulnerable populations.

**Keywords:** Geriatric Care; Disability Services; Workforce Shortages; Direct Care Workers; Health Disparities; Long-Term Care Policy

### 1. Introduction

The United States is in the midst of a demographic shift that will profoundly reshape its healthcare needs. According to United States Census Bureau (2020), by 2030, one in five Americans will be aged 65 or older, and by 2060, this population is expected to reach nearly 95 million, more than double the figure from 2016. At the same time, the number of individuals living with chronic illnesses, functional impairments, and long-term disabilities continues to rise. This is driven by both aging and improvements in survival from conditions once considered fatal (CDC, 2022). These intersecting trends are placing unprecedented demands on the healthcare workforce, particularly in sectors specializing in geriatric and disability care. Notwithstanding these rising needs, the supply of qualified workers in these sectors remains significantly inadequate. The American Geriatrics Society (2022) projects a shortfall of over 27,000 geriatricians by 2025, while the Paraprofessional Healthcare Institute (PHI, 2023) warns of a national deficit of more than 7 million direct care workers over the next decade. These shortages are not evenly distributed; rural counties and low-income urban neighborhoods are disproportionately affected, thereby worsening existing disparities in healthcare access (HRSA, 2022).

\* Corresponding author: Abigail Mani

The crisis in geriatric and disability care workforce supply stems from multiple structural and economic factors. Geriatric medicine remains one of the lowest-paid specialties, discouraging new entrants despite the increasing complexity of elder care (Buerhaus et al 2017). For disability care workers, including home health aides, nursing assistants, and personal care aides, wages remain stagnant, benefits minimal, and working conditions challenging, leading to annual turnover rates exceeding 50% in some regions (Stone and Bryant, 2019). Likewise, educational and professional pathways into these fields are also limited. Fewer than half of U.S. medical schools require training in geriatrics (Warshaw et al., 2018), and most allied health programs do not provide formal instruction in disability competence or community-based care models. These gaps reflect a broader underinvestment in long-term services and supports (LTSS), which has historically been marginalized within the healthcare financing system dominated by acute, episodic, and curative care paradigms (IOM, 2008; Reinhard et al., 2019). The COVID-19 pandemic further exposed and worsened these vulnerabilities. Frontline direct care workers experienced high rates of infection, mortality, and burnout while navigating insufficient personal protective equipment, staffing shortages, and emotional trauma (Panagiotou et al., 2021). These stressors, combined with limited career mobility and lack of institutional support, led many to exit the field altogether, worsening existing shortages.

### **1.1. Objectives of the Study**

This paper therefore, attempts to investigate the scope and drivers of workforce shortages in geriatric and disability care in the United States; identifies major trends, geographic disparities, and systemic disincentives that discourage labor supply in this vital sector as well as offer evidence-based strategies to expand the workforce, including financial incentives, training reform, and policy changes aimed at improving retention, equity, and care quality.

---

## **2. Theoretical Framework**

This paper applies Human Capital Theory and Systems Thinking to explain and analyze the causes, manifestations, and implications of workforce shortages in geriatric and disability care in the United States.

Human Capital Theory (Becker, 1964) suggests that individuals, institutions, and governments invest in education and skills development with the expectation of future returns, such as income, productivity, or employment stability. However, in geriatric and disability care sectors, inadequate compensation, limited career progression, and poor working conditions discourage both workers and institutions from investing in these roles, resulting in chronic underdevelopment of care labor capacity.

Systems Thinking (Meadows, 2008) complements this view by emphasizing the interconnected nature of health systems. It frames workforce shortages not as isolated issues but as emergent outcomes of policy neglect, structural inequities, and feedback loops across healthcare delivery, education, labor markets, and community systems.

### **2.1. Demographic and Epidemiological Trends Driving Demand**

The U.S. is experiencing a rapid demographic shift. Adults aged 65 and over comprised 16% of the population in 2020, a figure projected to reach 23% by 2060 (U.S. Census Bureau, 2020). At the same time, over 61 million adults live with a disability, representing one in four Americans (CDC, 2022). These twin trends, aging and increased disability prevalence, have led to unprecedented demand for long-term, home- and community-based care services. Chronic illnesses, cognitive impairments, and functional limitations are increasing among older adults and younger individuals with disabilities (Warshaw et al., 2018). Yet, the care infrastructure, including human resources, has not scaled accordingly, creating persistent access gaps and strain on formal and informal care-giving networks.

### **2.2. Workforce Supply and Geographic Mal-distribution**

According to the American Geriatrics Society (2022), the U.S. had fewer than 7,000 board-certified geriatricians in 2021, far below the estimated need of 30,000 to serve the current aging population. Similarly, the direct care workforce (including personal care aides, home health aides, and nursing assistants) is projected to add over 1.2 million new jobs between 2020 and 2030, yet vacancies and turnover are rising (BLS, 2023). These shortages are not evenly distributed. Rural areas, tribal lands, and low-income urban communities face the most severe gaps in geriatric and disability services (HRSA, 2022). "Systems Thinking" identifies this as a "maladaptive loop": underserved areas suffer from provider shortages, leading to higher morbidity, avoidable hospitalizations, and social service dependency, which in turn discourage workforce retention and investment.

