



PHI

QUALITY CARE
THROUGH
QUALITY JOBS

Envisioning the Future of Home Care

TRENDS AND OPPORTUNITIES IN WORKFORCE
POLICY AND PRACTICE

ACKNOWLEDGMENTS

PHI wishes to thank the Gordon and Betty Moore Foundation for generously supporting this work (GBMF Grant #6903). We are also grateful to **Dr. Lisa Iezzoni** (Professor of Medicine, Harvard Medical School and Health Policy Research Center, Mongan Institute, Massachusetts General Hospital) for conceptualizing this project and inviting PHI's participation. Critical insight and input from **Dr. Iezzoni** and **Naomi Gallopyn** (Program Manager, Mongan Institute Center for Aging & Serious Illness), and from a range of other experts in the long-term services and supports field, has enriched this report immeasurably.

Author:
Kezia Scales, PhD

Contributors:
Jodi M. Sturgeon
Robert Espinoza
Stephen Campbell
Allison Cook

Design:
RD Design

CONTENTS

2	Key Terms
3	Executive Summary
16	Introduction
19	Part I: Home Care Demand and Supply
20	Chapter 1: Home Care Consumers
25	Chapter 2: The Home Care Workforce
32	Chapter 3: The Home Care Sector
41	Part II: Recruitment and Retention of the Home Care Workforce
42	Chapter 4: Improving Job Quality
52	Chapter 5: Optimizing Training Standards and Systems
66	Part III: Opportunities for Innovation and Sustainability
67	Chapter 6: Strengthening Home Care Payment
78	Chapter 7: Maximizing the Contribution of the Home Care Workforce
85	Chapter 8: Leveraging Technology in Home Care Services
94	Chapter 9: Measuring and Monitoring Progress
102	Conclusion and Recommendations
107	Notes
122	Appendix: Summary of Public Data on the Home Care Workforce

KEY TERMS

ACTIVITIES OF DAILY LIVING (ADLS): ADLs are essential activities performed every day, including bathing, dressing, eating, toilet care, and transferring/mobility.

CONSUMER: A consumer is an individual who receives paid long-term services and supports (LTSS) due to physical, cognitive, developmental, behavioral health, and/or chronic health conditions or impairments. This report focuses on older adults and adults with disabilities who receive home care services. Home care consumers may also be referred to as *clients*.

CONSUMER-DIRECTED SERVICES: Also known as *participant-directed* or *self-directed services*, publicly funded consumer-directed services enable consumers to assume more control over the long-term services and supports (LTSS) they receive. In the employer authority model of consumer direction, consumers are authorized to hire, schedule, supervise, and dismiss their own personal assistance workers; while in the budget authority model, consumers are allotted a personal budget from which to directly purchase goods and services, including (but not limited to) personal assistance.

HOME AND COMMUNITY-BASED SERVICES (HCBS): HCBS are long-term services and supports (LTSS) that are delivered in private homes and community settings, including assisted living facilities and adult day services.

HOME CARE: Home care, which is the primary focus of this report, refers to home and community-based services (HCBS) that are provided to individuals at home. The adjectives *formal* and *paid* are used interchangeably in this report to distinguish home care services provided by home care workers from assistance provided by family members, friends, and other *informal* or *unpaid* caregivers.

HOME CARE AGENCY: Home care agencies, which include home health care and nonmedical home care agencies, provide a range of in-home services for consumers, including support with activities of daily living

(ADLs) and instrumental activities of daily living (IADLs). Home care agencies assume all responsibility for hiring, training, and supervising the home care workers who provide that support, except in the agency with choice (AWC) model, in which employment responsibilities are shared between the consumer and agency.

HOME CARE WORKER: Home care worker is a term used to collectively describe direct care workers—including primarily personal care aides and home health aides—who provide assistance to individuals in their homes.

HOME HEALTH AIDE: Home health aides are direct care workers who assist consumers with activities of daily living (ADLs) and instrumental activities of daily living (IADLs), and who may also perform certain clinical tasks under the supervision of a licensed clinical professional. In the home care context, *nursing assistants* may fulfill the same duties as home health aides.

INDEPENDENT PROVIDER: Independent providers are home care workers who are employed directly by consumers, whether in publicly funded consumer-directed programs or through private-pay arrangements.

INSTRUMENTAL ACTIVITIES OF DAILY LIVING (IADLS): IADLs are tasks associated with living independently, such as preparing meals, shopping, housekeeping, using a telephone, managing medications, managing finances, and attending appointments.

LONG-TERM SERVICES AND SUPPORTS (LTSS): LTSS include a range of health and social services that are provided to individuals who require assistance with activities of daily living (ADLs) and/or instrumental activities of daily living (IADLs). LTSS may also be referred to as *long-term care (LTC)*.

MEDICAID: Medicaid is a public means-tested health insurance program that is jointly financed by the federal government and each state. As the primary payer for all long-term services and supports (LTSS), Medicaid is the main driver of experimentation and innovation across the sector.

MEDICARE: Medicare is a federally administered health insurance program for people who have worked in the United States and are above the age of 65 or younger than 65 with a qualifying disability. Medicare coverage for personal assistance services has traditionally been limited to persons who are assessed as “homebound” and who also receive “skilled” nursing or other services, and typically for only a short period of time. Since January 2019, however, Medicare Advantage plans have had the option to provide “non-skilled” home care services, including personal care aide or home health aide services, as a supplemental benefit.

PERSONAL ASSISTANCE SERVICES (PAS): Personal assistance services encompass assistance with activities of daily living (ADLs) and/or instrumental activities of daily living (IADLs) provided to individuals who experience limitations in accomplishing these activities without assistance. Also known as *personal care services* and related terms, personal assistance services are central to paid home care services and are provided predominantly by home care workers.

PERSONAL CARE AIDE: Personal care aides are direct care workers who assist with activities of daily living (ADLs) and/or instrumental activities of daily living (IADLs), and who may also support individuals with employment and other aspects of community and social engagement. Personal care aides are employed either by a home care agency or directly by a consumer or consumer’s family. Depending on context, these workers may also be known as *PAS providers*, *personal attendants*, *personal care attendants*, or by a range of other job titles. More informally, they may be referred to as *aides*, *assistants*, *attendants*, or *caregivers*.



Executive Summary

More than 15 million Americans living at home experience some degree of difficulty with daily activities due to physical, cognitive, developmental, behavioral, and/or chronic health concerns.

The majority of these individuals seek assistance, when needed, from unpaid family members and friends. However, paid home care services fill a critical gap, especially for individuals with limited caregiving networks or with more complex needs. As the U.S. population lives longer and grows older, more individuals will require support to continue living independently in their homes and communities—and yet the home care sector, as the central pillar of the home and community-based services (HCBS) system, is already struggling to meet current demand.

The aim of this report is to identify opportunities for strengthening the home care workforce and improving home care access and quality for consumers in the years ahead. The report proceeds from the premise that, underneath the layers of complexity in the HCBS system, home care is defined by the direct relationship between the individual consumer and the home care worker who assists him or her to accomplish essential daily tasks and engage in home and community life. To a significant extent, the nature of this relationship determines the delivery, experience, and outcomes of care.

From this starting premise, the report is guided by three broad questions:

1. What are the main factors impacting the home care delivery system and workforce in the United States, now and looking ahead?

2. What are the most promising opportunities to strengthen the home care workforce and maximize its role within the changing long-term services and support (LTSS) system?

3. How do these factors and opportunities vary between states and across different service delivery models?

Evidence for the report was gathered from academic journals, policy documents, and reports from public, private, and nonprofit agencies. Additionally, national data sets from the U.S. Census Bureau and Bureau of Labor Statistics were used to generate a range of quantitative estimates of home care supply, demand, service provision, job quality, and more. The literature review and data analyses were informed by interviews with key stakeholders, including home care providers, government agency representatives, consumer advocates, and academic researchers.

The report findings are presented in three parts: Part I describes the current and projected home care landscape, focusing in turn on consumers, workers, and the sector, while Parts II and III begin building a vision for the future of home care services in the United States. The report culminates with recommendations for achieving this vision.

PART I

HOME CARE DEMAND AND SUPPLY

HOME CARE CONSUMERS

Fifteen million adults living at home in the United States require some degree of personal assistance, including 7.6 million who require assistance with activities of daily living (ADLs) and 13.8 million who require assistance with instrumental activities of daily living (IADLs). Among those with personal assistance needs, individuals aged 18 to 64 years old currently outnumber older adults (aged 65 and above), at 7.7 million versus 7.2 million, but the balance will shift as the U.S. population grows older in the coming decades. Personal assistance needs are impacted by a range of other intersecting demographic factors as well, including gender, race and ethnicity, nativity, geographic location, and health and socioeconomic status. Because individuals' use of paid home care services increases with age and complexity of need, overall demand is expected to increase precipitously in the years ahead. Sociocultural shifts (e.g., changing patterns of marriage and divorce, labor force participation, and family caregiving) and policy trends (e.g., the rebalancing of services from institutions to the community) are expected to further drive up demand for home care services in the future.

THE HOME CARE WORKFORCE

While unpaid caregivers provide the majority of personal assistance for older adults and people with disabilities, home care workers—primarily personal care aides and home health aides, as well as nursing assistants working in the home care sector—provide more *paid* support than any other segment of the HCBS workforce. Home care workers are predominantly female (87 percent) and people of color (62 percent), and nearly one in three (31 percent) were born outside the United States. The majority of home care workers (54 percent) have a high school education or less. Given this demographic profile, home care workers represent a historically and persistently marginalized group of workers, which complicates efforts to improve the quality of their jobs.

The home care workforce is growing rapidly. From 2008 to 2018, the workforce more than doubled in size, from 898,600 to nearly 2.3 million workers; personal care aides constituted 81 percent of that employment growth.

These figures likely understate the size of the workforce by not fully accounting for workers employed privately by consumers. Looking ahead, the home care workforce is expected to add more than one million additional jobs between 2018 and 2028, with the most growth among personal care aides (nearly 70 percent of the total). Home care will add more new jobs than the second and third U.S. occupations with the most growth *combined* (namely, fast food and registered nursing). Although it is difficult to robustly quantify a home care workforce shortage due to the lack of comprehensive national data, state and local evidence on job vacancies, turnover, and unmet need suggest that the supply of workers is increasingly insufficient to meet demand. Recent immigration policy trends are intensifying concerns about the workforce shortage.

THE HOME CARE SECTOR

Home care agencies fall into two main industries within the North American Industry Classification System (NAICS): Home Health Care Services and Services for the Elderly and Persons with Disabilities (SEPD). These two industries are distinguished by their primary emphasis on medical versus nonmedical care; however, there is considerable overlap between them, as many home health care agencies provide extensive nonmedical assistance, and SEPD agencies have expanded into medical services. Across the two industries, there were an estimated 56,000 home care and related establishments in 2012 (the most recent year for which detailed data are available), representing a 71 percent increase from 2002, and industry revenues were nearly \$100 billion, up from \$46 billion in 2002.

The current home care sector is characterized by several key trends, including: increasing for-profit ownership; the expansion of acute health care providers into home care; private equity investment in the sector; home care franchising; and the entry and exit of tech-driven companies. These trends raise concerns about whether all home care providers in the diverse sector are equally prepared (with the necessary expertise and commitment) to meet care quality and job quality standards. The wide variation in certification and licensure rules for home care agencies further complicates efforts to ensure consistent quality across the sector.



Alongside the agency model, publicly funded consumer-directed programs (which enable consumers to hire their own workers) are gaining prominence in the home care sector. In 2016, there were 253 consumer-directed programs across the country serving just over one million enrollees, which was an increase of 250,000 enrollees since 2013. Consumer-directed programs vary widely, including with regards to: the extent of consumers' authority; the types of allowable care providers; and the provision of employment services and supports for consumers. As with agency services, the diverse and distributed nature of consumer-directed programs complicates efforts to develop and implement

universal quality standards—particularly given the critical importance of balancing individual autonomy and personalized services against standardization.

Home care workers who are hired and paid privately by consumers, either as household employees, independent contractors, or unreported workers, comprise the third segment of the home care sector. This segment, known as the gray market, is difficult to characterize and impossible to quantify—but certainly sizable, given the large proportion of consumers who do not qualify for public funding but cannot afford to pay out-of-pocket for agency services.

PART II

RECRUITMENT AND RETENTION OF THE HOME CARE WORKFORCE

IMPROVING JOB QUALITY

Although high-quality home care cannot be achieved without a strong and stable workforce, especially given the growing and evolving demand for services, job quality for home care workers remains persistently low.

The median wage for home care workers is \$11.52 per hour and median annual earnings are \$16,200, representing only a modest increase over the past decade. There are further disparities within the workforce: the median wage for women of color is considerably less, for example, than the median wage for white men. Home care workers' earning potential is also limited by part-time scheduling: nearly two in five home care workers work fewer than 35 hours per week, although many would choose to work full time if the hours were available or with support for their personal caregiving and other responsibilities.

The median wage for home care workers is \$11.52 per hour and median annual earnings are \$16,200, representing only a modest increase over the past decade.

Given these wage and scheduling limitations, economic self-sufficiency is an elusive goal for many home care workers and their families: nearly one in five home care workers lives below the federal poverty line, and 53 percent receive public assistance. Additionally, nearly one in five home care workers lacks health benefits and, among those who are insured, 42 percent rely on Medicaid or other public programs. Recent efforts to

introduce work requirements in Medicaid may negatively impact these workers, due to their inconsistent schedules and the burden of reporting requirements.

Along with better wages, hours, and benefits, the evidence shows that job quality in home care can be improved through high-quality supervision, which is often lacking in home care, and other employer-driven employment supports. At the systems level, strategies to improve job quality for home care workers include increasing the minimum wage and implementing supportive employment policies for all workers, along with raising reimbursement rates to fully cover home care labor costs and directly increase home care wages. Monitoring and evaluation are critical to ensure these strategies achieve their intended impact.

JOB QUALITY VISION ▶ Rewarding, sufficiently compensated, and well-supported home care jobs that attract and retain a strong and stable workforce.

OPTIMIZING TRAINING STANDARDS AND SYSTEMS

As changes in longevity, population health, and service provision have increased absolute demand for home care and average acuity levels among home care consumers, the sector needs a training system that produces a sufficient supply of home care workers with the right knowledge and skills to meet consumers' needs.

Home health aides who are employed by Medicare-certified home health agencies are required by federal legislation to complete at least 75 hours of training through a state-approved training program. Only 17 states and the District of Columbia exceed these standards. There are no federal training standards for personal care aides; instead, states have enacted a range of entry-level training requirements, along with different job titles and job descriptions for these workers. Seven states do not have any training requirements for personal care aides, and only 14 states have uniform training standards for all agency-employed personal care aides.

Across the majority of states and programs, training for independent providers hired through consumer-directed programs is delegated to consumers, which aligns with the model's principles of independence and autonomy. However, as well as raising quality assurance concerns, a lack of training standards for independent providers impedes workforce development efforts. Stakeholders agree that efforts to introduce training standards for independent providers must meaningfully engage consumers and must ensure that the key principles of self-direction are included in any mandated training curricula, along with other relevant topics.

Although training for home care workers is currently delivered through a patchwork of different training providers using a range of methods and curricula, there are innovative examples of state-level efforts to build coordinated, competency-based, adult learner-centered training systems that strengthen the pipeline of home care workers while also providing a well-structured career pathway for all direct care workers.

TRAINING VISION ▶ An adequately funded, competency-based training system that supports the development of a home care workforce that is well-prepared to provide appropriate, person-centered services for all consumers.

PART III

OPPORTUNITIES FOR INNOVATION AND SUSTAINABILITY

STRENGTHENING HOME CARE PAYMENT

The cost of LTSS, including home care, far exceeds most consumers' capacity to pay out-of-pocket, and long-term care insurance covers only a fraction of services. Instead, the majority of home care is covered by Medicaid, with Medicare primarily covering short-term, post-acute services. As the primary payer, Medicaid largely defines the LTSS sector—and any sustainable innovation in the sector must be driven through its policies and programs. Home care services are also funded to a limited extent by the Veteran's Health Administration, the Older Americans Act, and a range of state-level programs for low-income individuals.

There are a number of health care financing and delivery trends that will shape and define home care availability, access, and quality in the years ahead. First, building on the groundwork laid by the (repealed) 2010 Community Living Assistance Services and Supports (CLASS) Act, there is growing momentum at both the federal and state levels to create a social long-term care insurance system. In 2019, Washington became the first state in the country to enact a full, universal long-term care benefit for state residents.

The next two trends are the expansion of managed care and value-based payment in LTSS. Twenty-three states now operate managed LTSS programs in Medicaid,

an increase from 16 states in 2012 and just eight states in 2008. Along with purported improvements in care quality and cost efficiency, the shift to managed LTSS offers potential opportunities to strengthen workforce development. However, these benefits—which are not guaranteed without best practice guidance, appropriate approval and monitoring mechanisms, and other interventions and oversight—have not yet been realized to a meaningful extent.

Value-based payment, whereby payment hinges on the value rather than volume of services, also offers a *potential* opportunity to improve quality in home care, including by directly or indirectly incentivizing investment in the home care workforce. Two primary barriers to adopting value-based payment are the lack of standardized quality measures in home care and the inadequate technological infrastructure within home care agencies, both of which hinder the collection, sharing, and reporting of quality metrics. Despite these barriers, states have begun introducing value-based payment into HCBS, including into home care.

Two further trends affecting home care are the implementation of coordinated care models to increase access to timely treatment, improve continuity of care, and decrease adverse outcomes; and the identification of new ways to address social determinants of health



as part of LTSS, such as by integrating home care and affordable housing for low-income older adults and people with disabilities. Both trends offer opportunities to leverage the role of home care workers in new and cost-effective ways, as indicated by preliminary evidence from pilot projects.

PAYMENT VISION ▶ A person-centered long-term services and supports system that is adequately funded and, in coordination with other health care and social services, organized around both individuals and populations.

MAXIMIZING THE CONTRIBUTION OF THE HOME CARE WORKFORCE

As home care services expand to assist a larger and more complex population, two key opportunities to elevate the contribution of the home care workforce stand out. The first opportunity is to prepare and support home care workers to serve a better-recognized role in helping

consumers manage their health. With specialized, condition-specific training, home care workers are optimally positioned to observe consumers' health status and—with effective communication systems in place—report any changes to clinical partners, as well as to provide direct assistance with health-related tasks (if authorized to do so).

The second opportunity for maximizing home care workers' contribution is to create advanced roles. Examples include: condition-specific specialist roles, such as diabetes or dementia specialists; senior aides, who can provide a range of support for home care workers, family caregivers, consumers, and/or the interdisciplinary team; health coaches, who can support consumers to achieve individualized health and wellness goals; peer mentors; assistant trainers; and assistant coordinators.

Many advanced roles can be implemented within home care workers' current allowable practice parameters, as long as they receive sufficient training, support, and oversight to fulfill their new roles safely and competently.