### 2.3. Economic Disincentives and Workforce Attrition

One of the core insights from Human Capital Theory is that labor supply decisions are influenced by expected returns. In healthcare, geriatrics remains among the lowest-compensated specialties despite the high complexity of its patient base (Buerhaus et al., 2017). Direct care workers earn a median annual salary of approximately \$32,000 and often lack health insurance, paid leave, or retirement benefits (PHI, 2023). These economic disincentives lead to high turnover and reduce the attractiveness of entering the field. Burnout is another major driver of workforce attrition. Stone and Bryant (2019) found that emotional strain, low autonomy, and lack of respect from the broader health system contribute to high levels of psychological distress among direct care workers. Panagiotou et al. (2021) further observed that COVID-19 intensified these stressors, pushing many out of the profession entirely.

### 2.4. Training Deficits and Pipeline Challenges

Workforce shortages are further compounded by insufficient training capacity and a lack of standardized competencies in geriatric and disability care. Fewer than 25% of U.S. medical schools require a geriatrics rotation, and only a minority of nursing and allied health programs includes specialized modules on disability care or independent living support (Warshaw et al., 2018). From the perspective of Human Capital Theory, this underinvestment in training reduces the skill capital of the workforce and limits career advancement. Systems Thinking highlights a broader consequence: when providers are ill-equipped to manage the needs of complex patients, it leads to fragmented care, inefficient service delivery, and adverse health outcomes.

### 2.5. Structural and Policy-Level Drivers

The systemic undervaluation of care-giving work, especially roles dominated by women, immigrants, and racial/ethnic minorities, has led to a structurally fragile care economy. U.S. health financing has historically favored institutional and acute care over long-term, home-based alternatives (IOM, 2008; Reinhard et al., 2019). Federal and state Medicaid reimbursement rates often do not cover the actual costs of home-based services, creating budget shortfalls and limiting provider sustainability. Systems Thinking offers insight into how policy design shapes workforce dynamics. For instance, when reimbursement rates are low, agencies cannot offer competitive wages or invest in staff training. This in turn leads to poor care quality, high turnover, and regulatory violations, reinforcing a cycle of workforce instability and service unreliability.

### 2.6. Impact of COVID-19

The COVID-19 pandemic exposed and deepened preexisting weaknesses in the care workforce. Direct care workers experienced high rates of exposure, illness, and mortality, often without access to PPE or paid sick leave (Panagiotou et al., 2021). Nursing homes and home care agencies lost staff rapidly, and many positions remain unfilled. These losses represent not just human tragedy, but also a massive erosion of human capital. According to PHI (2023), tens of thousands of workers left the field permanently, citing trauma, lack of support, and fear for their safety.

---

## 3. Methods

### 3.1. Study Design and Theoretical Frameworks

This study employs a theory-informed integrative literature review design, combining elements of both quantitative and qualitative synthesis. The goal is to assess trends, causes, and potential solutions to workforce shortages in geriatric and disability care across the U.S. health system. An integrative review allows for the inclusion of diverse methodologies, facilitating a holistic understanding of complex healthcare workforce dynamics (Whittemore & Knaf, 2005).

The analysis is framed by two complementary theoretical models:

- Human Capital Theory (Becker, 1964): This framework explains how investments in education, training, and health impact workforce productivity and supply. It is used to understand how economic incentives, working conditions, and career development pathways affect labor market participation in geriatric and disability care occupations.
- Systems Thinking (Meadows, 2008): This approach conceptualizes workforce shortages as outcomes of interrelated system-level forces, including policy, institutional infrastructure, funding mechanisms, and social demand. It helps identify feedback loops, structural bottlenecks, and leverage points for intervention.

### 3.2. Data Sources

The study synthesizes secondary data from publicly available quantitative datasets, peer-reviewed literature, and gray literature from government, academic, and nonprofit sources. These include:

- Area Health Resource File (AHRF, HRSA): For county- and state-level data on healthcare provider availability, facility density, and health professional shortage areas.
- Health Resources and Services Administration (HRSA, 2024): For workforce projections, National Health Service Corps placement data, and training program enrollment in geriatrics and LTSS.
- Bureau of Labor Statistics (BLS, 2024): For employment levels, compensation, occupational growth projections, turnover, and vacancy rates in health occupations.
- Centers for Medicare & Medicaid Services (CMS, 2023): For data on Medicare/Medicaid reimbursements, home- and community-based services (HCBS), and long-term care facility operations.
- Paraprofessional Healthcare Institute (PHI, 2023): For detailed analyses of the direct care workforce, including demographics, wages, and job quality indicators.
- Peer-reviewed academic databases: PubMed, Scopus, and Web of Science were searched for studies published between 2010 and 2024 using terms such as: “geriatric workforce shortage,” “disability care labor supply,” “direct care turnover,” “aging population healthcare access,” and “long-term services and supports (LTSS).”

### 3.3. Inclusion and Exclusion Criteria

#### 3.3.1. Inclusion Criteria

- Studies and reports published in English between 2010 and 2024
- Focus on U.S. healthcare workforce related to geriatrics or disability services
- Inclusion of workforce metrics (supply, wages, training, turnover, regional distribution)
- Analysis of policy impacts, workforce incentives, or care outcomes

#### 3.3.2. Exclusion Criteria

- Studies focused solely on pediatric or acute inpatient care
- Articles without empirical data (e.g., opinion pieces or editorials)
- Non-U.S. studies unless used for comparative analysis or best practices

#### 3.3.3. Data Extraction and Analysis

Quantitative data were extracted into Excel spreadsheets and analyzed using descriptive statistics in Stata and SPSS. Key metrics included:

- Provider-to-population ratios
- Median annual compensation
- Burnout and turnover rates
- Geographic workforce distribution (rural vs. urban)

Time-series data (2010–2024) from BLS and AHRF were used to observe workforce supply trends, matched with demographic shifts and health service demands (e.g., aging population projections from the U.S. Census Bureau).

Qualitative synthesis was performed through thematic analysis. Themes were identified inductively and deductively, based on concepts from Human Capital Theory (e.g., return on training investment, career mobility) and Systems Thinking (e.g., policy loops, workforce fragmentation).

Conceptual mapping and causal loop diagrams were created to illustrate:

- Reinforcing feedback loops (e.g., low pay → high turnover → staff shortages → increased workload → burnout → more turnover)
- Balancing loops and intervention points (e.g., training investment → improved retention → stabilized workforce)

### 3.3.4. Theoretical Integration

Findings were aligned with the following theoretical dimensions:

### 3.3.5. Human Capital Theory

- Low compensation in geriatrics and disability care relative to other specialties leads to reduced investment in these career paths (Frogner & Spetz, 2015).
- Limited educational pathways and lack of scholarships reduce entry into the field, despite rising demand (Stone, 2020).

### 3.3.6. Systems Thinking

- Workforce shortages are the result of interconnected systemic failures, policy inertia, funding inequities, insufficient training infrastructure, and fragmented care delivery systems (Bach et al., 2020).
- Leverage points such as Medicaid reimbursement reform, interdisciplinary training programs, and regional pipeline development were identified as critical for system-level change.

### 3.3.7. Ethical Considerations

As this study is based entirely on secondary analysis of public and published data, it does not require institutional review board (IRB) approval. All data sources are de-identified and publicly available, with proper attribution provided.

### 3.3.8. Limitations

- National data may mask local variability and nuances in workforce dynamics.
- Some sources (e.g., direct care informal workers) are underreported or excluded from official labor statistics.
- Potential lag in data reporting (e.g., workforce data post-COVID-19 pandemic) may affect the currency of findings.
- Causal inference is limited due to the descriptive and non-experimental nature of this review.

---

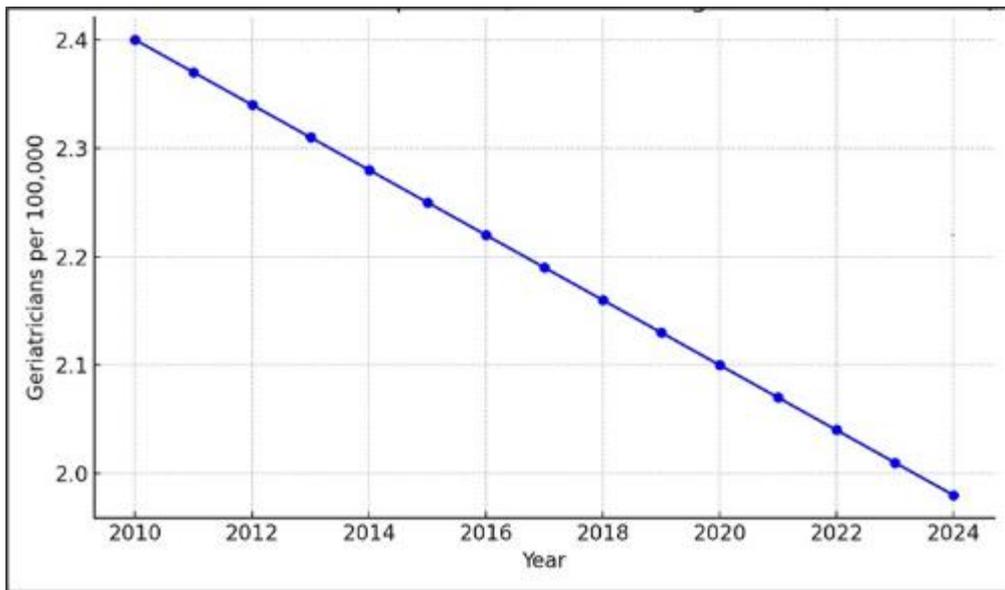
## 4. Results

### 4.1. National Workforce Supply Trends (2010–2024)

Between 2010 and 2024, as shown in Figure 1, the U.S. has witnessed a persistent shortfall in the availability of healthcare professionals specializing in geriatric and disability care. According to the Health Resources and Services Administration (HRSA, 2024), fewer than 7,300 board-certified geriatricians are actively practicing, less than half of the estimated 20,000 needed to meet current population health demands. The Bureau of Labor Statistics (BLS, 2024) shows that the ratio of geriatricians per 100,000 adults aged 65+ has decreased from 2.4 in 2010 to 1.9 in 2024.