In states with more restrictive or ambiguous nurse delegation rules or norms of practice, however, regulatory changes may be needed. The more that delegation rules are standardized across states and settings, the more effectively the home care workforce can help overcome gaps and inefficiencies in care.

There are promising examples of efforts to upskill home care workers and create new rungs in the home care career ladder, but the evidence base requires strengthening, particularly with regards to consumers' experiences and outcomes. Across all efforts to elevate the home care workforce, increased compensation for those workers who choose to further their education and take on new roles and responsibilities must be a common denominator.

MAXIMIZING HOME CARE VISION ► A home care workforce that is prepared to support consumers and families to the fullest extent and empowered to take on advanced roles within the care team, with appropriate training, supervision, and compensation.

LEVERAGING TECHNOLOGY IN HOME CARE SERVICES

Without substituting for high-quality personal assistance services, certain technologies may be leveraged to improve home care jobs, service delivery, and consumer outcomes.

First, e-learning offers an important opportunity to both expand access to training for home care workers and enhance their learning outcomes. E-learning programs can: extend training to individuals who may otherwise have few training opportunities; enhance traditional teaching methods, within and beyond the classroom; enable workers to develop specialized competencies; and provide as-needed information to workers in the field. However, the persistent digital divide, limited technological infrastructure within home care agencies, and the considerable costs of developing and implementing new training modalities are all barriers to maximizing the impact of e-learning in the home care sector.

Second, assistive technologies are valuable for improving the safety of personal assistance tasks for both consumers and home care workers—but more research on assistive technologies for use in private homes is greatly needed. Such research must consider a broad set of outcome measures, including not just the performance of the technology, but also: its usability in different settings; workers’ and consumers’ experiences and preferences; the impact of the technology on caregiving relationships; and the impact on the safety of workers as well as consumers. Strategies to fund the development of assistive technologies for home care and to expand access for home care consumers are also needed.

Finally, technology can be leveraged at the organizational level to facilitate effective two-way communication between home care workers and clinical partners, thereby enhancing home care workers’ “observe, record, report” role, and to automate or improve key operational functions, such as workforce recruitment, scheduling, and oversight.

TECHNOLOGY VISION ► The strategic introduction and use of technology to support home care consumers’ health and quality of life, improve home care jobs, and maximize home care workers’ positive impact on service delivery and outcomes.

MEASURING AND MONITORING PROGRESS

Home care leaders need accurate data on the size, stability, and compensation of the home care workforce in order to determine current resource allocation and plan for the future. The Occupational Employment Statistics program at the Bureau of Labor Statistics offers the most accurate national estimate of the home care workforce; however, outdated industry and occupational classifications hinder efforts to quantify the workforce in more detail.

At the state level, administrative data (e.g., from training, certification, or employment records) may be used to quantify the home care workforce. Given the limitations of these data, however, states may choose to implement alternative methods for collecting workforce data, such as periodic surveys of payers, employers, workers, and/or consumers.

Better data on the home care workforce are needed for numerous reasons. First, data on job vacancies can help provide proof of the workforce shortage, which is needed

to capture media attention, inform public education, and compel policy change. Second, data on home care training programs (such as completion, certification, and trainee and consumer satisfaction rates) can be used to guide program revisions and evaluate the impact on workers and consumers. Third, data on the workforce can inform fiscal decisions, such as Medicaid rate-setting policies, and help ensure that policies are implemented as intended. Finally, data can be useful at a micro-level to improve deployment of the home care workforce, for instance through matching service registries.

Technology can be leveraged at the organizational level to facilitate effective two-way communication between home care workers and clinical partners, thereby elevating home care workers’ role.

The trends toward managed care and value-based payment in LTSS also create an imperative to improve the measurement of *quality* in home care, including both structural measures (such as workforce supply and job quality) and process measures (such as provision of competent and person-centered care). Consensus on which and how many quality measures are appropriate for use in home care is still needed, as is significant investment in home care providers’ capacity to collect, manage, and report quality metrics.

DATA VISION ► Improved and integrated data monitoring and reporting systems in home care to facilitate better understanding of the workforce shortage and the connections between workforce investments, recruitment and retention, and care quality outcomes.

RECOMMENDATIONS

To achieve each component of the home care vision developed in this report, we conclude with two overall recommendations and a range of topic-specific recommendations.

OVERALL RECOMMENDATIONS

1. Develop, scale-up, and sustain successful home care interventions at the state, regional, and/or national levels. As highlighted throughout this report, the HCBS sector has seen considerable innovation within recent decades. However, many efforts have necessarily been undertaken on a small scale and for limited duration, and often without robust evaluation or lasting impact. The time has come to develop and test solutions on a larger scale—whether in localities, states, regions, or nationally—that build on and extend existing knowledge and lessons learned.
2. Promulgate evidence-informed best practices for recruiting and retaining a home care workforce that is well-prepared to provide quality services for consumers. While systemic solutions are being developed, the challenge of finding and keeping workers (in the face of a looming workforce crisis) falls to individual employers, including agency providers and self-directing consumers. Just as action is needed to implement collective knowledge at the policy level, dissemination of lessons learned to the employer level will also help move the field forward. The range of topics should include outreach and recruitment, screening and hiring, orientation and onboarding, training, supervision and support, compensation, engagement and recognition, and strategies for supporting career advancement.

JOB QUALITY RECOMMENDATIONS

3. Through a multi-stakeholder process, develop a national strategy for improving compensation for direct care workers, including home care workers. Albeit with considerable variations between states, programs, settings, employers, and even individual workers, wages and benefits for all direct care jobs remain consistently and egregiously inadequate. If the HCBS sector is to attract and retain enough workers to meet demand—and reduce costly churn within the workforce—nothing short of a national commitment to raising the floor for these jobs will suffice.

4. Monitor and evaluate the impact of wage pass-throughs and other public investments to make sure that they achieve their intended impacts on job quality. At the state level, policymakers have various options for improving compensation for home care jobs funded by public dollars. However, these efforts do not always achieve their intended impacts—and in some cases even reduce total compensation for workers, such as when incremental wage increases are offset by loss of eligibility for public benefits. Follow-through is required to ensure accountability from payers and providers, and to allow for course corrections when unintended negative consequences are identified.

5. Consider the impact on low-wage workers, including home care workers, when designing new employment protections. Policies that benefit workers across sectors, such as paid family and medical leave policies, provide another mechanism for improving job quality for home care workers. However, if they are to be relevant and accessible, such policies must be carefully designed to reflect home care workers' employment realities, which include inconsistent hours and multiple employers.

6. Create public authorities or other entities at the state or regional level that can help improve job quality for independent providers, while promoting the principles of consumer direction. Although the wage ceiling for independent providers may be marginally higher, in most cases these workers lack systematic access to the full range of employment benefits and protections that are required for agency employees. To strengthen and safeguard the independent provider workforce, every state should ensure that mechanisms are in place for supporting these workers and facilitating their access to group benefits such as health insurance, retirement accounts, and ongoing training.

TRAINING RECOMMENDATIONS

7. Build partnerships between workforce development organizations, educational institutions, home care employers, labor organizations, and industry associations to create worker pipelines, improve training, and design new career pathways. Although home care is adding more new jobs than any other single occupation in the U.S. economy, these jobs are not often the target of broad-based workforce development efforts. This leaves individual employers struggling to

recruit and train enough workers to meet demand. A more coordinated, well-funded workforce development approach is needed, ideally using a competency-based credentialing framework to facilitate both individual workers' career advancement and sectoral workforce deployment efforts. Medicaid and other funding sources should be leveraged to finance this approach, ensuring that training costs are not devolved to individual job seekers and employers.

8. Develop and strengthen national training standards for all home care workers. National competency-based training standards for all home care workers are critically needed to ensure that workers are prepared to meet consumers' complex needs in the community setting. With appropriate provisions for each segment of the workforce, these standards must encompass personal care aides as well as home health aides, and independent providers in consumer-directed programs as well as agency workers. Consumers and workers must play a guiding role in defining core competencies for home care workers and developing training standards and curricula.

9. Ensure adequate training and support for consumers who hire their own workers, including with regards to team-building, communication, and problem-solving as well as hiring, scheduling, and other employment responsibilities. Depending on the program, consumers who direct their own care may have considerable employment-related responsibilities—including not just legal responsibilities, but also managerial and supervisory responsibilities—with implications for their workers' job satisfaction, commitment, and performance. Just like agency employers, consumers need training and ongoing support to fulfill these responsibilities effectively and to manage the stress that they might engender.

PAYMENT RECOMMENDATIONS

10. Through a multi-stakeholder process at the state and national levels, rigorously explore new models for funding home care as a component of an affordable and sustainable LTSS system. Alongside efforts to improve home care within the current LTSS system, it is critical to continue striving to create a public insurance



system to replace it, building on the groundwork laid by the CLASS Act. Although a national solution to the fragmented, inadequate, and unsustainable current system is needed, state-level efforts are helping build knowledge and momentum toward this goal.

11. Fund large-scale evaluations of new models of service delivery in home care, including models that integrate personal assistance with other services—such as housing supports—and that explicitly leverage the role of the home care worker in new ways. The current emphasis on care coordination and integration offers an unprecedented opportunity to implement innovative home care service models that leverage the role of home care workers to achieve quality improvements and generate cost savings across the larger health care system. To achieve lasting impact, these new models must be funded, tested, and evaluated on a large scale. One promising service delivery model is the agency with choice (AWC) model, which promotes more autonomy than the traditional agency model, while also providing supports for consumers and workers that may be lacking in consumer-directed programs.

12. Build minimum standards for home care jobs into public contracts and/or promote investment in the workforce through value-based payment arrangements. Because labor is the primary expense in home care, efforts to contain costs often target workers' wages and/or service hours. To offset this tendency, contracts with managed long-term care plans and with providers, as well as value-based payment arrangements, should set minimum standards for home care workers' total compensation (taking wages, benefits, and hours into account) and explicitly incentivize investments in the home care workforce. Innovative thinking about how to reward workforce investment in the consumer-directed space is also critically needed.

MAXIMIZING HOME CARE RECOMMENDATIONS

13. Formalize home care workers' role in observing, recording, and reporting key information about consumers' health and wellbeing. Although home care workers often work in relative isolation, there is growing evidence that better communication links between home care workers and clinical supervisors can improve consumers' outcomes while also boosting workers' job satisfaction and retention. Efforts to better connect home care workers with the interdisciplinary team (with consumers' permission) must be supported by

training for all team members (including, for home care workers, training to strengthen their "observe, record, report" skills); well-defined structures and processes for reciprocal information exchange; and adequate compensation for any additional interdisciplinary teamwork responsibilities.

Contracts with payers and providers should set minimum standards for home care workers' compensation (taking wages, benefits, and hours into account) and explicitly incentivize investments in the workforce.

14. Remove barriers that prevent home care workers from working to their fullest capacity, with appropriate training and supervision. An increasing proportion of home care consumers require assistance with routine health-related tasks at home. When home care workers are not authorized to provide such assistance due to regulations, liability concerns, or practice norms, consumers may experience missed or delayed care—or may be forced to move into an institutional setting. This inefficient situation should be addressed first and foremost through evidence-informed national regulations outlining the minimum set of tasks that all personal care aides and home health aides may perform, regardless of state or program. These national minimum standards may then be expanded at the state level through nurse practice acts and related statutes.

15. Scale-up and test advanced roles for home care workers to demonstrate the impact on care quality, costs, and workforce recruitment and retention. Building new rungs into the career ladder for home care workers helps improve recruitment and retention as well as improving care delivery and outcomes. Numerous advanced roles have been implemented across the

country, primarily by individual providers or provider groups. The critical next step is to implement the most promising examples on a larger scale in order to make an evidence-based case for sustained investment.

TECHNOLOGY RECOMMENDATIONS

16. Invest in the development and dissemination of e-learning training curricula for home care workers and consumers. Encompassing a range of technology-driven teaching modalities, effective e-learning can augment classroom-based training for home care workers while also filling critical gaps, including for independent providers and consumers in rural and other underserved areas. However, the full potential impact of e-learning in home care will not be realized without parallel efforts to address disparities in Internet access and computer literacy across populations.

17. Expand research on technologies that directly support efficiency and effectiveness in home care. With the exception of investment in robotics, technological development in home care remains relatively limited. In particular, there is a clear need for research and development on assistive technologies, information and communication technologies, and workforce development and management technologies in home care. In each of these areas, attention to consumers' and workers' experiences, and the ethical and workflow implications of the new technologies—as well as their impacts on care outcomes and costs—is essential.

18. Designate specific funding for home care providers to introduce tested technologies into practice, accounting for upfront and ongoing costs. Operating on very narrow margins and with minimal existing technological infrastructure, most home care providers do not have the capacity to introduce and sustain new technologies without additional funding, regardless of the potential downstream cost savings. As well as designated funding, guidance for both providers and payers, including managed care plans, about how to effectively leverage technology in home care is critically needed.

DATA RECOMMENDATIONS

19. Update industry and occupational classification systems to facilitate robust analyses of the workforce across roles and settings. Efforts to describe the direct care workforce, identify trends over time, and plan for the future are limited by current data-classification systems. A multi-stakeholder initiative to revise these

classifications to reflect the current realities of the industry and the workforce could reduce ambiguity and confusion in the sector and strengthen evidence-informed planning and policymaking efforts.

20. Develop a core set of quality measures to be used across the HCBS system, including workforce quality measures. The multi-faceted nature of HCBS, including home care, and the heterogeneity across programs, service delivery models, providers, and beneficiaries make it exceedingly difficult to measure quality in a standardized way. Nonetheless, agreement on a minimum set of quality measures in home care—including in consumer-directed programs—is essential for setting standards, incentivizing quality improvement, and holding providers and payers accountable. Workforce quality measures could address compensation, training, turnover, and job vacancies, among others.

21. Capitalize on the data-sharing capabilities within coordinated care and integrated payment models to demonstrate the links between workforce investments and consumer outcomes. The home care sector has been historically stymied by a lack of robust evidence on the associations between investments in the home care workforce and outcomes for both consumers and workers. However, the current emphasis in health care on breaking down siloes to provide more coordinated, effective, and cost-efficient services provides a new impetus and opportunity to demonstrate these associations. Large-scale evaluations of training, career advancement, and other workforce interventions should make optimal use of these combined clinical and operational data sources.

As the U.S. population lives longer and grows older, an ever-larger home care workforce will be needed to ensure that individuals with personal support needs can live independently in their homes and engage in their communities. This report has laid out 21 evidence-based recommendations for improving home care jobs, boosting workforce recruitment and retention, and strengthening the home care sector. Although these recommendations address specific topics, such as job quality or financing, they are not designed to stand alone; coordinated action across the recommendations is required to effect meaningful and lasting systems change.



Introduction

Home and community-based services (HCBS) in the United States are a complex constellation of programs and services that vary by funding source, setting, target population, and provider, among other factors. As part of the broader long-term services and supports (LTSS) sector, HCBS are buffeted by changes sweeping the entire health care landscape, and challenged internally by competing trends of innovation and inertia. And as the American population lives longer and grows older, the HCBS system is straining under ever-increasing demand.

This report focuses on home care, the central pillar of the HCBS system, and the home care workforce. Our starting premise is that, underneath the layers of complexity in the system, home care is defined by the

Home care is defined by the direct relationship between each consumer and their home care worker. Strengthening this relationship is key to strengthening the entire home care system.

direct relationship between each individual consumer and the home care worker who assists him or her, among other activities, to bathe and dress, prepare and eat meals, go to the grocery store, and participate in home and community life. To a significant extent, the nature of this direct relationship determines the delivery, experience, and outcomes of care. Is the relationship sustained, or frequently interrupted by turnover? Is the relationship characterized by mutual trust, recognition, and respect? Is the relationship based on shared commitment to meeting the individual consumer's needs and goals? Is there a relationship at all—or is the consumer struggling to find anyone to help?

Strengthening the relationship between the consumer and the home care worker, therefore, is key to strengthening

the entire home care system. This is not a micro-level proposition, however. Enhancing care continuity for each consumer requires improving job quality and providing job supports so that workers are encouraged and enabled to stay in the workforce. Assisting a consumer to attain his or her goals requires that workers are adequately trained, supervised, and authorized to provide the highest possible level of support. Filling the growing “care gap” requires concerted recruitment and retention efforts, as well as readiness to deploy the workforce in new ways to appropriately and effectively meet demand in a cost-efficient manner.

The purpose of this report is to examine the current state of home care in the United States and draw out opportunities for innovation and improvement, focusing primarily on the home care workforce as the main provider of daily personal assistance and support for consumers.

PROJECT DESIGN AND METHODS

Three broad questions guided this inquiry. First, what are the main factors impacting the home care delivery system and workforce in the United States, now and looking ahead? Second, what are the most promising opportunities to strengthen the home care workforce and maximize its role within the changing LTSS system? And third, how do these factors and opportunities vary between states and across different service delivery models?

Evidence for the report was gathered from a range of academic journals, policy documents, and reports from public, private, and nonprofit agencies. Our search focused primarily on literature from the past five years, but older reports were consulted if they were particularly influential or when more recent evidence was not available. Additionally, quantitative estimates of population demand, workforce supply, workforce and job characteristics, and other indicators were developed using national data sets, including the U.S. Census Bureau's American Community Survey and National Population Projections, and the Bureau of Labor Statistics (BLS) Occupational Employment Statistics and Employment Projections.

To inform the literature review and quantitative analyses, interviews were conducted with stakeholders representing home care providers, government agencies, consumer advocates, and academic researchers (N=7). These interviews serve as background material for the report rather than explicit findings.

ORGANIZATION OF THE REPORT

This report is organized into three main sections. Part I, Home Care Demand and Supply, looks at current and projected demand and supply for home care. Chapter 1 begins with a focus on home care consumers—the 15 million Americans living at home who require some degree of assistance with their daily activities, whether from unpaid or paid caregivers. This first chapter develops a profile of home care consumers according to their demographic characteristics, care needs, and sources of assistance, before considering future projections and implications for the home care system.

Chapter 2 considers the home care workforce that is tasked with meeting current and future demand for formal home-based LTSS. The chapter begins by highlighting unpaid caregivers, an estimated 43.5 million adults who serve as the bulwark of the home care system. The discussion subsequently turns to focus on paid home care workers, providing a description of the current size and demographic profile of the workforce and considering future demand and the growing workforce shortage. The third chapter in Part I provides an overview of the three main segments of the home care sector—home care agencies, consumer-directed services, and the so-called gray market—drawing out key trends affecting access to services and quality of care.

Parts II and III begin building a vision for the future of home care services in the United States, highlighting promising opportunities as well as challenges and barriers. The perspective in these sections zooms in and out, reflecting the interplay between macro-level policies and processes, mid-level interventions, and the micro-level dyad between each consumer and their home care worker.¹

Part II, Recruitment and Retention of the Home Care Workforce, focuses specifically on the home care workforce as the linchpin of the formal home care system. Chapter 4 examines job quality for home care workers as a key driver of recruitment and retention, beginning with a detailed snapshot of home care workers' wages and benefits before discussing other aspects of job quality and identifying important levers for improvement. Chapter 5 focuses on training for home care workers, which is another element of job quality that impacts recruitment and retention as well as care quality. In describing how home health aides and personal care aides are trained and prepared to fulfill their roles, the chapter raises concerns about the current training system and identifies key elements of a better system for the future.

Part III, Opportunities for Innovation and Sustainability, maintains a focus on the home care workforce but in the context of broader trends and opportunities to strengthen home care. Chapter 6 focuses on payment for home care. The chapter begins with a summary of how HCBS are funded, and subsequently considers how home care may be affected by key trends in payment reform—including the rise of managed care and the shift to value-based payment. In the context of payment reform as well as changing population needs, Chapter 7 examines the expanded roles that home care workers could play in home care delivery, with adequate training, supervision, and recognition from other members of the interdisciplinary team.

Chapter 8 focuses on technology, considering how technological innovations might be harnessed to address the needs of home care consumers and workers without introducing unintended harms. In particular, the chapter discusses key technological developments that may enhance the efficiency and effectiveness of the home care workforce. Finally, linking to concerns raised throughout the report, Chapter 9 discusses current data collection and reporting systems in home care and identifies opportunities to strengthen measurement of home care quality, workforce development, and the critical links between the two—toward the goal of achieving sustained improvements across both.

The report concludes with recommendations for recruiting and retaining a sufficient supply of home care workers who are prepared and willing to support older adults and individuals with disabilities—many with increasingly complex needs—to live and age in place with independence, dignity, comfort, and the best possible health outcomes and quality of life.

A photograph showing a caregiver in a light blue uniform holding the hand of an elderly woman with short grey hair. The caregiver is on the left, looking towards the woman. The woman is on the right, looking directly at the camera with a slight smile. The background is softly blurred.

**Part I:
Home Care
Demand and
Supply**

HOME CARE CONSUMERS

More than 15 million Americans living at home experience difficulty with activities of daily living (ADLs), such as bathing, dressing, and eating, and/or with instrumental activities of daily living (IADLs), such as grocery shopping and attending doctor's appointments.² These challenges arise from physical, cognitive, developmental, behavioral, and/or chronic health conditions, and in many cases coincide with the need for assistance with health care-related activities, such as monitoring symptoms or taking medications. Adequate and appropriate personal assistance services—provided in coordination with other health and social services—are central to a long-term services and supports (LTSS) system that enables individuals to live their daily lives with independence, dignity, and comfort.

As we grapple with the growing “care gap” described in the next chapter, it is critical to start with a clear understanding of who requires home care and how consumers’ needs may be changing over time. This chapter begins by constructing a profile of home care consumers and then draws out key factors affecting current and future demand, including demographic differences, geographic variations, and changing patterns of caregiving.

CURRENT NEEDS AND FUTURE PROJECTIONS

The following figures, unless noted otherwise, are drawn from the U.S. Census Bureau’s American Community Survey (ACS), an annual survey of more than 3.5 million households in the United States.³ In these analyses, individuals who require personal assistance are defined as those who report difficulty with at least one ADL or IADL. As noted above, this definition describes 15 million individuals who live at home, including 7.6 million and 13.8 million people who require assistance with ADLs and IADLs, respectively.

Our analysis of the ACS finds that adults aged 18 to 64 years who have personal assistance needs currently outnumber older adults (aged 65 and above), at 7.7 million versus 7.2 million people. However, the balance will shift as the population grows older in the coming decades. From 2016 to 2060, those aged 65 and over will nearly double, from 49.2 million to 94.7 million, and the number of people aged 85 and over will triple, from 6.4 million to 19 million.⁴ During the same period, the number of adults aged 18 to 64 is projected to increase by only 15 percent.

This rapid aging of the population suggests that demand for personal care services will reach an unprecedented level in the near future; indeed, one out of two people turning 65 today is expected to require LTSS at some point in their lives.⁵ According to one model, this means that the population of older adults who require assistance with at least two ADLs will grow by nearly 150 percent from 2015 to 2065.⁶ Furthermore, poverty among older people is increasing, which has cross-cutting implications for their health and LTSS needs.⁷

DISABILITY TRENDS OVER TIME

The proportion of individuals requiring personal assistance has not remained static over time. Evidence suggests that “late-life disability” (among those aged 65 and over) gradually declined in the decades prior to the turn of the twenty-first century.⁸ Reasons for this decline include: advances in medical care and technology which weakened the connection between chronic conditions and activity limitations (e.g., improved treatment for cardiovascular disease; higher prevalence of cataract surgery and joint replacements; new medications for arthritic and rheumatic conditions); socioeconomic factors such as greater educational attainment, declining poverty, and the shift from labor-intensive, blue-collar work to less physically demanding occupations; and changing health behaviors.⁹

However, this declining trend appears to have leveled off in recent years¹⁰—and higher rates of chronic conditions, such as obesity and hypertension, among baby boomers and subsequent age cohorts may actually reverse the trend in the coming years.¹¹ The Centers for Disease Control and Prevention estimate that one in two adults in 2012 had at least one chronic condition, and more than one in four had multiple comorbidities.¹² Considering these factors, we can assume that the number of individuals who require personal assistance services will continue to increase in absolute terms and in proportion to the total population of older adults, suggesting that overall demand for services will ascend precipitously. An added demand factor is the rapidly increasing number of individuals with Alzheimer’s disease and other forms of dementia, given that 75 percent of older adults with dementia require personal assistance.¹³

Among adults aged 18 to 64, evidence suggests that there was an upward trend through the 1990s and 2000s in the proportion of individuals requiring help with two or more ADLs and with the most intense care requirements (defined as needing assistance with four or more ADLs).¹⁴ That trend appeared to have leveled off by 2010. However, as health and medical innovations continue to improve life expectancy for people with disabilities, a larger number of younger people with disabilities today can be expected to require LTSS in the future.¹⁵ Further, evidence suggests that increased longevity for younger people with disabilities is linked with longer periods of disability; in other words, individuals are living longer, but with greater predicted long-term care needs.¹⁶

DIVERSITY AMONG CONSUMERS

As described in the previous section, age is a significant driver of personal assistance needs. But even among older adults, needs vary according to a range of demographic factors, including gender, race and ethnicity, immigration status, and geographic location, among others.¹⁷ These disparities often begin to accrue at a young age, but become more pronounced over the life course; therefore, the following analysis of diversity among consumers focuses on older adults.

GENDER

The need for personal assistance varies considerably by gender, especially among older adults. According to our ACS analysis, 19 percent of older women require personal assistance compared to 13 percent of older men, which translates to 4.7 million older women versus 2.5 million older men. Among those aged 85 and over, 1.8 million women need personal assistance compared to 688,000 men.

Due to longer life expectancy for women, this gap can be expected to widen as the older population adds more women than men over the decades ahead.¹⁸ From 2015 to 2050, the number of older women will increase by 21.4 million while the number of men will grow by 18.7 million. Related to these gender differences in longevity and care needs, almost two-thirds of the 5.8 million Americans with Alzheimer’s disease, the most common form of dementia, are women.¹⁹

In part because women live longer, men and women also tend to have different caregiving networks. Among people with personal assistance needs, women age 65 and older are more likely to live alone than older men (37 percent and 23 percent, respectively)²⁰ and are more likely than men to experience unmet care needs.²¹ Higher incidence of widowhood and lower rates of remarriage among

older women compared to older men are two key drivers of these disparities.²²

RACE, ETHNICITY, AND IMMIGRATION

The need for personal assistance also varies among racial and ethnic groups.²³ Although white older adults currently comprise the majority of older adults requiring personal assistance, this population is less likely to need assistance than other racial and ethnic groups: 15 percent of older white adults need personal assistance, compared to 21 percent of Black/African-American and Hispanic/Latino and 18 percent of Asian/Pacific Islander older adult populations.²⁴ Older adults of color are also more likely to require higher levels of assistance and to report adverse outcomes due to unmet need.²⁵ Furthermore, one study comparing white and African-American older

...demand for personal care services will reach an unprecedented level in the near future; indeed, one out of two people turning 65 today is expected to require LTSS at some point in their lives.

adults showed that although longevity has increased for both populations, white older adults have seen greater compression of disability (i.e., fewer years with disability) than older African-Americans.²⁶

Economic and health disparities intersect with race and ethnicity to help explain the higher prevalence of personal assistance needs among older people of color. Seventeen percent of people of color over age 65 live in poverty, compared to seven percent of white older adults—and among older adults living in poverty, 26 percent need personal assistance, compared to 15 percent of people who live above the poverty line. Early- and mid-life factors (such as childhood health and lifetime occupation) have also been shown to contribute to the onset of late-life disability, along with current socioeconomic status.²⁷

Also, Black/African-American people are approximately twice as likely—and Hispanics/Latinos are about 1.5 times as likely—to have dementia as older whites.²⁸

Race, ethnicity, and cultural norms also influence whether and how an individual or family seeks personal assistance. Due to a “cultural justification for caregiving,” Asian, Hispanic/Latino, and Black/African-American families may be more likely than white families to prioritize family caregiving over paid care.²⁹ However, these differences are neither static nor monolithic; evidence suggests that collectivist and filial approaches to caregiving are affected by factors such as education and tend to weaken over generations.

These differences by race and ethnicity are particularly important when considering future needs, as the U.S. population is projected to become much more diverse. Currently, nearly four in five older adults are white and 22 percent are people of color (including Hispanic/Latino individuals of any race), but by 2060, people of color will represent 40 percent of all older people.³⁰ Hispanic/Latinos are driving this trend: from 2015 to 2060, the number of Hispanic/Latino older adults will more than triple, from 3.8 million to 13 million people.

The number of older adults who are foreign-born will also increase in the decades ahead. Currently, one in seven older adults over the age of 65 is an immigrant to the United States, but by 2050, that proportion will increase to one in four.³¹ Growth among Hispanic/Latino older immigrants accounts for nearly half (48 percent) of growth among all older immigrants.

GEOGRAPHIC LOCATION

A small subset of the 15 million people living at home with personal assistance needs reside in rural areas. Using U.S. Census Bureau data, we estimate that there are approximately 677,000 adults currently living at home in rural areas who need personal assistance, including 364,000 people between 18 and 64 years old and 314,000 people aged 65 and older.³² Because challenges related to HCBS staffing, service delivery, and consumer access are intensified in rural areas, solutions in these areas can help inform progress nationwide; therefore, it is important to bring attention to rural home care consumers, despite their smaller number.³³

Eighteen percent of Medicare beneficiaries in rural areas of the country are dually eligible for Medicare and Medicaid, compared to 16 percent of urban beneficiaries.³⁴ This is an indicator of poorer health and higher need among rural adults, as the dually eligible

population is more likely to have complex medical needs and the majority (60 percent) require support with ADLs.³⁵

Longevity is another indicator of health disparities between rural and urban populations. While life expectancy has improved in most areas of the country, rural areas lag behind: the difference in life expectancy between rural and urban adults was about five months when measured between 1969 to 1971, but two years when measured again between 2005 to 2009.³⁶ In some rural areas, life expectancy has actually declined.³⁷ Although shorter life expectancy may offset the population need for personal assistance services in the short term, the longer-term success of efforts to increase life expectancy in rural areas will drive up LTSS demand.

Population aging is also expected to occur more dramatically in rural areas compared to urban and suburban areas. According to our analysis of data from the Urban Institute’s Mapping America’s Futures project, the population of rural-dwelling adults aged 65 and older will grow by 984,000 (64 percent) from 2010 to 2030, while the population of rural residents aged 20 to 64 will fall by 638,000 (12 percent).³⁸ These trends have obvious implications for the caregiving ratio: in rural areas in 2010, there were 3.3 adults aged 18 to 64 for every person aged 65 and older, but that number will drop to 1.8 by 2030.³⁹ By contrast, there were 4.7 adults aged 18 to 64 for every person aged 65 and older in urban and suburban areas in 2010, with an expected ratio of 2.7 in 2030. By that same year, adults aged 65 and older will constitute more than a quarter (28 percent) of the rural population, compared to one-fifth (20 percent) of the urban and suburban population.

Another factor to consider is that older adults who require personal assistance in rural areas are also more likely to live alone than their urban counterparts: 36 percent of older adults requiring assistance in rural areas live alone, compared to 32 percent in urban areas. The gap widens with age: among people aged 85 and older who need personal assistance in rural areas, nearly 50 percent live alone, compared to 42 percent in urban areas.

Finally, the evidence suggests that, even when controlling for demographic characteristics (including age, gender, and race), people in rural areas are more likely to receive LTSS in nursing homes than in the community—due to state-level Medicaid policies, an inadequate supply of HCBS in rural areas, and other factors.⁴⁰ This evidence suggests that if states focus on rebalancing services away from nursing homes in rural areas, demand for HCBS in those areas will outpace population growth.

WHERE DO CONSUMERS SEEK ASSISTANCE?

We now consider where consumers with personal assistance needs receive support. In broad terms, the provision of LTSS has increasingly shifted to home and community-based settings in recent decades due to policy changes and consumer preferences. A 2018 AARP survey found that three out of four people over the age of 50 would like to remain in their homes as long as possible,⁴¹ and adult children support this option for their parents as well.⁴² On the policy side, spending on HCBS has comprised a majority of Medicaid LTSS expenditure each year since 2013.⁴³

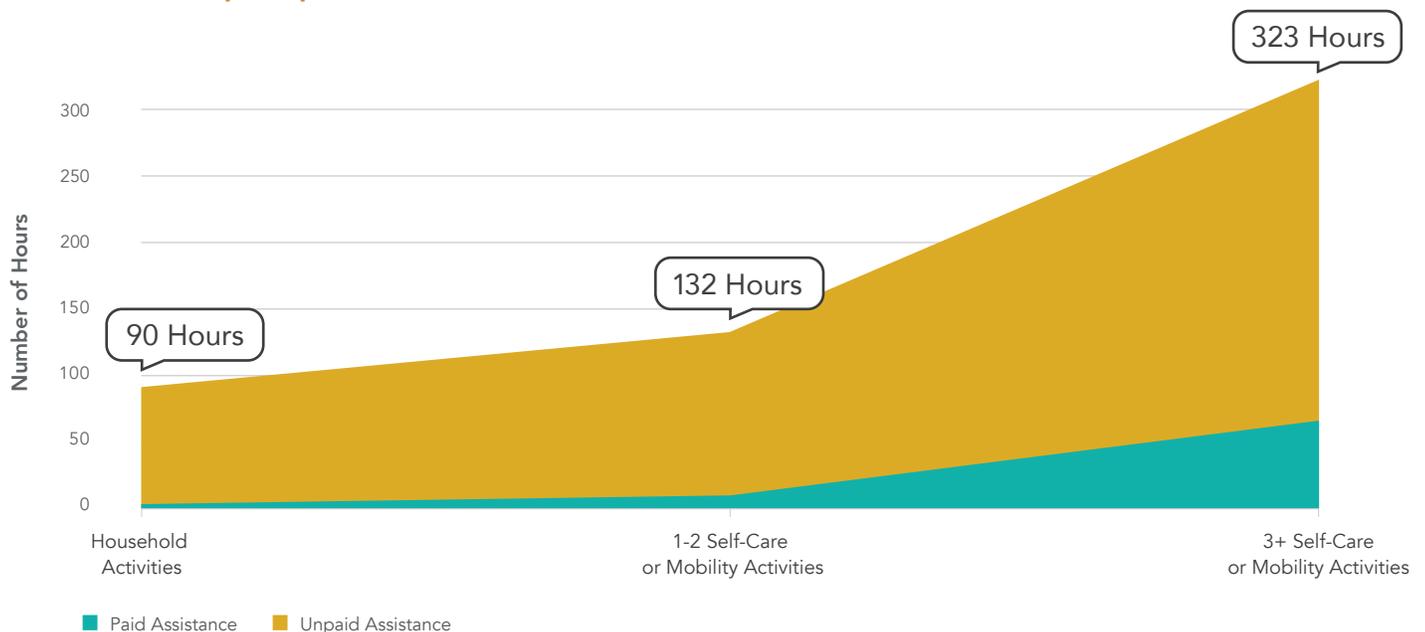
As a result, despite the growing older population, the number of nursing home residents has actually declined in the twenty-first century, from 1.5 million in 2000 to 1.4 million in 2014.⁴⁴ Disability trends show that the average number of years living with a disability in an institutional setting declined for both genders between 1970 to 2010, while the number of years living in the community with a disability rose slightly.⁴⁵

People who require assistance at home primarily rely on friends and family members, but many supplement unpaid care with paid services, particularly as their needs

increase. According to an analysis of the 2005 Survey of Income and Program Participation, 92 percent of individuals aged 15 and above who obtained personal care assistance received unpaid support, while 13 percent received assistance from a paid caregiver.⁴⁶ (There is overlap between categories because respondents could cite multiple “helpers.”) People aged 65 and older were more likely (18 percent) to access paid support, and nearly one in three older adults (29 percent) with a higher level of need—defined as the need for assistance with two or more ADLs—received paid care.

An analysis of the 2011 National Health and Aging Trends Study also found that higher levels of need correlate with greater reliance on paid assistance among older people (see Figure 1.1).⁴⁷ The analysis showed that individuals who lived at home received a monthly average of 164 hours of unpaid care and 29 hours of paid care. Approximately 50 percent of those who required assistance with three or more ADLs received paid help compared to 30 percent of those who required assistance with one or two ADLs. Also of note, the researchers found an especially high prevalence of unmet need (nearly 60 percent) among people receiving any amount of paid assistance, raising care quality questions.

FIGURE 1.1 | Older adults with more activity limitations typically require more hours of paid personal assistance.



Source: Freedman, Vicki A. and Brenda C. Spillman. 2014. *Disability and Care Needs of Older Americans: An Analysis of the 2011 National Health and Aging Trends Study*. Washington, DC: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation (ASPE). <https://aspe.hhs.gov/system/files/pdf/77136/NHATS-DCN.pdf>.

Living arrangements also impact sources of care. According to the 2005 Survey of Income and Program Participation mentioned above, people living alone who required personal assistance were nearly four times as likely to receive paid care as those living with relatives (26 compared to 7 percent)—and were also much more likely to report gaps in service or unmet needs. Living alone with personal assistance needs is more common among older adults: 17 percent of people under the age of 65 with personal assistance needs lives alone, compared to 32 percent of people aged 65 and older and 42 percent of people over 85 years old.⁴⁸

CHANGING PATTERNS OF CARE

Sources of personal assistance tend to change over an individual's life course. The 2005 Survey of Income and Program Participation found that people under the age of 30 tended to receive assistance from their parents while those aged 30 to 74 relied primarily on children and spouses—although use of paid care rose among those aged 60 to 74.⁴⁹ Relying on their spouses less frequently due to widowhood or shared disability, people aged 75 and older also sought assistance from adult children, as well as from other informal caregivers and/or paid caregivers. The growing numbers of individuals who live past the age of 85 may be less able to rely on their children for support, however, given that their children may increasingly have age-related LTSS needs of their own.