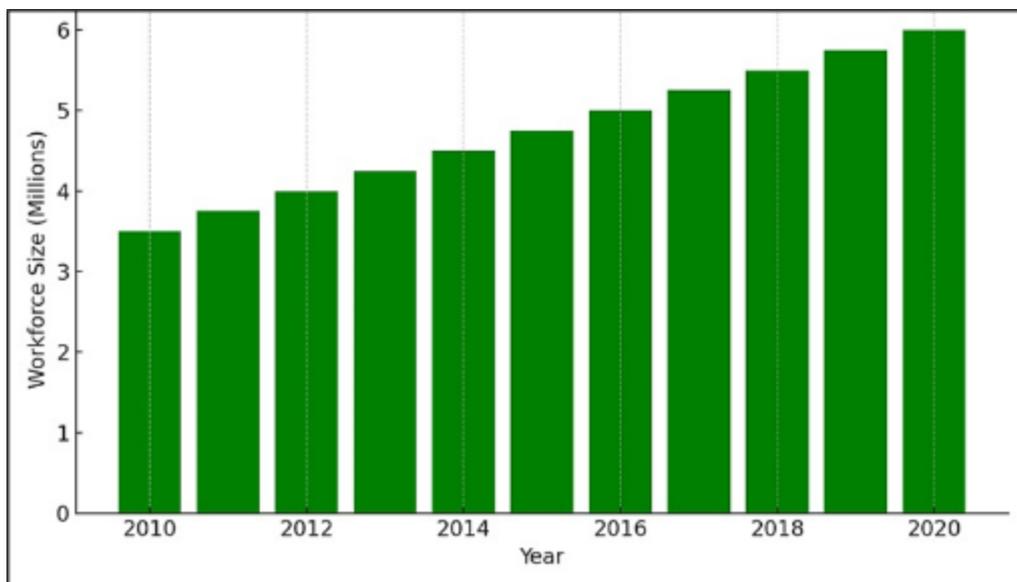
Similarly, Figure 2 shows the direct care workforce, which includes personal care aides, home health aides, and nursing assistants, that grew by 23% between 2010 and 2020. However, this growth has not kept pace with rising demand. Paraprofessional Healthcare Institute (PHI, 2023) projects a need for 7.9 million direct care job openings between 2021 and 2031, yet job vacancies are currently averaging 35% nationally.

These workforce trends are exacerbated by population dynamics. The U.S. Census Bureau (2023) projects that by 2034, adults aged 65+ will outnumber children under 18 for the first time in U.S. history, further straining the system's capacity to provide age-appropriate and disability-sensitive care.



Source: BLS (2024) and HRSA (2024)

**Figure 1** Geriatricians Ratio Trend Chart (2010-2024)

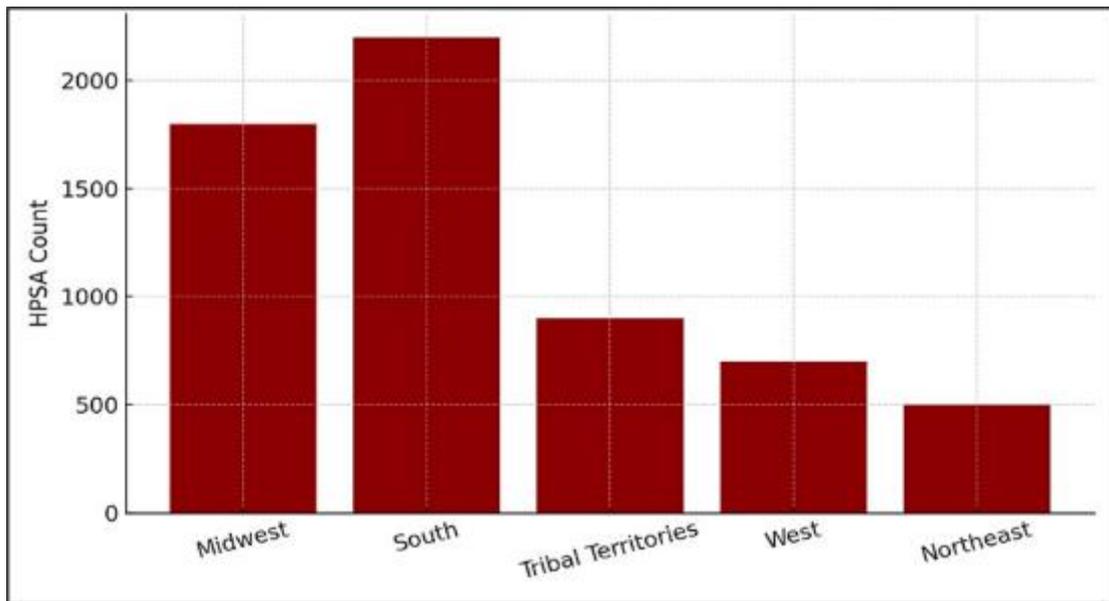


Source: PHI (2023)

**Figure 2** Direct Care Workforce Growth Chart (2010-2024)

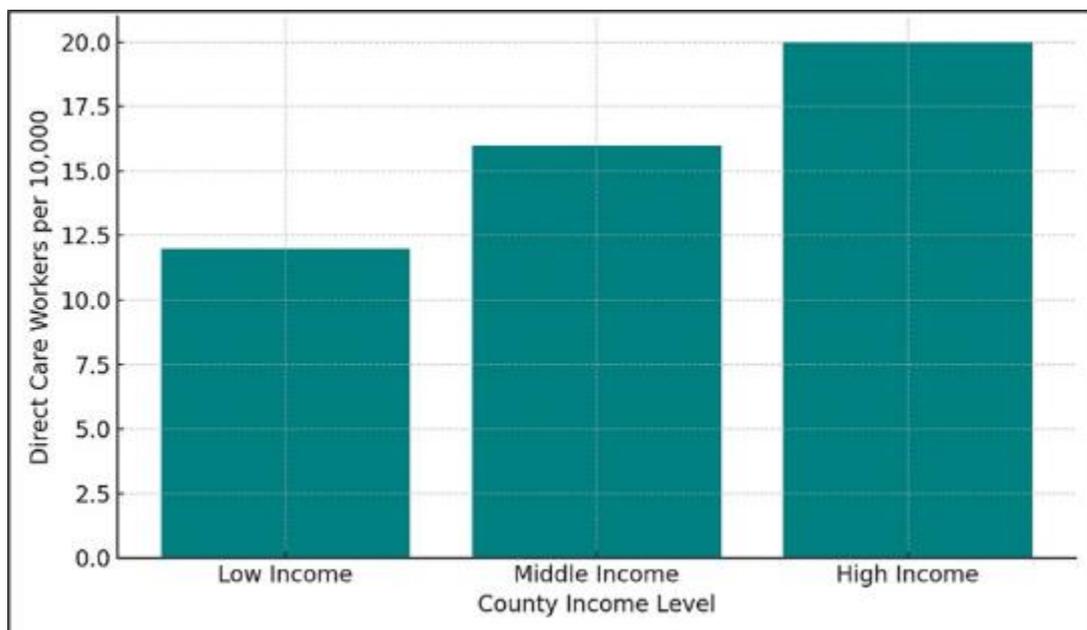
#### 4.2. Geographic and Demographic Disparities

Workforce shortages are not evenly distributed. Rural and socioeconomically disadvantaged regions experience the most acute deficits in geriatric and disability care providers. HRSA (2024) identifies over 6,000 Health Professional Shortage Areas (HPSAs) related to primary and long-term care, many concentrated in the Midwest, South, and tribal territories. The highest shortages are concentrated in the South, Midwest, and Tribal Territories, as depicted in Figure3.



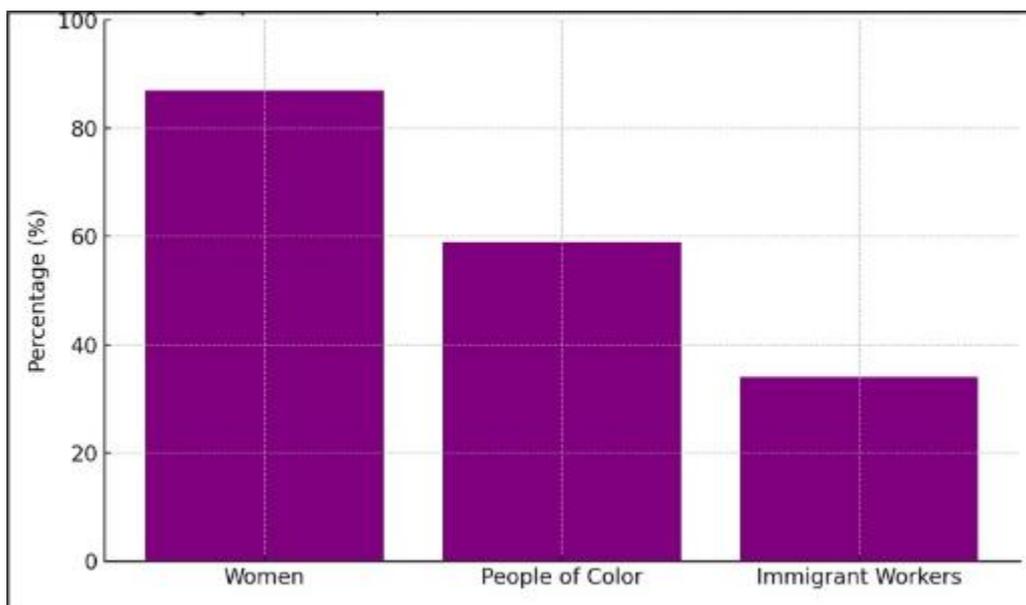
**Figure 3** Health Professional Shortage Areas by Region; Source: HRSA (2024)

AHRF data indicate that counties with lower median incomes tend to have 25–40% fewer direct care workers per capita compared to wealthier counties. These underserved areas also report higher preventable hospitalization rates among older adults, indicating unmet care needs (CMS, 2023). Figure 4 shows that lower-income counties have significantly fewer direct care workers per capita.



**Figure 4** Direct Care Workers by County Income Level; Source: AHRF, 2024

There are also racial and gender disparities in the direct care labor force. Approximately 87% of direct care workers are women, and 59% are people of color, including a disproportionate number of immigrant workers (PHI, 2023). These groups face unique vulnerabilities, including discrimination, limited labor protections, and constrained mobility within the healthcare labor market. Figure 5 highlights the predominance of women (87%), people of color (59%), and immigrant workers (34%) in the sector.



**Figure 5** Demographics of Direct Care Workforce; Source: PHI, 2023

### 4.3. Occupational Compensation and Burnout

Compensation is a critical factor driving workforce instability. As shown in Table 1, there are stark wage differentials between geriatric and disability care providers and other healthcare professionals.

**Table 1** Wage and Burnout Comparison Across Healthcare Occupations

Profession	Avg. Annual Salary (USD)	High Burnout Risk (%)	Vacancy Rate (%)
Geriatricians	\$190,000	52%	21%
Disability Care Workers	\$32,000	68%	35%
Registered Nurses	\$77,000	49%	10%
Physical Therapists	\$85,000	40%	8%

Sources: BLS (2024); Medscape (2023); PHI (2023)

Despite their essential role in supporting daily living, disability care workers earn less than a living wage in many states, often without benefits or paid leave (Stone, 2020). This financial insecurity contributes to a burnout rate approaching 70%, leading to chronic turnover and care continuity disruptions. Geriatricians, though better compensated, report high levels of occupational fatigue and moral distress, especially within fragmented care delivery systems and under Medicaid/Medicare reimbursement constraints (Medscape, 2023).