Patterns of caregiving have also shifted significantly over the generations, due to demographic and social changes. More women in the labor market, higher rates of childlessness, smaller and more geographically dispersed families, rising divorce rates among older people, the aging of the baby boom generation, and other factors are creating a care gap between the demand for and supply of family caregivers (the primary providers of personal assistance, as noted).⁵⁰ In fact, the “caregiver support ratio”—defined as the ratio of those aged 45 to 64, which is the most common caregiving cohort, to those aged 80 and above—is projected to fall from 7:1 in 2010 to 4:1 in 2030 and less than 3:1 by 2050.⁵¹ As a result, the formal HCBS system will need to “not only plan for an increase in the number of older adults requiring services ... but also a greater need of care per older individual due to a diminished availability of primary family resources,” as one study of cohort differences in family caregiving resources concluded.⁵²

On the other hand, consumers now and in the future may seek unpaid assistance from alternative caregiving networks, such as extended family, friends, and fictive kin (i.e., non-relatives who are regarded as family members). For this reason, we cannot predict precisely how changes in family composition and the caregiver support ratio will affect caregiving in the future, but subsequent generations will undoubtedly have different caregiving networks than their predecessors and an increasing need for paid services.

CONCLUSION

Currently, older adults constitute about half of all individuals with personal assistance needs. Although the prevalence of need for personal assistance has leveled off in recent years among older adults due to medical advances and other factors, demand for services will continue to rise at least in proportion to population growth—a sizeable trend, given that the older adult population is expected to nearly double in size from 2016 to 2060.

As described in this chapter, the demographic composition of older adults will affect demand for home care in the years ahead. Women will continue to outnumber men in the older adult population, and people of color will constitute a larger share of the older adult population than in previous generations—potentially driving up the rate of demand relative to population growth overall, due to the higher need for assistance among these groups. Additionally, the older adult population in rural areas will grow at a faster rate than in urban and suburban areas, with implications for the distribution and delivery of services.

Family members and friends will continue to play a large caregiving role, certainly, but shifts in family composition mean that unpaid caregivers are not likely to provide the same level of care as they did in the past. Further, it is difficult to predict how service utilization will change in the future among people who currently rely on family members the most—namely, people of color and immigrants.

These trends compel us to think creatively about strengthening and sustaining the paid home care workforce, which is the focus of the next chapter.

THE HOME CARE WORKFORCE

Recent upward trends in the demand for home and community-based services (HCBS) can be expected to continue into the future, given the growing population of older adults, shifting policy priorities, and enduring consumer preferences. This chapter focuses on the home care workforce that provides the majority of paid personal assistance to individuals in their homes—and considers whether this workforce will be able to keep up with growing demand.

The chapter begins by briefly discussing family caregiving as it intersects with the paid provision of care, before describing the current size and profile of the home care workforce. We end by considering future demand and the implications for workforce policy and practice.

THE INTERSECTION OF PAID AND UNPAID CARE

As described in Chapter 1, individuals who require personal assistance rely predominantly on family members and other sources of informal support. According to estimates from the AARP, 43.5 million adults in the United States provide unpaid assistance to family members or friends with disabilities⁵³—and the economic value of their contribution is estimated at \$470 billion, far exceeding Medicaid expenditure on HCBS.⁵⁴

The mean age of unpaid caregivers is 49 years, and nearly one in five (19 percent) are over the age of 65.⁵⁵ In contrast with the paid home care workforce described below, four in 10 unpaid caregivers are men, the majority of whom support a parent (49 percent) or spouse (13 percent). Unpaid caregiving also varies by race and ethnicity: while 17 percent of white individuals care for a family member or friend, the proportion increases to 21 percent of the Hispanic/Latino population, 20 percent of Black/African-Americans, and 20 percent of Asian-Americans.⁵⁶

The “caregiver burden” experienced by many family caregivers, especially by those who struggle to balance unpaid caregiving with paid work and other responsibilities, has been well-documented.⁵⁷ Negative outcomes include missed work, declining physical health, social isolation, and depressive symptoms. These challenges and outcomes are intensifying as caregivers support individuals with increasingly complex medical needs and/or cognitive impairment at home.⁵⁸ Support programs for unpaid caregivers are therefore an essential element of a comprehensive long-term services and supports

(LTSS) system, in order to help them maintain their health and wellbeing and to prevent or delay admission to institutional care for the individuals they support.

The importance of supporting family members has been recognized at the federal level in a number of ways, including in recent rules from the Centers for Medicare and Medicaid Services (CMS) for state plan HCBS and for managed care organizations.⁵⁹ One key resource is the National Family Caregiver Support Program (NFCSP), which was established in 2000 under the Older Americans Act as the first and only federal program for family caregivers. According to the most recent report, NFCSP served nearly a million individual family caregivers of older adults in 2015 through counseling, training, respite care, and information services.⁶⁰ New legislation—namely the Recognize, Assist, Include, Support and Engage (RAISE) Family Caregivers Act and the Supporting Grandparents Raising Grandchildren Act, both signed into law in 2018—will provide further support for family caregivers, if adequately implemented.

There are promising examples of support for family caregivers at the state level as well. For example: 15 states had included a family caregiver assessment as part of their HCBS client assessment tools as of 2012; several managed long-term care plans across the country have begun offering support to family caregivers; and five states and DC have passed paid family and medical leave laws (see Chapter 4 for more details).⁶¹

As one specific state example, Washington State currently uses a Section 1115 Medicaid waiver to support caregivers who assist consumers that are eligible for, or at risk of becoming eligible for, Medicaid LTSS.⁶² Under the program, family caregivers receive financial assistance for services such as respite, training, and/or health maintenance and therapy for themselves. According to an evaluation of the six-month pilot project, 84 percent of unpaid caregivers reported significant improvements in stress, burden, depression, and comfort with caregiving, and the state determined that these services helped reduced the likelihood of enrolling in Medicaid and accessing paid supports. Hawaii’s Kupuna Caregivers program, which is described in Chapter 6, is another state-level example of support for family caregivers.

Among interventions to support family caregivers, ensuring adequate access to paid home care workers—who can share ongoing caregiving responsibilities and/

or provide intermittent respite—ranks among the most effective strategies. In other words, while services targeted directly at family caregivers can reduce burnout and improve their health and wellbeing, so too can building a strong and sustainable home care workforce.

PROFILE OF THE HOME CARE WORKFORCE

Home care workers include personal care aides and home health aides (and in some cases nursing assistants) who are employed in two industries according to the North American Industry Classification System (NAICS), which is used by federal agencies to classify business establishments for the purpose of collecting, analyzing, and publishing statistical data.⁶³ The two industries are Services for the Elderly and Persons with Disabilities (SEPD) and Home Health Care Services. The following estimates about the home care workforce are drawn from the Bureau of Labor Statistics (BLS) Occupation Employment Statistics (OES) program, which produces annual employment and wage estimates for over 800 occupations.

Numbering nearly 2.3 million at the latest count, home care workers constitute about half of the total direct care workforce, which also includes workers who are employed in a range of acute care, skilled nursing, and community settings.⁶⁴ Broadly speaking, the job description for all home care workers includes assistance with activities of daily living (ADLs). Personal care aides often provide assistance with instrumental activities of daily living (IADLs) and/or community and social engagement, while home health aides (and nursing assistants who are employed in home care) may also perform certain clinical tasks under the supervision of a licensed nurse or therapist. These occupational distinctions often blur in practice, however, due to state and local policies and other factors. For example, some states require home care workers to be certified as home health aides or nursing assistants in order to fulfill personal care aide roles.

As well as being the largest segment of the direct care workforce, the home care workforce is also among the fastest growing. From 2008 to 2018, the home care workforce more than doubled in size, from 898,600 to the current 2.3 million; personal care aides constituted 81 percent of that employment growth.⁶⁵ During the same period, from 2008 to 2018, the number of workers in assisted living and continuing care retirement communities also increased, though not to the same degree, from 280,900 to 405,500. The number of nursing assistants in nursing homes, on the other hand, remained relatively static, at about 600,000 workers.

These OES figures likely understate true demand and growth in home care, however, given that they exclude workers who are paid out-of-pocket directly by consumers. Because consumers and workers might choose not to report this employment relationship through official channels, it is very difficult to quantify these workers' share of the workforce. The figures also exclude workers who are classified as independent contractors by home care agencies or through private home care registries—usually erroneously. Classifying workers as independent contractors is a strategy that may be used to reduce costs by shifting risks and responsibilities to workers and/or consumers.⁶⁶

From 2008 to 2018, the home care workforce more than doubled in size, from 898,600 to the current 2.3 million; personal care aides constituted 81 percent of that employment growth.

Finally, OES figures only include the number of workers who are employed in the field, not the number of vacant positions. Given high turnover among home care workers, paired with tight labor markets across the country, this likely leads to systematic undercounting of the true number of home care jobs. Turnover, job vacancies, and the workforce shortage will be revisited later in the chapter.

DEMOGRAPHIC CHARACTERISTICS OF HOME CARE WORKERS

The sociocultural legacy of home care as “domestic service”—undertaken behind closed doors and excluded until very recently from the protections of the Fair Labor Standard Act (FLSA)—has produced a workforce predominated by women, particularly women of color and immigrant women. Many of these workers face barriers to employment in other fields based on education, language, and discrimination—and the sector faces barriers to elevating home care jobs, given home care

workers' historically and persistently marginalized and undervalued position.

The following data, drawn from the U.S. Census Bureau's American Community Survey (unless otherwise indicated),⁶⁷ provide a more detailed picture of this workforce:

- In 2017, 87 percent of home care workers were women.
- The median age of home care workers in 2017 was 46 years old. The age distribution of the workforce appears to be shifting toward the two ends of the continuum: from 2007 to 2017, the proportion of home care workers over 55 years old increased from 27 to 30 percent, and those aged 16 to 34 also increased from 25 to 28 percent. On the other hand, the proportion of home care workers in their middle years (35 to 54) declined from 48 to 41 percent.
- In 2017, 62 percent of home care workers were people of color. Specifically, 28 percent were Black/African-American, 23 percent were Hispanic/Latino (of any race), and 8 percent were Asian/Pacific Islander. (By contrast, people of color make up just over one-third of the total U.S. workforce.) The home care workforce has grown more diverse in the past decade: in 2007, 56 percent of workers were people of color.
- Nearly one in three home care workers (31 percent) were born outside the United States. Thirty-seven percent of immigrant home care workers report speaking English "not well" or "not at all," which may pose communication challenges unless workers receive English-language supports or are matched with consumers who speak the same language.
- The majority of home care workers (54 percent) in 2017 had a high school education or less, including 19 percent who did not complete high school. Education levels among home care workers vary by race and ethnicity, nativity, geographic location, and other factors; for example, 65 percent of Hispanic/Latino workers, 59 percent of immigrant workers, and 57 percent of rural workers have a high school education or less. The gender gap in education among home care workers is also substantial: 54 percent of men in home care have more than a high school education, compared to 47 percent of women.

These figures indicate that, to some extent, the traditional profile of home care workers has become even more entrenched over the past decade, as more people of color and immigrants have joined the workforce—but there are countervailing trends, including a slight increase in the number of men joining the workforce.

See Appendix A for more data on the home care workforce.

FUTURE DEMAND FOR HOME CARE WORKERS

No single projection model can precisely predict future demand for home care workers—but all models agree that demand will increase in coming years. Comparing projection models helps indicate how various demographic and policy trends may impact demand.

According to data from the BLS Employment Projections Program, which are the most widely used projection data, the home care field will need just over one million new home care workers between 2018 and 2028, with personal care aides accounting for the majority of the expected growth.⁶⁸ According to these data, home care will add more new jobs than the second and third occupations with the most growth *combined* (namely, fast food and registered nursing).

A key strength of the BLS projections is the inbuilt assumption that the growing demand for LTSS will be increasingly met in home and community-based settings.⁶⁹ The projections also account for the shifting balance of employment within home care, which tilts away from home health aides and towards personal care aides. As a result, the BLS also predicts that home care job growth will outpace growth in other long-term care industries; assisted living facilities and continuing care retirement communities will add 138,900 direct care workers, and nursing homes will actually lose about 19,300 nursing assistants.⁷⁰

While these detailed industry employment projections are useful, they have limitations. Without data on job vacancies, the projections must assume that base year employment fully meets demand—which is often not the case in home care.⁷¹ Also, the projections assume economic conditions from the past will continue in the future and do not account for anticipated (nor as yet unanticipated) demographic trends, which will undoubtedly impact the future need for home care services and other forms of LTSS, including assisted living and nursing homes.

To address these methodological shortcomings, the Health Resources and Services Administration (HRSA) has produced separate projections for personal care aides, home health aides, nursing assistants, and psychiatric aides, accounting for a range of factors including population growth, population aging, overall economic conditions, expanded health insurance

coverage, changes in health care reimbursement, and geography.⁷² According to HRSA's baseline scenario, personal care aides and home health aides will grow by 740,000 workers from 2015 to 2030. An alternative projection model from HRSA that accounts for potential improvements in population health suggests that while these improvements may mitigate short-term care needs, the resulting longevity (and associated disability) will still drive up demand for workers in the long term.

Aside from the absolute growth in the older population, changes in race and ethnicity may also impact future demand for care. In particular, the population of Hispanic/Latino people is growing faster than any other racial or ethnic group, as noted in the previous chapter: the number of Hispanic/Latino older adults will more than triple in size from 2015 to 2060 (up to 13 million people). Many Hispanic/Latino older adults are immigrants who may prefer to receive personal assistance from family members instead of paid home care workers.⁷³ However, as caregiving norms and traditions evolve among subsequent generations born in the United States,⁷⁴ demand for paid home services among the Hispanic/Latino population may increase.⁷⁵

More than 4.7 million total home care job openings are anticipated over the next decade (from 2018 to 2028).

Finally, it is important to note that just as demand rises for home care workers, it will also rise for family caregivers. For example, Paul Osterman from the Massachusetts Institute of Technology estimates that the LTSS field will need an additional 13.1 million family caregivers from 2015 to 2040—but faces a shortfall of up to 11 million caregivers due to demographic and other trends.⁷⁶ Importantly, although these projections of need for paid and family caregivers do not inform each other, it follows that a shortage of unpaid care will drive up demand for home care workers (and exacerbate the home care worker shortage described below).

THE WORKFORCE SHORTAGE IN HOME CARE

As well as new jobs created by growing demand, the home care workforce will see a considerable number of job openings caused by workers leaving the field over the next decade. The BLS employment projections indicate that 3.7 million existing home care jobs will need to be filled from 2018 to 2028 as workers leave the labor force (because of retirement, disability, or other reasons) or move into other occupations. When combined with growth, this means that more than 4.7 million total home care job openings are anticipated over the course of the next decade.

These predictions do not account for the persistently high churn within the home care sector. Although there is no robust national estimate of turnover in home care, turnover has generally been reported at 40 to 60 percent or higher.⁷⁷ The most recent annual benchmarking study conducted by Home Care Pulse, a market research and consulting firm that serves private-duty home care agencies, found that turnover among home care agencies reached a historic peak of 82 percent in 2018, a 15 percent increase over the previous year.⁷⁸

How have these trends impacted the supply of home care workers? Although quantification of a workforce shortage is hampered by the lack of national data on workforce stability,⁷⁹ reports from the field suggest that the LTSS sector is struggling to meet explosive demand for home care.

For example, according to Home Care Pulse, three out of four private-pay home care organizations consider caregiver shortages as one of their three most pressing concerns.⁸⁰ In a 2007 national survey conducted by PHI, 97 percent of responding states reported that direct care worker vacancies and/or turnover constituted “a serious workforce issue.”⁸¹ A recent study of HCBS program structures and challenges in five states conducted by the U.S. Government Accountability Office (GAO) found that recruitment and retention were top concerns reported by officials across all states.⁸² At the individual state level, a recent survey in Wisconsin found that 93 percent of personal care providers reported difficulties in filling job openings, and 70 percent were unable to staff all authorized hours.⁸³ Likewise, 90 percent of home care agencies surveyed by the Massachusetts Home Care Aide Council in 2016 and 2017 reported that workforce challenges were their top concern.⁸⁴

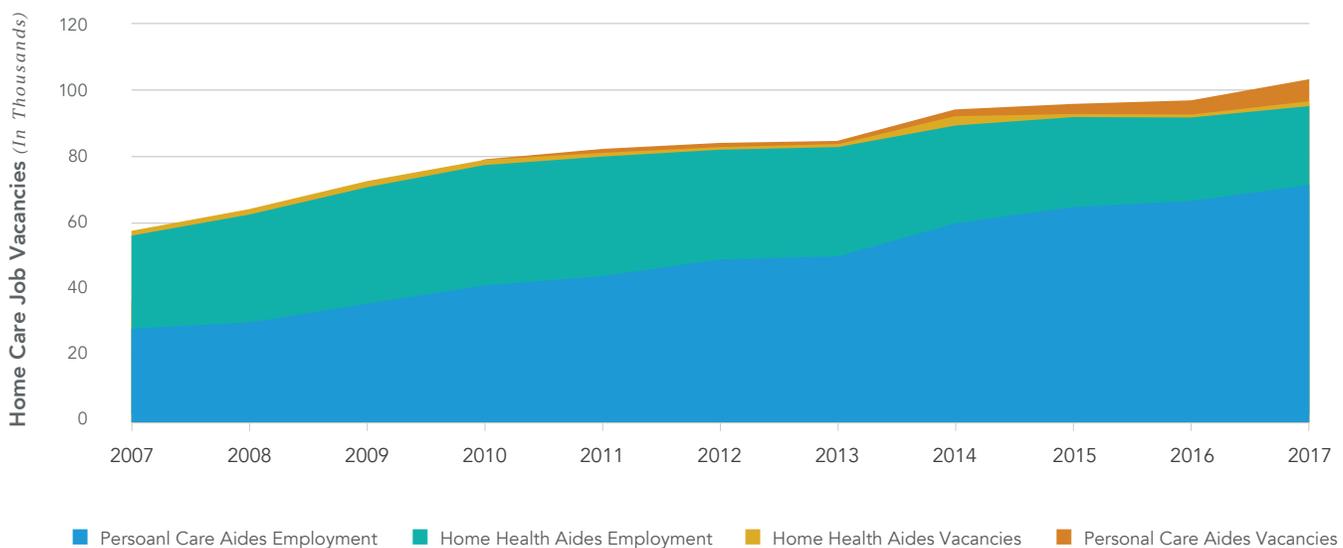
Consumer surveys also indicate the growing shortage of home care workers. In New York, a 2016 survey of consumers in the Consumer Directed Personal Assistance Program found that consumers advertise open positions three or more times per year, on average, and two-thirds of open positions take more than a month to fill (while one in 10 takes more than six months to fill).⁸⁵ A 2016 survey in Wisconsin found that 95 percent of consumers struggled to find workers.⁸⁶

Certain states are taking steps to measure the workforce shortage on the basis of workforce demand and job vacancies. For example, Minnesota collects longitudinal data on job vacancies by industry and occupation. Combining vacancy data with employment data for home care reveals a concerning trend. In 2017, the data showed that there were 24,530 home health aides and 1,020 vacancies (a 4 percent vacancy rate) in the state.⁸⁷ Demand for personal care aides was much greater (72,080 workers) and the vacancy rate was also much higher (6,618 vacancies, or 8 percent). Moreover, there

were more personal care aide vacancies in 2017 than almost any other occupation in the state, except retail salespeople. This marked a substantial change over 2007 data, which indicated that there were 28,290 personal care aides and 209 open positions (a vacancy rate of less than 1 percent). Given these findings, along with corroborating qualitative data from the Minnesota Department of Health, stakeholders have identified the workforce shortage as the top contributor to service gaps in HCBS in the state.⁸⁸

Other states periodically collect home care job vacancy data as well. In 2016, Iowa Caregivers—an independent nonprofit organization founded in 1992 in response to growing concerns about workforce shortages and high turnover in direct care—partnered with a state agency to survey long-term care providers.⁸⁹ The survey identified a 15 percent vacancy rate for personal care aides and home health aides, primarily due to a lack of applicants. Maine has also collected job vacancy data—finding in 2016 that one in five personal care aide positions was vacant.⁹⁰

FIGURE 2.1 | In Minnesota, home care job vacancies grew as demand increased over the past decade.