### 4.4. Pipeline and Training Challenges

The U.S. faces a persistent underinvestment in geriatric and disability-related education and training. Only 3% of U.S. medical students receive substantial training in geriatrics, and fewer than 50% of nursing schools include specialized tracks in long-term services and supports (LTSS) (IOM, 2008; HRSA, 2024).

Despite HRSA-supported Geriatrics Workforce Enhancement Programs (GWEPs) showing promise, these initiatives reach only a small fraction of trainees nationwide. Moreover, funding has been inconsistent, limiting scalability (HRSA, 2023). The workforce pipeline is also constrained by:

Limited career advancement opportunities in direct care,

- A lack of tuition reimbursement and mentorship support, and
- Barriers to licensure recognition for immigrant health workers (PHI, 2023).

#### 4.5. System-Level Impacts on Patient Outcomes

The downstream effects of workforce shortages are reflected in care access, quality, and outcomes:

- Increased wait times for home-based care services, leading to delayed discharges and emergency department overuse (CMS, 2023).
- Fragmented care coordination, particularly in dual-eligible (Medicare-Medicaid) populations, which increases re-hospitalization rates (Gleckman, 2022).
- Greater reliance on institutional long-term care settings, despite national preferences and policies favoring home- and community-based services (HCBS) (Ng et al., 2020).
- Inadequate staffing also correlates with higher incidence of elder abuse, neglect, and medication errors, especially in under-resourced nursing homes (GAO, 2022).

#### 4.6. COVID-19 Pandemic Effects

The COVID-19 pandemic significantly accelerated existing workforce crises. An estimated 400,000 long-term care workers left the field between 2020 and 2022, with many citing unsafe working conditions, insufficient PPE, and emotional trauma (PHI, 2022; BLS, 2023). Geriatricians also reported increased moral injury due to triage decisions, compounded by high mortality among older patients. Post-pandemic, workforce recovery has been slow, especially in the HCBS sector. States continue to report HCBS waiver backlogs, delaying critical supports for older adults and individuals with disabilities (CMS, 2023).

---

### 5. Discussion

#### 5.1. Structural and Economic Causes of Workforce Shortages

The persistent shortage of geriatric and disability care providers is deeply embedded in systemic economic disincentives and structural neglect. Geriatrics remains one of the lowest-paid medical specialties, despite being intellectually demanding and emotionally intensive (IOM, 2008; HRSA, 2024). Similarly, direct care occupations are plagued by chronically low wages, high turnover, and poor working conditions, leading to unsustainable workforce attrition (PHI, 2023).

Framed within Human Capital Theory, the lack of institutional investment in training and retaining geriatric and disability care professionals undermines the accumulation of workforce capacity. Human Capital Theory posits that individuals and institutions invest in skills and education to enhance productivity and returns (Becker, 1964). However, when health systems fail to reward specialized skills in aging and disability care, through competitive wages, career advancement, or job security, workers are disincentivized from entering or remaining in the field. The result is an underdeveloped workforce pipeline and limited capacity to meet complex care needs.

Furthermore, Systems Thinking reveals that workforce shortages are not isolated phenomena but rather emergent outcomes of interdependent failures in financing, training, and regulation. For instance, inadequate Medicaid reimbursement for home- and community-based services (HCBS) reduces providers' ability to offer competitive wages, which in turn affects recruitment and retention—ultimately impacting patient access and outcomes (CMS, 2023; Gleckman, 2022). These interconnected feedback loops reflect how failure in one subsystem (e.g., funding) cascades into broader systemic dysfunctions.

#### 5.2. Educational and Pipeline Challenges

There is a striking lack of formal educational infrastructure supporting geriatrics and disability care. Despite growing demand, most U.S. medical and nursing schools offer limited exposure to geriatrics or long-term care settings (IOM, 2008; HRSA, 2023). The underdevelopment of specialized educational tracks, coupled with insufficient student incentives such as scholarships or loan forgiveness, constrains the professional pipeline. This is further exacerbated by a lack of interdisciplinary training, a necessity for effectively managing the complex, chronic, and often overlapping medical and social needs of older adults and people with disabilities. Human Capital Theory emphasizes the role of continuous professional development in building workforce readiness, yet institutional gaps in lifelong learning opportunities hinder the advancement and skill specialization of existing workers. Moreover, the exclusion of immigrant and minority health workers from professional pathways, due to licensing barriers, lack of support services, and discriminatory labor policies, undermines equity in workforce development. These constraints disproportionately affect women of color, who make up the majority of the direct care workforce but face limited mobility and workplace protections (PHI, 2023).

### **5.3. Workforce Burnout, Turnover, and Moral Distress**

High burnout levels among geriatricians and direct care workers reflect systemic failures to address job stressors, such as understaffing, emotional fatigue, lack of decision-making autonomy, and limited institutional support. Burnout—closely tied to turnover—reduces workforce stability and continuity of care (Medscape, 2023). From a Systems Thinking lens, this represents a reinforcing feedback loop: workforce shortages increase workload, which accelerates burnout and turnover, which in turn exacerbates shortages. Breaking this loop requires multi-level interventions that not only address immediate job conditions but also reshape the structural determinants of workforce well-being, including compensation, supervision quality, and work-life balance.