Source: U.S. Bureau of Labor Statistics (BLS), Division of Occupational Employment Statistics. 2018. May 2007 to May 2017 *State Occupational Employment and Wage Estimates*. <https://www.bls.gov/oes/current/oesrci.htm>; Minnesota Department of Employment and Economic Development. 2018. *Job Vacancy Survey*. <https://apps.deed.state.mn.us/lmi/jvs/Results.aspx>; analysis by PHI (August 10, 2018).

LOOKING AHEAD

The workforce shortage will worsen as the traditional labor pool for home care workers declines. According to projections from the BLS, there is a smaller number of adults aged 20 to 64 entering the labor force compared to previous years.⁹¹ In particular, the number of women joining the labor force is declining in comparison to recent decades; whereas the female share of the labor force increased by nearly 7.7 million workers from 1996 to 2006, the increase was only 3.2 million in 2006 to 2016, and is projected to be 3.5 million in 2016 to 2026. However, in the upcoming decade, the number of older people (aged 65 and over) who participate in the labor force is expected to continue an upward trend.

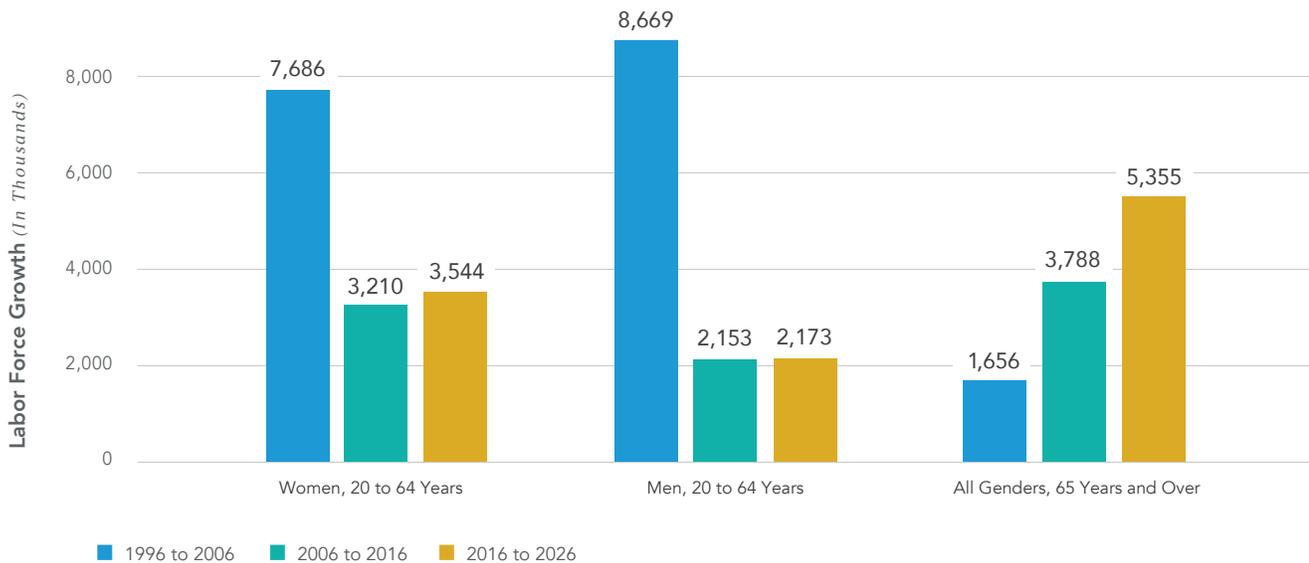
Based on current trends, Paul Osterman, who was cited in the previous section, projects a shortfall of more than 151,000 direct care workers by 2030 and 355,000 by 2040.⁹²

Changes in immigration policy will certainly exacerbate the workforce shortage in home care, given that foreign-born workers comprise nearly a third of the current workforce.⁹³ For example, the travel ban introduced by the current administration (and recently upheld by the Supreme Court) will impact recruitment and retention of workers in certain parts of the country.⁹⁴

As a case in point, one in seven immigrants working in direct care in Minnesota is from Somalia, one of the countries included in the ban. The current and future supply of immigrant workers in home care is also threatened by the potential termination of Temporary Protected Status for citizens of several Central American and Caribbean countries; the ongoing debate about the future of the Deferred Action for Childhood Arrivals program; and the push to restrict family-based immigration.⁹⁵ Finally, the recent transformation of the public charge rules will disproportionately affect home care workers who, as discussed in Chapter 4, are often required to supplement their persistently low wages and annual earnings by accessing public assistance.⁹⁶ Reports from the field suggest that, by creating fear and uncertainty among workers and employers, these immigration policies and proposals deter foreign-born workers from joining the workforce even if they are not directly implicated. On the other hand, more supportive policies—along with culturally competent employment practices—could help shore up and strengthen the home care workforce in the years ahead.

As well as supporting immigrant workers, another important strategy for building the home care workforce will be to recruit individuals from “non-traditional”

FIGURE 2.2 | Labor force growth among women and men aged 20 to 64 will slow in the next decade, while participation among older adults will grow.



Source: PHI. 2018. *U.S. Home Care Workers: Key Facts*. Bronx, NY: PHI. <https://phinational.org/wp-content/uploads/2018/08/U.S.-Home-Care-Workers-2018-PHI.pdf>.



segments of the labor force. For example, older workers—who are joining the labor force in larger numbers than in previous generations—may be attracted to home care jobs by the opportunity to “give back,” to learn new skills, and/or to balance flexible, part-time work with other priorities, such as caring for their own parents, children, or grandchildren.⁹⁷ (Older workers, defined as those aged 55 and over, already make a substantive contribution to LTSS: one in four direct care workers fits this age profile.) Efforts to recruit older workers could be aligned with broader initiatives, such as the Senior Community Service Employment Program, a federal program designed to help low-income older adults “earn and learn” that has been used successfully to recruit direct care workers in past pilot projects.⁹⁸

Recruitment efforts may also be aimed at younger workers, particularly through outreach to high schools and colleges.⁹⁹ Given the competition among employers for younger workers, competitive pay and clear career development opportunities will be critically important for attracting this segment of the labor force (as described further in Chapters 5 and 7). Finally, there is an obvious opportunity to recruit more men, who make up only 13 percent of the home care workforce but constitute 40 percent of unpaid caregivers.¹⁰⁰ To successfully recruit from any of these segments of the labor force, it will be necessary to identify appropriate recruitment messages, methods, and partners as well as providing targeted job supports.¹⁰¹

CONCLUSION

The home care workforce is large, diverse, and rapidly expanding, outnumbering direct care workers in every other long-term care setting. The growing population of older adults will drive up the need for home care workers, as will changes in LTSS policy, the shifting demographic composition of older adults, changing family structures and patterns of caregiving, and other factors.

But the LTSS system is *already* struggling to recruit enough workers to meet demand. Demographic changes are reducing the traditional supply of workers, while turnover in the workforce is high and job vacancies are increasing. Meeting current and future demand depends on expanding the labor pool, particularly by recruiting more men, older adults, and young people—and addressing policy trends, such as immigration restrictions, that threaten to shrink the workforce.

The growing care gap in home care is a demographic issue, but it is also a job quality issue. Inadequate compensation, limited training, ineffective supervision, and few opportunities for engagement and advancement all contribute to recruitment and retention challenges in home care and undermine the capacity of the workforce to meet growing demand. These factors will be examined in the chapters that follow.

THE HOME CARE SECTOR

Individuals who require long-term services and supports (LTSS) may receive services at home from home care agencies or by directly hiring “independent providers.” Independent providers are home care workers who are hired through private-pay arrangements or, for eligible consumers, through publicly funded consumer-directed programs.

Behind this simple classification of home care services is an exceedingly complex system that is difficult to define and measure for a number of reasons. The first challenge, as noted in the previous chapter, is that home care services are classified within two separate (but overlapping) industries. A second challenge is the significant variation across and within states with regard to nomenclature, definitions, payment mechanisms, and regulation of home care providers, including agencies and independent providers. This heterogeneity makes it difficult, though nonetheless important, to compare major players, practices, and trends across the country, and to share knowledge across state borders.

The home care sector is also difficult to characterize as it evolves in tandem with the broader landscape of health care and social services. For example, traditional home health agencies are expanding their share of nonmedical services; primarily nonmedical home care agencies are experimenting with new models of care; hospital systems are creating their own home care services; consumers are moving away from agencies toward self-directed options; and so on. The scale and pace of these changes make it difficult not only to coherently describe the current sector, but also to identify, expand, and sustain the innovations that hold the most promise for stabilizing and improving home-based LTSS.

Bearing these considerations in mind, this chapter will describe the size and key features of the three main pillars of the home care sector—home care agencies, consumer-directed services, and gray market providers—and the implications for access to services and quality of care.

HOME CARE AGENCIES

The home care sector spans two industries that are distinguished by their primary emphasis on medical or nonmedical care: Home Health Care Services (NAICS 621610) and Services for the Elderly and Persons with Disabilities (SEPD; NAICS 624120).¹⁰²

Home Health Care Services provide support for individuals who require medically oriented services in their homes. Agencies that fall into this industry usually offer skilled nursing care and may provide a range of other services, including: wound care; pain and medication management; disease management; oxygen or intravenous services; medical supplies and equipment; physical, speech or occupational therapy; behavioral health care; and/or nonmedical services, including personal assistance. This industry also includes visiting nurse associations, home infusion therapy services, and in-home hospice care.

The scale and pace of change in the home care sector make it difficult not only to describe the sector, but also to identify, expand, and sustain promising innovations.

On the other hand, the SEPD industry is comprised of home care agencies that primarily provide nonmedical care, including personal assistance, homemaker, and companionship services. This industry also includes adult day services and activity centers for older people and people with intellectual and developmental disabilities.

There is considerable overlap between home care agencies that are classified into these two industries, however, as many home health care agencies provide extensive nonmedical services, and SEPD agencies are expanding into medical services. More broadly, an absolute distinction between medical and nonmedical care can be difficult to uphold both in principle and practice, especially from a person-centered perspective; that is, although personal assistance may be nonmedical, it may be closely linked to physical, behavioral, and/or emotional health outcomes.

CERTIFICATION AND LICENSURE

Certification and licensure rules in home care vary by type of agency and state rules, which is one of the factors that complicates efforts not only to describe the sector but also to implement sector-wide standards and achieve quality improvement.

Home health care agencies that wish to participate in Medicare are subject to federal certification requirements, which include: employing at least one physician and one registered nurse; providing skilled nursing and at least one other service, such as home health aide services; establishing and adhering to a physician-approved plan of care for each care recipient and meeting requirements related to assessment, care coordination, person-centered care, and more. Many home health care agencies are also voluntarily accredited by independent third-party organizations such as the Joint Commission, Community Health Accreditation Partner, or the Accreditation

Commission for Health Care, which are all approved by the Centers for Medicare and Medicaid Services (CMS) to conduct initial certification surveys, recertification surveys, and complaint investigations.

There are no federal requirements for nonmedical home care agencies, nor for home health care agencies who opt out of Medicare. Licensure requirements for nonmedical home care providers, including those funded by Medicaid, are determined at the state level—and consequently there is significant variation among states with regard to standards for training, supervision, staffing requirements, and other quality indicators.¹⁰³ (Licensure of home health care agencies is also governed at the state level, although a small number of states do not require any license or certificate of need for such agencies.) Twenty-five states do not license nonmedical home care agencies at all. The implications of state-level regulation for training and scope of practice are described later in this report.



SIZE AND OWNERSHIP

Across the two industries, there were an estimated 56,000 home care and related establishments in 2012 (the most recent year for which detailed data are available), including approximately 30,100 establishments in the Home Health Care Services industry and nearly 26,000 SEPD establishments (see Table 3.1).¹⁰⁴ There has been explosive growth in both industries, including a 71 percent combined increase in the number of establishments from 2002 to 2012. Revenues across the sector more than doubled in the same period, from nearly \$46 billion to nearly \$100 billion (and are now assumed to be much higher). Notably but unsurprisingly, given the medical/skilled nursing focus of Home Health Care Services, revenue per SEPD establishment was approximately 60 percent of revenue per establishment for Home Health Care Services.

Another indicator of size is employment level: the two industries employed over 2.1 million workers in 2012, a dramatic increase from 2002. Employment levels in SEPD in particular increased by 137 percent, reflecting in part the momentous growth in the personal care aide occupation. The number of employees per SEPD

establishment also increased by nearly 40 percent, while employment in home health agencies shrank by 5 percent. The wide distribution of employment indicates the diversity of agencies in the sector, which range from small, privately owned operations to large national and international chains; nearly a quarter of agencies (24 percent) had fewer than five employees, while another 23 percent had 20 to 49 employees, and 12 percent employed 50 to 99 workers.¹⁰⁵ Agency size can have varying implications: small companies may offer more localized, tailored services, but at the same time may struggle to comply with rapid changes in regulations and norms of practice.

Another key characteristic of the home care sector is its relative fragmentation: the market share of the four largest firms was just 7 percent in 2012, and that of the 50 largest operators was 26 percent.¹⁰⁶ By comparison, in the same year, the 50 largest firms controlled 29 percent of the continuing care retirement community industry, 31 percent of the nursing home industry, and 45 percent of the assisted living industry. The diversity and fragmentation of the home care market can hinder efforts to uniformly raise standards of care quality and job quality.

TABLE 3.1 | Key characteristics of home care agencies by industry, 2002 to 2012

	Home Health Care Services (NAICS 621610)			Services for the Elderly and Persons with Disabilities (NAICS 624120)		
	2002	2012	Change	2002	2012	Change
Number of establishments	17,666	30,139	71%	15,156	25,964	71%
Revenue (in millions)	\$30,386	\$65,447	115%	\$15,284	\$34,087	123%
Revenue per establishment (in thousands)	\$1,720	\$2,172	26%	\$1,008	\$1,313	30%
Total employment	777,128	1,263,528	63%	381,097	901,359	137%
Employees per establishment	43.99	41.92	(5%)	25.14	34.72	38%
Annual payroll (in thousands)	\$15,262	\$32,759	115%	\$6,342	\$15,756	148%

Sources: U.S. Census Bureau. 2012. "Industry Snapshot: Home Health Care Services (NAICS 621610)." https://thedataweb.rm.census.gov/TheDataWeb_HotReport2/econsnapshot/2012/snapshot.html?NAICS=621610; U.S. Census Bureau. 2012. "Industry Snapshot: Services for the Elderly and Persons with Disabilities (NAICS 624120)." https://thedataweb.rm.census.gov/TheDataWeb_HotReport2/econsnapshot/2012/snapshot.html?NAICS=624120.

Although the home care sector was dominated by non-profit entities in previous decades,¹⁰⁷ nearly three-quarters of home care agencies (74 percent) were for-profit by 2012. Ownership type is an important consideration when assessing the home care sector, given that the evidence generally points toward higher costs and lower quality (including staffing levels) among for-profit providers compared to non-profit providers in home health and other health care settings.¹⁰⁸ Interestingly, although they constitute only 26 percent of the sector in 2012, non-profit agencies employed a slightly larger proportion of workers (31 percent) and garnered higher revenue (40 percent) relative to their share of the sector.

Among for-profit agencies (numbering approximately 41,000 establishments), just over two-thirds were corporately owned in 2012.¹⁰⁹ Although individuals, families, and other partnerships owned about one in three home care agencies, these agencies tended to be smaller in revenue and employment compared to corporate agencies.

Four trends in ownership of home care agencies should be mentioned here. First, in the context of the shift toward “value over volume” in health care (as described in Chapter 6), health systems and other market-adjacent providers are expanding into home care, either by creating or acquiring their own agencies or partnering with existing home care providers.¹¹⁰ The industry is also seeing large insurers acquiring home care agencies, especially to better manage Medicare Advantage beneficiaries.¹¹¹

Although these acquisition trends may help support care coordination, efficiency, and quality goals, it raises several concerns. First, the new market penetration is likely to edge out smaller agencies that, although unable to compete with larger providers, may be in the best position to deliver appropriate, culturally competent care to local consumers (e.g., agencies that specialize in assisting specific sociocultural groups). Second, given that hospitals and health insurance companies operate by definition within the medical model, home care under their purview may become over-medicalized, possibly to the detriment of consumers’ nonmedical needs and care preferences.

A second trend is the investment of private equity in home care, spurred by the ever-growing demand for services (as described in Chapter 1). As one example of the growing investment in home care, 10 private equity investments were made in Medicaid-funded home care agencies in 2016, which was more than double the investments made in 2015, and private equity was involved in nearly half of all private-duty home care acquisitions in the same year.¹¹² The concern with this type of investment

is the primary emphasis on financial return to investors, possibly at the expense of care quality and job quality—particularly given many investors’ limited knowledge of home care and/or Medicaid.¹¹³ Given the low existing overhead for home care companies, efforts to increase profit margins are likely to lead to cutbacks in services for consumers and/or compensation for workers—unless investors are explicitly committed to these concerns. Greater centralization of ownership leading to reduced consumer choice is also a risk.

Efforts to increase profit margins in home care may lead to cutbacks in services and/or wages—unless investors are explicitly committed to these concerns.

Another key trend in the sector is the expanding role of franchise ownership in private-pay home care. Although franchises—such as Home Instead and Visiting Angels—constitute only 7 percent of the total sector, the number of home care franchise brands increased from just 13 in 2000 to 56 in 2014, and among the 45 home care franchise brands that belong to the International Franchise Association, the number of franchise locations increased from 300 to 6,000.¹¹⁴ Sixteen home care franchises were on Entrepreneur Magazine’s Top 500 Franchise List in 2018, and five of those were in the top 100.¹¹⁵

Low start-up costs as well as market demand appear to be driving franchise development in home care; a number of home care brands made it onto the Franchise Business Review’s 2018 list of top *low-cost* franchises (requiring investment of less than \$100,000).¹¹⁶ Home care franchises also rank highly in franchisee satisfaction.¹¹⁷ The benefit of the franchise model is that it allows individuals to set up local offices—capitalizing on the community-based, relational nature of home care—while also drawing on the brand recognition and infrastructure of a national or international chain. However, there is no guarantee that new franchisees are adequately prepared to

provide quality services or navigate complex home care and employment rules and regulations. Furthermore, uniformity of practice and quality across franchise locations may be limited, especially in light of concerns about joint employment and liability (between franchisors and franchisees) and, for multi-state franchises, given the variation in regulations across state lines.¹¹⁸ Like other small proprietorships, the lack of standardization among franchisees can leave both consumers and workers vulnerable to inadvertent or deliberate breaches of their rights and wellbeing.

Local ownership can be a competitive advantage in home care, driving referrals and strengthening relationships between the agency, workers, consumers, and families.

The final trend to mention is the recent entry (and exit, in some cases) of tech-driven home care start-ups, including HomeHero, Honor, and Hometeam. The aim of these companies, in broad strokes, has been to build economies of scale in home care by reducing costs and increasing geographic spread. In practice, the companies do not appear to have disrupted the sector as much as anticipated, for several reasons. One key reason, according to HomeHero's former CEO Kyle Hill, is that traditional agencies are not as tech-backward as expected: "While file cabinets are still popular," he wrote in 2017 (when announcing the company's closure), "they are not sitting in the stone ages," and some have already developed their own competitive technology platforms.¹¹⁹

A second reason is that these new companies, no matter how innovative their intentions, are not exempt from the financial and regulatory pressures experienced by more traditional agencies. They must comply with changing employment laws and keep up with complex regulations and reforms. In contrast with HomeHero, some start-ups appear to be leaning into these realities; for example, New York-based Hometeam has not only switched focus from private pay to Medicaid, but is homing in on the dually

eligible population, aiming to use the company's data and technology capabilities to improve care integration, quality, and cost.¹²⁰

A third limitation on the disruptive impact of home care start-ups is, as noted above, the competitive advantage of local, community-focused ownership and operations in home care, which drives referrals and the quality of relationships between the agency, workers, consumers, and families.¹²¹ Again, some start-ups appear to be leveraging this lesson. For example, Honor has formed the Honor Partner Network to partner with, rather than supplant, independent home care agencies in local areas; the company's president, Nita Sommers, explained that through this network the company aims to "pair [their] uniquely scaled technology and capabilities with the best of local providers."¹²² In this model, Honor assumes responsibility for certain business operations, including recruiting, onboarding, and training of workers—and shares a negotiated portion of the agency's revenue in return. The value of this new approach, and degree of disruption to the sector overall, has yet to be determined.¹²³

CONSUMER-DIRECTED SERVICES

Home care services are also increasingly available to HCBS consumers through consumer-directed programs. Although consumer-directed home care services overlap somewhat with the industries described above (given that consumers may choose to receive services through home care agencies), these services are predominantly delivered by independent providers who are hired directly by consumers.

Also known as self-directed or participant-directed services, publicly funded consumer-directed services are designed to shift choice and control to consumers, on the principle that they know best how to meet their own needs effectively and efficiently.

Although consumer-directed programs have deep roots, there is general agreement that the model truly took hold in the United States with the Cash & Counseling program. A joint venture between the Robert Wood Johnson Foundation and the Office of the Assistant Secretary for Planning and Evaluation (ASPE), Cash & Counseling initially ran as a demonstration program in three states (Arizona, Florida, and New Jersey) in 1996 through 2003 and was then replicated in 12 other states through 2009.¹²⁴ Evaluation results from the demonstration phase—which involved more than 6,500 Medicaid-eligible individuals

with LTSS needs who either received traditional agency-based services or began self-directing their services—indicated that the program significantly reduced unmet need, improved quality of life for recipients and their families, and was not associated with higher incidence of adverse health outcomes (indeed, producing better outcomes on some measures).

Since then, consumer direction has expanded exponentially. According to a Kaiser Family Foundation survey of Medicaid HCBS programs, nearly all states (N=49) operated consumer-directed programs through 1915(c) and/or Section 1115 waivers in 2016, and 20 out of 31 reporting states included self-direction in their personal care state plan.¹²⁵ Adding more detail, the National Resource Center for Participant-Directed Services reported that there were 253 consumer-directed programs operating across the country in 2016, three-quarters of which were available statewide (189 programs), compared to only 44 percent in 2013.¹²⁶

These programs served just over one million enrollees in 2016, representing an increase of about 250,000 enrollees since 2013. California consumers accounted for 51 percent of the total. Of the 208 programs that responded to the survey, just over one-third (37 percent) served multiple populations. Looking across populations, 42 percent served individuals with intellectual or developmental disabilities; 34 percent served adults with physical disabilities; 33 percent served children and 28 percent served older adults; 15 percent served veterans; and 8 percent served other populations, including individuals with behavioral health issues, traumatic brain injury, autism, or HIV. Table 3.2 shows the number of programs by funding source.

Of note, the expansion of managed long-term services and supports (MLTSS), discussed further in the next chapter, does not seem to have affected the growth trend in consumer direction, even though the two approaches may be considered somewhat antithetical. The 2016

TABLE 3.2 | Medicaid is the main funder of consumer-directed programs, particularly through 1915(c) HCBS waivers

Funding Source	Number of Programs	% of Reporting Programs (N=240)
Medicaid State Plan	17	7%
Medicaid Section 1115 Demonstration Waiver	13	5%
Medicaid 1915(b) Waiver	3	1%
Medicaid 1915(c) HCBS Waiver	145	60%
Medicaid 1915(i) HCBS State Plan Option	2	1%
Medicaid 1915(j) Self-Directed PAS State Plan Option	5	2%
Medicaid 1915(k) Community First Choice State Plan Option	4	2%
Veterans' Administration	31	13%
State General Revenue	7	3%
Other Funding Mechanisms	13	5%

Source: Edwards-Orr, Merle and Kathleen Ujvari. 2018. *Taking it to the Next Level: Using Innovative Strategies to Expand Options for Self-Direction*. Washington, DC: AARP Foundation, The Commonwealth Fund, and The Scan Foundation. <https://www.aarp.org/content/dam/aarp/ppi/2018/04/taking-it-to-the-next-level.pdf>.

National Inventory shows that, among the 21 states that were implementing or operating MLTSS in 2016, enrollment in consumer-directed programs had increased in 16 states and decreased in the other five since 2013; whereas among non-MLTSS states, 21 increased the number of enrollees and 10 decreased.¹²⁷

KEY FEATURES OF CONSUMER DIRECTION

There are two main variants of consumer direction: employer authority and budget authority.¹²⁸ Employer authority, the more limited version, authorizes consumers to hire, schedule, supervise, and dismiss their own personal assistance workers. In the budget authority model, on the other hand, consumers receive a monthly budget with which to purchase a range of goods and services to meet their assessed needs (as specified in their service plan), including but usually not limited to personal assistance. A key advantage of budget authority is that it enables consumers to negotiate higher wages and benefits with their workers—while adhering to employment laws and regulations, for example the Fair Labor Standards Act (FLSA) rules on overtime (see Chapter 4)—which can improve job and service quality and sustainability. In 2016, 47 states offered employer authority in their 1915(c) and Section 1115 consumer direction waiver programs, while 35 states offered budget authority.¹²⁹

Regulations about who can be paid through consumer-directed services also vary by program and state, but overall, an estimated 70 percent of independent providers in consumer-directed programs are family members or friends. Consumer-directed programs often do not allow payment, however, to spouses or parents of children under the age of 18.¹³⁰ Reluctance to authorize payments to such individuals stems from several sources, including concerns about training, preparation, and oversight (as discussed further in Chapter 5); concerns about the budget impact of substituting paid for unpaid care or the fraudulent use of funds; and cultural and legal norms about innate caregiving obligations. The evidence does not appear to support these concerns, however; the Cash & Counseling demonstration, for example, found no evidence of care substitution or a “woodwork effect” (i.e., a marked increase in payment for spouses in the two states that permitted it),¹³¹ and a study of IHSS recipients in California (N=386,447) found no financial disadvantages and some improved health outcomes among those hiring a spouse, parent, or other relative compared to those with nonrelative caregivers.¹³² Further, the argument for compensating family members is strengthened by the increasing evidence of the physical, emotional, financial, and other stressors experienced by

many family members who must balance unpaid family caregiving with paid employment.

Another feature of consumer-directed services is that participants must have access to a case manager (also known as a support broker, counselor, consultant, or by other job titles) to help them liaise with the program and obtain the services they need.¹³³ All consumer-directed programs must also make Fiscal Management Services (FMS) available to assist consumers with the responsibilities associated with being an employer, such as billing and documentation, payroll and related taxes, budget monitoring, and so on. However, states may choose among different FMS models.¹³⁴ One is the fiscal employer agent (F/EA) model, in which a government agency or vendor entity acts on behalf of individual consumers to fulfill key fiduciary obligations, such as withholding, filing, and depositing employment taxes. There are two ways for states to implement consumer direction using a vendor F/EA: (1) select a discrete number of F/EAs through a competitive bidding process, and bill the costs as administrative expenses (with a standard 50 percent federal match) or (2) allow freedom of choice for participants, and bill F/EA costs as service expenses (with a potentially higher federal match).

An alternative FMS model is the agency with choice (AWC) model, which is a co-employment arrangement between the consumer and a traditional home care agency.¹³⁵ In this model, the consumer is the managing employer—recruiting, interviewing, selecting, training, managing, and dismissing workers—while the agency is the legal employer for IRS purposes, officially hiring the worker and managing payroll. There are a range of benefits associated with the AWC model. The consumer is released from some of the burden of paperwork (and associated liability), while retaining choice and control over the personal assistance services they receive. Further, the model facilitates more extensive and sustained support for both consumers and workers: consumers can access assistance with any aspect of the employment process, and workers can benefit from training opportunities, group-policy benefits (such as health insurance or retirement benefits), and other job supports. An F/EA, on the other hand, may only provide limited guidance to the consumer, rather than direct assistance.

Sharing employment responsibilities through the AWC model does bring up challenges. One challenge is the current ambiguity regarding liability around employment practices, especially given that joint employment is not recognized in many state and some federal laws. This

ambiguity is sometimes addressed by agency policies that shift all liability to consumers, which is a distortion of the principles of consumer direction.¹³⁶ Ambiguity may also be experienced by a home care worker who does not clearly know who his or her “boss” is. Without sufficient commitment to the principles of self-direction on the agency’s part, the AWC model can also result in limits on consumer choice and control; for example, if an AWC dictates how many personnel changes a consumer can make. Notwithstanding these concerns, which require further examination and testing, the AWC model is a promising model for serving the needs of both consumers and workers.

The agency with choice (AWC) model, a co-employment arrangement between the consumer and home care agency, offers a range of benefits for consumers and workers.

In a handful of states, most notably California, independent or quasi-governmental entities called public authorities or workforce councils have been created to serve as the employer of record for independent providers. (Whether or not these public authorities should be categorized as a form of FMS provider is an unresolved debate.) One of the distinctive roles of public authorities is to engage in collective bargaining, thereby helping improve independent providers’ wages and access to group benefits. While consumers retain employer authority, public authorities may perform payroll tasks, and usually also fulfill other activities such as recruiting and screening workers, maintaining a registry of workers, matching workers and consumers, and/or offering training opportunities and support services.¹³⁷

To note, the nascent collective bargaining power of home care workers has come under threat recently. In *Harris v. Quinn*, the Supreme Court ruled in 2014 that independent providers funded through Medicaid constitute “partial-public” rather than fully public employees, and therefore cannot be compelled to pay union fees if they do not choose to join the union.¹³⁸ Despite this setback, the

Atlantic reports that the United Domestic Workers of America, which represents home care workers in California, was larger in 2018 than before *Harris v. Quinn* (with a current membership count of 75,000 versus 68,000 prior to the ruling)—thanks to the union’s effort to more proactively engage and support workers through training opportunities and other services and supports.¹³⁹ More recently, however, the Centers for Medicare and Medicaid Services released a final rule on Medicaid provider payments that prohibits states from paying union dues on behalf of home care providers, which will affect independent providers in California, Connecticut, Massachusetts, Oregon, and Washington (and possibly others).¹⁴⁰ The impact of this rule on home care workers’ union membership and job quality remains to be seen.

As with the traditional agency model described above, the diverse and distributed nature of consumer-directed programs across and within states makes it difficult to develop or implement universal quality standards—particularly given that quality assurance falls largely to the individual, in keeping with the model’s principles of independence and autonomy. A key opportunity, therefore, is to develop agreement on a robust definition of “quality” to serve as the basis for assessment and improvement in consumer-directed services, as discussed further in Chapter 9.

THE GRAY MARKET

Comprising the third main pillar of the home care sector are direct care workers who are hired and paid privately by consumers, either as household employees (the W2 model), independent contractors (the 1099 model), or unreported workers.

This segment of the sector, which is commonly known as the gray market, is difficult to characterize and quantify—but certainly sizable, given the large swathe of consumers who do not qualify for public LTSS funding but cannot afford to pay privately for agency services, or do not choose to do so. (According to the Genworth Cost of Care Survey, the national median rate for personal assistance services from a home care agency is \$21 to \$22 per hour.¹⁴¹)

Anecdotal reports suggest that the benefit of the gray market is that, like publicly funded consumer-directed services, it allows consumers maximum scope in choosing who provides their personal assistance and how.¹⁴² This means that consumers can seek workers who are the best fit in terms of experience, availability, or personal characteristics such as temperament, race/ethnicity,

or language. It also means that consumers can circumvent state and/or agency rules that limit, sometimes inconsistently, what a home care worker is allowed to do in other employment scenarios (as discussed further in Chapter 7). Consumers can also choose to pay a higher wage than workers receive through Medicaid-reimbursed or private-pay agency services. The flip side of autonomy, however, is a lack of oversight, support, and protection for either consumers or workers—leaving both parties vulnerable to a range of potential personal and professional risks.¹⁴³

In a system that's both multi-layered and fragmented, careful planning and coordination are needed to stabilize the home care workforce and ensure effective services for consumers.

The gray market is also seeing a proliferation of privately owned and operated staffing registries which connect consumers and workers, but do not by design fulfill any employment functions, such as hiring, scheduling, supervision, or training. Although well-structured registries play an important role in connecting consumers and workers, particularly in the context of a growing workforce shortage (see Chapters 8 and 9), they may not always be managed in the best interests of consumers or workers; reports from the field suggest that, at least in some cases, companies are choosing to operate registries in order to sidestep home care regulations. Educating registry providers and implementing some degree of regulation—as seen in Florida, which has a licensure category for nursing registries¹⁴⁴—are important steps toward protecting consumers and workers, who may not otherwise know the risks or liability they assume when using a private registry.¹⁴⁵

CONCLUSION

The home care sector is large and complex, with considerable state-by-state variation due to differing (or in some cases non-existent) rules and regulations. In recent years, the number of home care agencies has exploded in response to consumer preferences, policy changes, and growing demand.

The home care sector is highly fragmented, with a low market concentration and large proportion of small establishments. Recently, there has been considerable growth among larger agencies, however. Hospitals and health systems have entered the home care sector, and an influx of private equity has driven mergers and acquisitions. These trends carry worrying implications if investment is not matched by appropriate expertise and explicit commitment to investing in home care jobs and improving consumers' experiences of care.

Along with the burgeoning number of home care agencies, consumers have also taken on new roles in directly hiring, training, and supervising workers. In consumer-directed programs, consumers often share some employment responsibilities with FMS providers. These arrangements can, when organized effectively, help consumers successfully navigate their employment role, thereby functioning as a support and quality assurance system that is largely lacking in the private-pay gray market. The AWC model stands out among FMS models as particularly well-structured to address the needs and preferences of consumers and workers simultaneously.

The new home care landscape affords more opportunities for consumers to choose the home care providers (whether agencies or individuals) who serve them best. But rapid changes in the sector pose significant challenges for workforce development. In a system that's both multi-layered and fragmented, states face considerable barriers to enforcing and implementing workforce development policies, and workers face limited options to establish a career in caregiving. In this context, careful planning and strong coordination are needed to stabilize the home care workforce and create a home care system that can effectively serve consumers.



Part II: Recruitment and Retention of the Home Care Workforce

IMPROVING JOB QUALITY

VISION ► Rewarding, sufficiently compensated, and well-supported home care jobs that attract and retain a strong and stable workforce.

High-quality home-based long-term services and supports (LTSS) cannot be achieved without a strong and stable workforce; in the face of growing and evolving demand for service, this long-established fact is more obvious than ever. Yet efforts to invest in the home care workforce are stymied by at least two factors: first, by the historical dismissal of home care as low-skilled, feminized domestic labor, and the related marginalization of the home care workforce; and second, by cost-containment concerns in the sector and wider health care system.

Recent policy developments, such as rising minimum wage rates and the revision of the Fair Labor Standards Act (FLSA) to cover home care workers, suggest progress toward improving employment conditions for the home care workforce.¹⁴⁶ But these incremental changes are insufficient to address inadequacies in wages, benefits, hours, supervision, and employment supports caused by systemic and persistent underinvestment in home care and its workforce. Poor job quality makes it difficult to recruit new workers to the field, including non-traditional workers, and leads to negative downstream effects, including high turnover, service gaps, and poor outcomes for consumers. Thus, improving job quality for home care workers has been described as a care quality issue, an economic development issue, and a moral imperative.¹⁴⁷

This chapter provides an up-to-date snapshot of home care workers' wages, benefits, and other indicators of job quality, and subsequently describes a range of options for improving job quality in order to improve workforce recruitment and retention.

WAGES, HOURS, AND BENEFITS FOR HOME CARE WORKERS

The following analyses include personal care aides, home health aides, and nursing assistants in the two industries described in Chapter 3, namely Home Health Care Services and Services for the Elderly and Persons with Disabilities (SEPD). (Nursing assistants in home care perform the same on-the-job tasks as home health aides.)