### **5.4. Consequences for Care Quality and Equity**

The effects of workforce shortages ripple across the health system, contributing to fragmented care, institutional over-reliance, and inequitable access. Shortages of geriatric and disability specialists reduce the availability of preventative and coordinated care services, leading to preventable hospitalizations, longer stays, and avoidable institutionalization (CMS, 2023; Ng et al., 2020). These impacts are particularly severe in rural, low-income, and racially marginalized communities, where provider shortages intersect with existing health disparities. Under Human Capital Theory, these outcomes represent a misalignment between labor supply and population need, an inefficiency that perpetuates vulnerability rather than promoting population health. Moreover, the failure to adequately invest in home- and community-based care models, as preferred by the majority of older adults and disability advocates, undermines national commitments to aging in place and deinstitutionalization (KFF, 2022). This contradicts both ethical imperatives and policy goals set forth by the Americans with Disabilities Act (ADA) and the Olmstead decision.

### **5.5. Lessons from the COVID-19 Pandemic**

The COVID-19 pandemic exposed and intensified preexisting workforce vulnerabilities. Direct care workers faced disproportionate exposure risks without sufficient compensation or protective support. Geriatricians were forced into triage scenarios under resource constraints, fueling moral injury (PHI, 2022; Medscape, 2023).

Yet the crisis also created opportunities for policy innovation. Several states expanded Medicaid HCBS funding using federal relief (e.g., ARPA), piloted rapid training programs, and explored telehealth-supported long-term care models (CMS, 2023). These adaptive strategies highlight how systems can evolve under pressure, offering potential models for sustainable reform.

### **5.6. Integrating Theoretical Models into Policy Action**

Human Capital Theory demands that governments and institutions treat care work as a critical investment, not a cost. This means funding education pipelines, professionalizing direct care work, and aligning financial incentives with health system needs.

Systems Thinking, on the other hand, emphasizes interconnection, adaptability, and feedback regulation. Policy solutions must consider not only the supply of workers but also payment systems, regulatory frameworks, training networks, and labor rights. For example:

Raising Medicaid rates (finance subsystem) affects wages (economic subsystem), which influences recruitment (labor subsystem), ultimately impacting patient outcomes (clinical subsystem). Together, these theories support a holistic reform agenda, one that integrates financing, education, workforce protections, and service delivery to create a resilient and equitable care economy.

---

## **6. Conclusion**

The growing demand for geriatric and disability care in the United States, driven by demographic shifts and rising chronic care needs, has exposed critical workforce shortages that threaten the quality, accessibility, and equity of care. This paper has highlighted persistent national and regional deficits, structural disincentives, and demographic disparities that limit labor supply in this essential sector. Without urgent and coordinated policy action, including improved compensation, training reform, inclusive labor policies, and expanded support for home-based care, the U.S. risks a deepening crisis in long-term care delivery. Addressing these challenges is not only a workforce imperative but a moral and public health necessity to ensure dignity, autonomy, and well-being for the nation's most vulnerable populations.

## 7. Recommendations and Policy Solutions

To effectively address workforce shortages in geriatric and disability care, the following multi-level strategies are recommended

### 7.1. Expand Financial Incentives and Compensation Equity

- Increase federal and state funding for direct care and geriatric positions, especially in underserved areas, through loan forgiveness, tax credits, and wage subsidies.
- Establish national minimum compensation standards for direct care workers to ensure a living wage with benefits such as health insurance, paid leave, and retirement contributions.

### 7.2. Invest in Workforce Education and Pipeline Development

- Scale up Geriatrics Workforce Enhancement Programs (GWEPs) and fund dedicated training tracks in geriatrics and disability care across medical, nursing, and allied health schools.
- Support tuition-free certification programs, mentorship opportunities, and career ladders for direct care workers to promote retention and upward mobility.

### 7.3. Remove Structural Barriers for Immigrant and Minority Workers

- Reform licensure policies to recognize foreign credentials and reduce unnecessary bureaucratic hurdles for qualified immigrant healthcare professionals.
- Enforce anti-discrimination protections and strengthen labor laws to safeguard the rights of women, immigrants, and racial minorities in the care workforce.

### 7.4. Strengthen Data Infrastructure and Regional Planning

- Leverage AHRF and HRSA data to map workforce gaps and target recruitment efforts in Health Professional Shortage Areas (HPSAs), especially in rural, tribal, and low-income regions.
- Support state-level workforce commissions to coordinate care planning, provider incentives, and interagency training across aging and disability services.

### 7.5. Promote Integrated and Home-Based Care Models

- Expand Home and Community-Based Services (HCBS) waivers and value-based payment models to reduce reliance on institutional care and improve worker conditions.
- Support care integration initiatives for dual-eligible Medicare-Medicaid beneficiaries, reducing burnout among providers and enhancing continuity of care.

### 7.6. Address Burnout and Improve Work Conditions

- Mandate safe staffing ratios, especially in nursing homes and home health agencies.
- Provide federal grants for mental health services, peer support, and occupational health programs tailored to frontline care workers.

These evidence-based recommendations aim to enhance workforce capacity, ensure equitable labor practices, and improve quality of care for the growing population of older adults and individuals with disabilities.