WAGES AND EARNINGS

Direct care wages are notoriously and persistently low, especially for home care workers. The median wage for all home care workers in 2018 was \$11.52 per hour and median annual earnings were \$16,200.¹⁴⁸ Personal care aides earned the least; their hourly wage was \$11.40, compared to \$11.77 for home health aides and nursing assistants working in home care. (Nursing assistants working in nursing homes, on the other hand, earned a median hourly wage of \$13.38.)

There are considerable variations among different populations of home care workers, however, even at this low end of the pay scale, according to our analyses of 2017 data from the U.S. Census Bureau.¹⁴⁹ Women of color earned \$10.48 per hour compared to \$10.69 for white women, according to these slightly older data, and the difference in their annual family earnings was more than \$7,000 (\$44,000 compared to \$51,200). Men of color earned slightly more than women, but less than white men: their hourly wage was \$11.00 and family income was \$50,400, compared to \$11.30 and \$54,400 for white men. Interestingly, immigrants (who constitute nearly a third of the home care workforce), earned slightly more than U.S.-born workers per hour (\$11.00 versus \$10.48) and annually (\$17,100 versus \$15,100). Finally, men earned \$11.00 per hour while women earned \$10.52. Although not a startling difference, this paradoxical pay gap (in a female-dominated field) amounted to a 6 percent difference in annual earnings (\$16,100 versus \$15,100). The gender difference in family earnings was even larger, at 12 percent (\$52,500 for male home care workers versus \$46,700 for female workers).

Education also has an effect on home care workers' wages, even in an occupation with low educational requirements. High school graduates earned \$10.46 per hour and \$15,600 annually, compared to \$10.18 and \$13,400 for those who did not finish high school. Hourly earnings increased to a median of \$11.20 for workers with an Associate's degree or higher, and their median annual income was \$18,100. Another notable pay differential can be seen between home care workers employed by non-profit agencies versus those in for-profit agencies.

While for-profit workers earned \$10.48 per hour and \$15,100 annually, non-profit workers earned a full dollar more on the hour and \$18,100 annually.

Although it is difficult to make robust estimates about independent providers, even those working in publicly funded consumer-directed programs, the data indicate that they made slightly more per hour (\$11.00 per hour) but earned slightly less per year (\$14,200). Of note, for the many independent providers in consumer-directed programs who are family members, low wages can affect consumers' financial wellbeing as well; for example, when a family member leaves a higher-paying job to provide paid personal assistance, the whole household, including the consumer, may feel the impact of their diminished income.

Personal care aides earned the least; their hourly wage was \$11.40, compared to \$11.77 for home health aides and nursing assistants working in home care.

Finally, wages and earnings are also somewhat higher in suburban and urban areas compared to rural areas (\$10.75 compared to \$10.20 per hour, and \$14,800 compared to \$13,800 annually)—though the difference is not as great as might be expected given the higher cost of living in urban areas.

WAGE TRENDS

Wages for home care workers have not kept pace with rising LTSS demand. From 2008 to 2018, inflation-adjusted wages for home care workers increased by less than a dollar (from \$10.83 to \$11.52).¹⁵⁰ There was some variation between wages for personal care aides (whose wages increased by \$1.07) versus home health aides (whose wages only increased by 43 cents)—but as noted above, personal care aides still earned less than home health aides in 2018.

EMPLOYMENT STATUS

Low annual earnings reflect not just low hourly wages but also high rates of part-time working. The data show that two in five home care workers (38 percent) worked part time in 2018, defined by the BLS as less than 35 hours per week.¹⁵¹ Among all home care workers, 7 percent worked part time for economic reasons, meaning that they would prefer full-time hours but are not able to find them due to business conditions at their agency or in the wider labor market. The other 31 percent worked part time for non-economic reasons, which may be voluntary or involuntary; these include personal or family obligations, school enrollment, retirement or social security earning limits, health or medical limitations, and other reasons.

Our analysis of 2017 data from the U.S. Census Bureau indicate that part-time workers tended to make less per hour than their full-time counterparts (\$10.25 versus \$11.01), as well as earning significantly less annually (\$10,100 versus \$21,200).¹⁵² Their lower hourly wage may be explained in part by the fact that more non-profit workers worked full-time (67 percent) than for-profit workers (60 percent), perhaps due to a higher commitment to full-time hours for workers among non-profit providers.¹⁵³

As a side note, paid time off is relatively rare for home care workers. A national survey of home care workers conducted by the National Employment Law Project (NELP) found that, among approximately 2,600 respondents, only 19 percent received paid sick leave from their employers and just under 30 percent received paid vacation days.¹⁵⁴ However, union membership made a difference: 55 percent of unionized respondents reported receiving either vacation or sick days, compared to 23 percent of non-unionized respondents.

HEALTH INSURANCE

Health insurance is another essential indicator of compensation and job quality. Without health coverage, low-income workers struggle to achieve stable employment and economic self-sufficiency.¹⁵⁵ The high rate of occupational hazards in home care mentioned in the next section bolsters the argument for health insurance for home care workers.

However, 16 percent of home care workers lacked health insurance in 2017, compared to 11 percent of nursing assistants working in nursing homes and just over 10 percent of the U.S. labor force overall.¹⁵⁶ Among home care workers who are insured, the largest proportion



(42 percent) relied on public coverage, most commonly Medicaid, while another 38 percent were insured through their employer or union. Reasons for the low rate of employer coverage include workers' ineligibility due to part-time hours and, when insurance is available, the prohibitive cost of premiums or copayments.

Of note, the high rate of coverage through Medicaid is due in part to the Affordable Care Act, under which states were incentivized to expand Medicaid eligibility to meet the needs of low-wage workers (those under 138 percent of the federal poverty line). A recent analysis showed that between 2010 and 2014, the uninsured rate among all direct care workers decreased by 21 percent—but in Medicaid “expansion states,” the uninsured rate fell 33 percent.¹⁵⁷ Home care workers benefitted most from Medicaid expansion, with their coverage increasing from 22 percent to 28 percent.

A second, countervailing point about Medicaid is the trend toward work requirements. In 2017, CMS posted revised criteria for Section 1115 waivers allowing the inclusion of work requirements. As of August 2019, six states had been approved for a work requirement waiver and a further seven had waiver requests pending, while three more

states—Arkansas, Kentucky, and New Hampshire—had been blocked by the courts from implementing the waiver program.¹⁵⁸ The legal battles revolve around whether work requirements contravene Medicaid's main aim, which is to provide affordable coverage to those who are eligible, and whether the administration has overstepped in authorizing these new models.

Evidence shows that, because most enrollees who are able to work are already employed, Medicaid work requirements directly target just 6 percent of working-age adults on Medicaid (two-thirds of whom report that they are retired or unable to find work).¹⁵⁹ However, the new requirements negatively impact other Medicaid enrollees—including, as shown above, a significant proportion of the home care workforce. One cause for concern is the introduction of work-status reporting requirements (as a condition for continued coverage), which can be difficult for workers with limited computer access or experience. For example, among Medicaid enrollees who were subject to work requirements in Arkansas, an estimated 25 to 31 percent lacked Internet access at home.¹⁶⁰ In the first month that work requirements took effect in that state, nearly 7,500 people

(or 29 percent of the target population) failed to meet the reporting requirements; and altogether, during the 10-month life of the program, more than 18,000 enrollees lost their health insurance coverage.¹⁶¹

Moreover, due to the part-time and inconsistent nature of their work, many home care workers may risk losing Medicaid coverage if, for example, they lose their primary client, or experience a major life event that requires taking time off work. For these low-income workers, losing health insurance may trigger a downward spiral of health problems and financial insecurity that causes their exit from the labor force altogether.

ECONOMIC SELF-SUFFICIENCY

Low wages, part-time hours, and low annual earnings make economic self-sufficiency an elusive goal for many home care workers and their families. Nearly one in five home care workers lived below the federal poverty line in 2017,¹⁶² which was set at \$12,060 for an individual and \$24,600 for a family of four, far short of what is considered necessary to meet basic needs without relying on public subsidies or other assistance.¹⁶³ Twenty-nine

Low wages, part-time hours, and low annual earnings make economic self-sufficiency an elusive goal for many home care workers and their families. Nearly one in five home care workers lived below the federal poverty line in 2017.

percent of workers lived below 138 percent of the poverty line, and nearly half (48 percent) lived below 200 percent.

Because of these high rates of poverty, 53 percent of home care workers received some form of public assistance, including Medicaid (33 percent), food and nutrition assistance (30 percent), and/or cash assistance (3 percent).¹⁶⁴

Further economic disparities can be seen within the home care workforce. For example, in 2016, 22 percent of workers who are women of color lived below the poverty line, and 56 percent accessed public assistance.¹⁶⁵ By comparison, 16 percent of white women in the workforce lived in poverty and 46 percent accessed public assistance. Education matters too: nearly one quarter of home care workers without a high school education lived in poverty and 60 percent required public assistance. Immigrant workers are somewhat less likely to live in poverty (16 percent, compared to 20 percent of U.S.-born workers), but their use of public assistance is similar (52 percent for immigrants, 51 percent for U.S.-born workers). This finding underscores concerns about the public charge rule discussed in Chapter 2.¹⁶⁶

See Appendix A for more data on the home care workforce.

EVIDENCE ON THE IMPORTANCE OF JOB QUALITY

These data show that, despite the challenging nature of the work, home care jobs do not ensure economic stability for workers—a central lesson for efforts to strengthen and stabilize the workforce.

Individuals are motivated to enter and remain in caring occupations for intrinsic as well as extrinsic reasons.¹⁶⁷ Intrinsic motivations include the desire to help others or give back; a sense of duty or calling; and/or a preference for working independently in the field.¹⁶⁸ Extrinsic factors, on the other hand, include wages, benefits, scheduling and hours, supervision, and other elements of job quality. The academic literature on job quality and turnover in direct care, which has been mainly conducted in residential settings, points toward a combination or “bundle” of these factors as being important for job satisfaction, recruitment, and retention.¹⁶⁹ Otherwise, no matter how strong their intrinsic motivation, workers may not be able to afford to stay in their jobs, or may experience stress and burnout if they do remain.

Evidence from the Better Jobs Better Care national demonstration project, which was funded from 2002 through 2006 by the Robert Wood Johnson Foundation and The Atlantic Philanthropies, is instructive here. Better Jobs Better Care was a \$15.5 million effort to investigate, implement, and disseminate strategies to improve recruitment and retention of direct care workers across long-term care settings, including nursing homes, assisted living, home care, and adult day services. Participants

included nonprofit coalitions in five states: Iowa, North Carolina, Oregon, Pennsylvania, and Vermont. In their analysis of data from over 3,000 direct care workers involved in the demonstration, Brannon and colleagues compared those who were “somewhat likely” or “very likely” to leave their jobs in the next year against those who were “not at all likely” to leave—and found that income was one of the main indicators of intention to leave.¹⁷⁰ This finding was especially strong for home care workers versus direct care workers in other long-term care settings.

Another research team analyzed responses to a single open-ended question on the baseline survey for Better Jobs Better Care, which was: “What is the single most important thing your employer could do to improve your job as a direct care worker?”¹⁷¹ The sample included nearly 3,500 respondents, a third of whom were from home care agencies. Among the two out of three home care respondents who answered the question, 63 percent reported that increasing compensation was the single most important thing that employers could do, while a significant minority also called for better benefits.

A 2009 study of home care workers in Maine (N=507) helps highlight the association between extrinsic job factors and turnover among home care workers.¹⁷² The study, which examined the impact of wages, hours, and benefits on worker retention, controlling for a range of factors, found that perceptions about “non-monetary job-related rewards” (i.e., intrinsic rewards) had a strong impact on intent to leave, but compensation variables were better predictors of *actual* turnover. The researchers concluded by questioning whether “improvements to reduce job stress and enhance the nonmonetary rewards of home care work can compensate for low wages and a lack of benefits.”

Evidence from the 2004 National Nursing Assistant Survey suggests an association between low wages and exit from the field altogether.¹⁷³ From an analysis of approximately 2,300 respondents, researchers found that facility characteristics, including supervisor qualities, training/safety, and benefits, primarily affected job retention; whereas “profession retention,” measured by whether the respondent expected to be a nursing assistant in their next job, was negatively associated with income (as well as education). The take-home message from these findings—with relevance, if not direct applicability, to home care workers—is the need for both organization-level policies to support workers *and* higher-level interventions to improve the competitive nature of these jobs relative to other occupations.

Finally, the impact of wages and benefits on retention in consumer-directed programs is also important to consider—given that the balance between intrinsic and extrinsic motivation may be different for independent providers, especially those who are related to consumers.¹⁷⁴ In one early study, Howes looked at the impact of wage and benefit increases during a 52-month period (from November 1997 to February 2002) on retention rates among 18,000 independent providers in the In-Home Supportive Services (IHSS) program in San Francisco.¹⁷⁵ The findings were startling: the near-doubling of wages and addition of health care benefits was associated with an 89 percent increase in the annual retention rate of new workers and a 57 percent decrease in the turnover rate.

In a second study, Howes examined the impact of wages and benefits, controlling for personal characteristics, on recruitment and retention among a sample of 2,260 independent providers working in eight counties in California in 2004.¹⁷⁶ The counties represented the range of wage and benefit packages available to IHSS workers. Two-thirds of respondents reported that commitment to their consumer was the most important and flexibility was the second most important reason for taking the job, regardless of wages, benefits, and personal characteristics. However, wages became a significant recruitment and retention factor when they rose above \$9 per hour (in 2004 dollars), for both family and non-family providers. The implication from these nuanced findings is that recruitment may be improved with higher wages when wages reach a minimum threshold.

Refuting simplistic assumptions that caregiving is “not about the money,” this brief review of evidence suggests that wages, benefits, and other extrinsic aspects of job quality are critical to recruitment and retention in home care. These other extrinsic elements include supervision and other forms of support, as discussed in the next section, as well as adequate training (Chapter 5) and opportunities for engagement and advancement (Chapter 7).

SUPERVISION AND SUPPORT

Effective frontline supervision is considered essential for the “development, engagement, and performance of the workforce,”¹⁷⁷ not least for home care workers, whose jobs are highly autonomous and often weakly tied to any form of organizational infrastructure or support.

Many of the studies cited above identified supervision and support, along with compensation, as key elements of job satisfaction and/or intent to stay or leave.

As further evidence, in their analysis of the 2007 National Home Health Aides Survey, Yoon and colleagues found that organizational and supervisory support had a direct effect on home health aides' job satisfaction.¹⁷⁸ These supports also had an indirect effect by weakening the negative relationship between job-related stressors and job satisfaction; in other words, proper support and supervision appears to help workers manage the stress of their role and attain higher job satisfaction. Another analysis of the same survey found a negative association between "job resources" (which included recognition by supervisor as well as self-confidence in job performance) and specific job outcomes, namely intent to leave and turnover.¹⁷⁹

Among the home care workers who responded, 63 percent reported that increasing compensation was the single most important thing that employers could do to improve their jobs, while a significant minority also called for better benefits.

Despite its importance, supervision is an underdeveloped role in home care. A 2006 report from the Department of Health and Human Services Office of Inspector General (OIG) found that supervision was only included in about two-thirds of the state and program requirements for Medicaid-funded personal care services (198 out of 301 total requirement sets), with wide variation in requirements about the supervisory role, supervision methods, and frequency of supervision.¹⁸⁰ Supervision for home health aides, on the other hand, is mandated at the federal level by CMS, but minimally; the rules stipulate that home health aides must receive a supervisory visit from a registered nurse every 60 days.

Although the OIG report was published in 2006, there is no reason to believe that supervision has become a more uniform or stringent requirement. Reports from the field suggest that home care workers employed by home care

agencies often do not know who their direct supervisor is, or have more than one supervisor. Moreover, those in supervisory roles are often appointed without specific training or tools.¹⁸¹ As a result, supervisors often fall short, albeit inadvertently, of adequately supporting workers and holding them accountable.

The Center for Coaching Supervision and Leadership (CCSL) provides a promising example of efforts to improve supervision for direct care workers. Funded by the John A. Hartford Foundation and The Atlantic Philanthropies and implemented by PHI in 2006 through 2010, the CCSL initiative was designed to test and refine an alternative supervision model called PHI Coaching Supervision®. This model emphasizes clear communication, high expectations, and supportive problem-solving as foundational elements of supervision. According to the evaluation of this project—which involved 17 nursing home and home care providers—77 percent of trained supervisors reported "often" or "always" practicing coaching supervision at work, and 30 percent of supervisors and managers reported that "time [spent] solving other employees' problems" had decreased.¹⁸² The evaluation also showed statistically significant improvements in job satisfaction and satisfaction with supervision among the nearly 1500 staff who completed a post-intervention survey.

More research on supervision in home care is required to identify best practices across different service delivery models, with attention to supervisory roles and when, where, and how supervisors communicate with workers in the field. In particular, little is known about supervision in consumer-directed programs and how to achieve an effective balance between consumer autonomy, on the one hand, and external support and oversight of the worker, on the other.

Along with effective supervision, additional job supports can be leveraged to stabilize and improve home care jobs—even within budget constraints. Home care cooperatives, which are by definition worker-centered, lead the way in implementing strategies to support and empower workers.¹⁸³ For example, Cooperative Home Care Associates—formed in the Bronx in 1985 and now the country's largest worker-owned company, with more than 2,000 workers—employs peer mentors to support new and incumbent workers; retains a full-time case manager to support younger workers to successfully navigate training and employment; offers emergency funds and interest-free loans for workers in financial difficulty; and partners with community-based organizations to provide financial literacy counseling

and other supports. Turnover at Cooperative Home Care Associates hovers around 20 percent, compared to the much-higher industry norm (reported by Home Care Pulse as 67 percent in 2017 and 82 percent in 2018).¹⁸⁴

Finally, on-the-job safety is an important element of job quality. Home care workers currently experience a high rate of occupational injury, particularly musculoskeletal injuries: in 2016, injury rates were 144 injuries per 10,000 personal care aides and 116 per 10,000 home health aides, compared to 100 injuries per 10,000 workers across all U.S. occupations.¹⁸⁵ Better training, supervision, oversight, and access to safety equipment and supplies are all elements of a comprehensive approach to reducing occupational injuries, thereby supporting job quality, satisfaction, and retention.¹⁸⁶

POLICY LEVERS TO IMPROVE COMPENSATION

This chapter will conclude by describing levers to improve job quality for home care workers, with a primary focus on increasing compensation. (Training and career advancement are addressed in subsequent chapters.)

MINIMUM WAGE AND OTHER BROAD INTERVENTIONS

Minimum wage increases are one way for states to help all low-income workers earn enough to support themselves and their families. Although the federal minimum wage has held steady at \$7.25 since 2009, 29 states and DC have raised their minimum wage above that rate. There is also considerable momentum at the local level: since 2012, more than 40 cities and counties have raised the local minimum wage.¹⁸⁷

A higher minimum wage can benefit home care workers, but with three significant caveats. The first caveat is that, in a publicly funded space like home care, increased wages may actually lead to decreased hours (or even job loss) for workers if not matched by a targeted increase in reimbursement rates.