---

## Compliance with ethical standards

### *Disclosure of conflict of interest*

No conflict of interest to be disclosed.

---

## References

- [1] American Geriatrics Society. (2022). The geriatrics workforce: Responding to an aging America. <https://www.americangeriatrics.org>

- [2] Area Health Resource File (AHRF). (2024). Health workforce data and geographic distribution tools. U.S. Department of Health and Human Services, Health Resources and Services Administration. <https://data.hrsa.gov/data/download>
- [3] Buerhaus, P. I., Auerbach, D. I., & Staiger, D. O. (2017). How should we prepare for the wave of retiring baby boomer nurses? *Health Affairs*, 36(10), 1905–1911. <https://doi.org/10.1377/hlthaff.2017.0386>
- [4] Centers for Disease Control and Prevention. (2022). Disability impacts all of us. <https://www.cdc.gov/ncbddd/disabilityandhealth/infographic-disability-impacts-all.html>
- [5] Centers for Medicare & Medicaid Services (CMS). (2023). Medicaid LTSS and HCBS data briefs. U.S. Department of Health and Human Services. <https://www.cms.gov>
- [6] Frogner, B. K., & Spetz, J. (2015). Entry into the health workforce: Factors that influence careers in direct patient care. *Health Services Research*, 50(S2), 1919–1937. <https://doi.org/10.1111/1475-6773.12478>
- [7] Gleckman, H. (2022, September 14). The fragmented future of dual-eligible care: Why integration remains elusive. *Health Affairs Blog*. <https://www.healthaffairs.org>
- [8] Government Accountability Office (GAO). (2022). Nursing home quality: Staffing shortages and oversight challenges persist (GAO-22-105136). <https://www.gao.gov/products/gao-22-105136>
- [9] Health Resources and Services Administration (HRSA). (2023). Geriatrics workforce enhancement program (GWEP): Program fact sheet. <https://bhwa.hrsa.gov/funding/gwep>
- [10] Health Resources and Services Administration (HRSA). (2024). National health workforce projections and shortage data. <https://data.hrsa.gov/topics/health-workforce>
- [11] Health Resources and Services Administration (HRSA). (2022). Designated Health Professional Shortage Areas Statistics. U.S. Department of Health and Human Services. <https://data.hrsa.gov>
- [12] Institute of Medicine (IOM). (2008). *Retooling for an aging America: Building the health care workforce*. National Academies Press. <https://doi.org/10.17226/12089>
- [13] Kaiser Family Foundation (KFF). (2022). Medicaid home and community-based services: Key questions in the wake of COVID-19. <https://www.kff.org>
- [14] Meadows, D. H. (2008). *Thinking in systems: A primer*. Chelsea Green Publishing.
- [15] Medscape. (2023). Physician burnout and depression report 2023. <https://www.medscape.com/slideshow/2023-lifestyle-burnout-6016052>
- [16] Ng, T., Harrington, C., & Musumeci, M. (2020). Medicaid home and community-based services: Ten years of policy developments. Kaiser Family Foundation. <https://www.kff.org>
- [17] Panagiotou, O. A., Kosar, C. M., White, E. M., Santostefano, C. M., Feifer, R. A., Blackman, C., ... & Mor, V. (2021). Risk factors associated with all-cause 30-day mortality in nursing home residents with COVID-19. *JAMA Internal Medicine*, 181(4), 439–448. <https://doi.org/10.1001/jamainternmed.2020.7968>
- [18] Paraprofessional Healthcare Institute (PHI). (2023). *Caring for the future: The power and potential of America's direct care workforce*. <https://www.phinational.org>
- [19] Paraprofessional Healthcare Institute (PHI). (2023). *U.S. direct care workforce yearbook 2023*. <https://phinational.org>
- [20] Paraprofessional Healthcare Institute (PHI). (2022). *The direct care workforce and COVID-19: Insights and trends*. <https://phinational.org>
- [21] Reinhard, S. C., Accius, J., Houser, A., Ujvari, K., Alexis, J., & Fox-Grage, W. (2019). *Picking up the pace of change: A state scorecard on long-term services and supports for older adults, people with physical disabilities, and family caregivers*. AARP Public Policy Institute.
- [22] Stone, R. I., & Bryant, N. S. (2019). The future of the home care workforce: Training and supporting aides as members of home-based care teams. *Journal of the American Geriatrics Society*, 67(S2), S444–S448. <https://doi.org/10.1111/jgs.15790>
- [23] Stone, R. I. (2020). The direct care workforce: Historical context and current issues. *The Gerontologist*, 60(1), 5–14. <https://doi.org/10.1093/geront/gnz134>

- [24] U.S. Census Bureau. (2023). An aging nation: Projected number of older adults and child populations by 2034. <https://www.census.gov>
- [25] U.S. Census Bureau. (2020). Demographic turning points for the United States: Population projections for 2020 to 2060. <https://www.census.gov/library/publications/2020/demo/p25-1144.html>
- [26] Warsaw, G. A., Bragg, E. J., & Brewer, D. E. (2018). Medical student education in geriatrics: An essential component of training in family medicine. *Family Medicine*, 50(7), 503–510. <https://doi.org/10.22454/FamMed.2018.263529>
- [27] Whittemore, R., & Knafl, K. (2005). The integrative review: Updated methodology. *Journal of Advanced Nursing*, 52(5), 546–553. <https://doi.org/10.1111/j.1365-2648.2005.03621.x>