Second, given the interplay between wages and benefit eligibility, higher wages do not always translate into better compensation for workers overall, and may in fact lead to lower total compensation. For example, an analysis of the impact of increased hourly wages for home care workers in New York City—triggered by a 2016 state law that increased the minimum wage to \$15 by the end of 2018—found evidence of “benefit cliffs” and “benefit plateaus.”¹⁸⁸ With benefit cliffs, total income drops even as wages

increase, due to reduced public benefits; for example, the analysis showed that a single home care worker earning \$13 per hour has a higher total income at 35 hours than at 40 hours, due to a corresponding drop in benefits. With benefit plateaus, total income remains the same even when wages increase, because benefits decrease at the same level; for example, the analysis showed that a four-person family’s income stayed relatively flat at \$11, \$13, and \$15 per hour due to graduated loss of benefits. In sum, these findings show that wage increases are only part of the solution, as the impact of higher wages depends on family size, hours worked, and other factors impacting eligibility for public benefits.

The third concern relates to the impact of minimum wage increases on recruitment and retention. Because a higher minimum wage “lifts all boats,” the home care workforce may lose workers to other sectors that offer a similar wage but more hours, a stable schedule, or an escape from “the pressure of keeping someone else alive.”¹⁸⁹ There are ways to combat this risk, however: in Arizona, for example, reimbursement rates have been raised in response to a minimum wage increase; and in Washington, workers have negotiated a \$15 wage for some home care workers beginning in 2020, when the state minimum wage rises to \$13.50 per hour. New York also raised reimbursement rates in response to minimum wage increases, but without mandating a wage pass-through, with the risk that home care workers will not see the benefit.

Minimum wage increases are one way for states to help all low-income workers earn enough to support themselves and their families.

Another universal protection that can benefit home care workers is paid family and medical leave.¹⁹⁰ Paid family and medical leave allows a worker to take paid time off to care for their own serious medical condition or that of a family member, or to bond with a new child; some policies also include leave for a military service member’s



deployment.¹⁹¹ Given that home care workers are primarily women in their middle years, maternity and caregiving leave is particularly important for this workforce. Without the protection of paid leave, workers who need to take time off may experience serious financial repercussions from lost wages, or risk losing their jobs altogether. By the same token, appropriate paid leave policies can help address turnover by supporting workers to stay in their jobs even when significant life events occur.

The federal Family and Medical Leave Act provides up to 12 weeks for unpaid family and medical leave for certain workers—but the eligibility criteria make it accessible by only 60 percent of U.S. workers, and less than half of all low-income workers.¹⁹² Furthermore, those workers who do qualify cannot, in many cases, afford to take unpaid time off. Some states are beginning to fill the gap, however, with five states (California, New Jersey, New York, Rhode Island, and Washington) and the District of Columbia passing their own paid family and medical leave laws. The key challenge is to ensure that these policies are accessible to low-income workers, including home care workers. For example, partial wage replacement levels may not suffice for workers who live paycheck-to-paycheck by necessity, and strict criteria for tenure or

hours worked may exclude those who work for more than one employer, which is common in this sector.

REVISION OF THE FAIR LABOR STANDARDS ACT (FLSA)

Progress toward raising employment standards for home care workers was recently achieved when the U.S. Department of Labor published a final rule on the Fair Labor Standards Act (FLSA) that extends federal minimum wage and overtime protections to most home care workers.¹⁹³

Since its inception, FLSA had excluded “domestic workers,” a category including cooks, housekeepers, maids, gardeners, and other employees performing household services in private homes, including personal assistance services. This exclusion both reflected and perpetuated the marginalization of these workers (primarily women and people of color) and the services they provide—a stigma that continues to haunt the home care space. Even when FLSA was amended in 1974 to include domestic workers, “companionship services”—which included home care services, even when provided through a home care agency—were still explicitly exempted.

After a long rule-making process initiated in 2011, and several subsequent legal challenges, a final rule that substantively narrowed the companionship exemption came into force in 2015. Under the rule, home care agencies can no longer claim the exemption under any circumstances, and private employers can only claim it if the worker provides primarily “fellowship and protection.” If the companionship includes any medically related tasks, the exemption does not hold. Outside of the exemption, home care workers must now be paid at least the federal or state minimum wage, whichever is higher, for the first 40 hours of the work week; must be paid overtime at time-and-a-half; and must be paid for travel time between clients that are assigned by a single employer.

Resistance to revision of the companionship exemption arose primarily from concerns that it would drive up the cost of care—which, without a corresponding increase in Medicaid reimbursement rates, might lead to fewer authorized hours of assistance, and in some cases, early or unwanted admission to a nursing home. Mission Analytics Group, in partnership with Assistant Secretary for Planning and Evaluation (ASPE), is currently completing a case study of state actions toward compliance with the final rule. The findings from this research should provide insight about how states have managed these funding concerns.

Evidence from the field suggests, in the meantime, that the revision has fundamentally changed how home care workers are deployed, given that reimbursement rates have not kept up with the new overtime requirements. Providers have initiated strict scheduling restrictions to avoid overtime costs, and home care workers have been forced to spread out their work hours between employers (to attain enough hours without exceeding 40 hours with any single employer)—with implications for consumers’ continuity of care. Increased funding, along with technical assistance, is needed to ensure that employers are knowledgeable about and able to comply with the new rules in ways that support both care quality and job quality.

DIRECT INVESTMENTS IN THE HOME CARE WORKFORCE

States can also directly improve compensation for direct care workers who are reimbursed through Medicaid, including home care workers. Fifteen states reported implementing wage increases for direct care workers in fiscal year (FY) 2018, and 24 states reported increases for FY19 (14 states reported wage increases for both years).¹⁹⁴

A common strategy for increasing direct care workers’ wages is through wage “pass-throughs,” by which states allocate extra funds to Medicaid reimbursement rates for the specific purpose of increasing compensation for workers. Wage pass-throughs are important, given that general reimbursement rate increases may not trickle down to the workforce.

Montana, for example, implemented a rate increase through the 2017 budget process that specifically raised direct care worker wages.¹⁹⁵ For developmental disability service providers, the new law stipulates that “the department shall phase in the appropriation on July 1 and January 1 of each year of the biennium in a manner that provides the equivalent of an increase in wages of at least 75 cents an hour per employee” (or more, if the appropriation allows). For other home care workers, the law mandated a wage increase of \$1.50 an hour per employee on July 1, 2017, and a further increase of \$2.25 per hour on July 1, 2018. The law makes it clear that these increases are only for direct care workers, not licensed nurses or other members of staff.

A better-compensated workforce will rely less on public assistance and put more money into the economy through higher spending on transportation, housing, food, and other goods and services.

Two states have used Balancing Incentive Program (BIP) funds to increase wages for home care workers: Massachusetts enhanced home care workers’ wages by 5 percent, while Texas increased attendant care workers’ wages from the state minimum of \$7.25 to \$7.86 per hour.¹⁹⁶ (The Texas legislature subsequently increased their wages again to \$8.00 per hour.) As related examples: DC allocates funding to LTSS providers that, by regulation, must fund personal care aide wages to meet a living wage requirement; Minnesota requires that 72.5 percent of Medicaid payments to home care

agencies go directly to worker compensation;¹⁹⁷ and Texas allows personal care providers to access enhanced funding if they agree to spend 90 percent of their total reimbursements on worker wages.¹⁹⁸

Wage pass-throughs are not a panacea, particularly if they are too low to make a meaningful difference; if they are enacted on a short-term basis; and/or if they are not carefully monitored to ensure implementation. However, limited evidence does indicate that they are a viable option for improving home care workers' compensation. One early study of data from the 1996 and 2001 panels of the Survey of Income and Program Participation found that nursing assistants, home health aides, and personal care aides in states with pass-through programs (23 states at the time) earned as much as 12 percent more per hour than the same workers in other states, after the pass-throughs were implemented.¹⁹⁹

As discussed further in Chapter 6, broader shifts in the health care landscape that impact the payment and delivery of LTSS also present opportunities to invest directly in the home care workforce. For instance, states can include standards related to compensation in contracts with MLTSS plans, along with other workforce quality standards, or in value-based payment arrangements. Arizona, for example, recently required managed long-term care organizations to collect workforce data, develop workforce development plans, and coordinate with providers to implement workforce interventions.²⁰⁰ Under Pennsylvania's new managed care system, as another example, plans are required to promote direct care workforce innovation through training, advancement opportunities, and participation in care coordination activities.²⁰¹

As described in Chapter 3, the creation of public authorities for managing consumer-directed programs has also been an important way to improve wages, benefits, and other aspects of job quality for independent providers.

Finally, a corrective strategy is to ensure that home care workers are properly classified as employees rather than independent contractors. The NELP survey of home care workers cited above found that nearly a quarter of respondents *may* be misclassified as independent contractors, and 14 percent are *likely* misclassified, based on their responses to questions about taxes, wage reporting, and other topics.²⁰² Classifying home care workers as independent contractors can create a competitive advantage for employers, who

can then charge rates below the industry norm while offering a higher paycheck for workers (in some cases). However, because a worker on a 1099 contract, which is the tax status for independent contractors, is considered to be running their own business, they are responsible for paying Social Security, incomes taxes, and any other state licensing and insurance requirements. As well as significantly decreasing their take-home wages, these requirements impose a large reporting burden that workers may not be prepared for.²⁰³ Further, 1099 status may exclude workers from a range of employment protections, including minimum wage and overtime pay, workers' compensation, and unemployment insurance, and group benefits such as health insurance or retirement. For these reasons, 1099 misclassification is a serious concern and has been challenged in court in a number of states, including Maryland, North Carolina, and Pennsylvania.

CONCLUSION

A report published a decade ago on challenges facing the direct care workforce called for a range of actions aimed at "enhancing the status and image of the direct service workforce."²⁰⁴ Although some progress has been made since then toward recognizing the direct care workforce overall, investment in home care jobs remains woefully low. As a result, as this chapter has shown, home care workers struggle just to get by, much less achieve financial stability or long-term security.

Investing in a livable wage and benefits for home care workers—along with adequate supervision and other job supports—carries a cost, certainly. But aside from the moral imperative to adequately reward those who provide an essential public service, there are financial benefits in the bigger picture. A better-compensated workforce will rely less on public assistance and put more money into the economy through higher spending on transportation, housing, food, and other goods and services. Moreover, better compensation and support will make home care jobs more attractive and sustainable, promoting retention and driving down the considerable costs of turnover. In turn, a larger and more stable workforce will help enhance service access and quality, and therefore help reduce avoidable hospitalizations and other costly outcomes for consumers.

Training and career advancement are also central elements of job quality that impact service outcomes, as discussed in the chapters ahead.

OPTIMIZING TRAINING STANDARDS AND SYSTEMS

VISION ▶ An adequately funded, competency-based training system that supports the development of a home care workforce that is well-prepared to provide appropriate, person-centered services for all consumers.

A strong training system is essential for workforce development, job quality, and care quality. However, the current training system for home care workers is fragmented, inconsistent, and often inadequate. Home health aides (like nursing assistants) must meet minimum federal training requirements to work in Medicare-certified agencies, but otherwise training standards are left to states' discretion, and therefore vary widely both within and across states. Training is delivered by a patchwork of different providers, from individual home care agencies to formal educational institutions, resulting in uneven emphasis on genuine skills development versus compliance-driven "seat time."²⁰⁵

However, there are pockets of promise in the home care training landscape, ranging from localized pilot projects to state-level efforts and national demonstrations that aim to develop comprehensive, competency-based training standards and systems. This chapter describes the current training landscape for home health aides and personal care aides, including those who are hired directly by consumers, and then explores key components of a training system that will better prepare the home care workforce going forward. The chapter begins with a brief rationale for updating and improving training standards for home care workers.

THE CASE FOR GOOD TRAINING

For a number of reasons, training is an essential component of efforts to stabilize the workforce and improve care quality for recipients of home and community-based services (HCBS) and other long-term services and supports (LTSS). First, as described in Chapter 1, the number of individuals requiring and receiving personal assistance services at home and in other community settings is growing rapidly, which drives up demand for home care workers—therefore, the HCBS training system must draw in adequate numbers of new workers to meet growing demand. Moreover, as changes in longevity, population

health, and service provision have raised acuity levels in home care, a well-prepared workforce with the right skills and abilities to meet consumers' increasingly complex needs is critically needed.

Without adequate preparation, home care workers must figure out how to navigate job challenges on their own and in the moment—a highly individualized process that, if rushed and/or unsupported, can be emotionally stressful and fraught with risk for both workers and consumers.²⁰⁶ On the other hand, good training can boost workers' skills while also helping them experience more confidence and esteem in their role, which can improve their job performance and satisfaction and thus increase workforce retention.²⁰⁷

Good training can boost workers' skills and confidence, which can improve their job performance and satisfaction — and thereby increase workforce retention.

Finally, clear training standards and pathways help improve the profile of home care as a career option, which is critical for both recruiting and retaining workers. With the opportunity to attain recognized and portable credentials, workers can craft a career in direct care that involves lateral and vertical job mobility—whereas without such credentials, workers may leave the field altogether when they leave a particular position. This latter scenario can destabilize not just the home care workforce, but the labor force altogether. As an example, one study of entry



and exit trends in the direct care workforce found that among “job leavers,” 20 percent of personal care aides became unemployed and 43 percent left the labor force altogether; the comparable statistics for home health aides (along with nursing assistants and psychiatric aides) were 24 percent and 32 percent, respectively.²⁰⁸

HOME CARE TRAINING REQUIREMENTS

The following section describes training requirements for different segments of the home care workforce.

TRAINING REQUIREMENTS FOR HOME HEALTH AIDES

Home health aides who are employed by Medicare-certified home health agencies are required by federal legislation to complete at least 75 hours of training through a state-approved training program, including at least 16 hours of practical training under the supervision of a licensed nurse, and must pass a competency evaluation. Home health aides must also complete

12 hours of in-service training annually. These requirements do not apply to home health aides who are employed by non-Medicare-certified home care agencies or hired by consumers through private-pay arrangements.

At the latest count, 33 states meet the federal minimum training standards, while 17 states and the District of Columbia exceed them.²⁰⁹ Fifteen states and DC require more than the minimum 16 hours of supervised practical training, with a range of 20 to 80 hours.

Among the states that exceed the minimum training requirements, 13 states require 100 hours or more, and six states plus DC meet or exceed the 120-hour recommendation set out in *Retooling for an Aging America*, the seminal report released in 2008 by the Institute of Medicine (now the National Academy of Medicine).²¹⁰ By comparison, 30 states and DC exceed the 75-hour minimum training requirements for certified nursing assistants, with 13 states and DC requiring 120 hours or more—suggesting relatively more progress toward improving training standards for that segment of the direct care workforce.²¹¹

STATE-APPROVED HOME HEALTH AIDE TRAININGS MUST COVER THE FOLLOWING CONTENT:

- Communications skills
- Observation, reporting and documentation of patient status and care
- Reading and recording temperature, pulse, and respiration
- Basic infection control
- Basic elements of body functioning and reportable changes in function
- Maintenance of a clean, safe, and healthy environment
- Recognizing emergencies and knowledge of emergency procedures
- The physical, emotional, and developmental needs of and ways to work with different populations
- Appropriate and safe techniques in personal hygiene and grooming
- Safe transfer techniques and ambulation
- Normal range of motion and positioning
- Adequate nutrition and fluid intake
- Any other task that an agency may choose to have the home health aide perform

Source: Centers for Medicare and Medicaid Services (CMS). 2017. Home Health Services. 42 CFR 484.36.

On a related note, some states have designated nursing assistant training as the baseline for the home health aide role. Specifically, 11 states require home health aides to be certified as nursing assistants, and four more allow nursing assistants to become home health aides with supplementary training. In Wyoming, for example, there is no specific home health aide training program; instead, “home health CNAs” are certified nursing assistants who meet skills requirements established by the Board of Nursing. In Kansas, home health aides must first be certified as nursing assistants (through a 90-hour training program) before completing 20 additional hours of home care training.

Requiring home health aides to train and certify as nursing assistants presents both opportunities and barriers. On the one hand, requiring nursing assistant certification for all workers enhances their lateral career mobility while also establishing baseline quality standards across settings. On the other hand, constructing home care training as an “add-on” risks underestimating the distinct skills required to provide high-quality HCBS—unless the training components are designed around clearly defined competency sets

for each role, as discussed further below. Furthermore, entry requirements for nursing assistant training programs are often higher than for home health aide programs, which can prevent prospective home health aides from applying (if, for example, they do not possess a high school diploma or equivalent).

TRAINING REQUIREMENTS FOR PERSONAL CARE AIDES

Unlike for home health aides, there are no federal standards governing training for personal care aides because their services—defined as nonmedical—are not reimbursable by Medicare. As described in Chapter 6, most personal assistance services are funded instead through a variety of state Medicaid programs.

Without federal standards, states have enacted a range of entry-level training requirements, along with different job titles and job descriptions, for personal care aides—with little uniformity across states, or even between programs within a single state.²¹² Seven states do not have any training requirements for personal care aides, and only 14 states have uniform training standards

for all agency-employed workers. (Training requirements for consumer-directed services are discussed below). Where there are regulations, they tend to be minimal. Twenty-six states do not require a minimum number of training hours for personal care aides in any regulations, and only 11 states and DC states offer or mandate the use of a state-sponsored curriculum in personal care aide training regulations.

On the other end of the spectrum, however, five states and DC require personal care aides to complete home health aide or certified nurse aide training in at least one of their Medicaid-funded personal assistance programs.

As one example of more stringent state training standards, personal care aides in DC's Medicaid State Plan and HCBS waiver programs must complete 125 hours of home health aide training, including 40 clinical hours, with a state-approved agency or licensing entity. (Although stringent, DC's training requirements are designed to promote mobility between care settings; for example, home health aides can become certified nursing assistants by completing 40 more hours of training, rather than the full 120 hours.²¹³) On the other hand, DC is an example of intrastate variation. Personal care aides providing consumer-directed services through DC's My Way waiver program are only required to complete CPR and first aid training, with further training left to the discretion of the consumer.

Aside from entry-level training requirements, 31 states and DC require annual continuing education for personal care aides in at least one set of regulations. Twenty-eight states and DC specify the duration of training (ranging from 4 to 12 hours, with a mean of 9.6 hours), and six require specific content, most commonly first aid, infection control, and abuse and neglect prevention.

TRAINING REQUIREMENTS IN CONSUMER-DIRECTED SERVICES

Across the majority of states and programs, training for workers hired through consumer-directed programs is delegated to consumers, which aligns with the model's defining principles: that individuals receiving supports “know their needs best and are in the best position to plan and manage their own services.”²¹⁴

The evidence on consumer-directed programs supports these principles of autonomy and self-direction, overall.²¹⁵ For example, the Cash & Counseling demonstration evaluation—one of the most robust evaluations of consumer direction, though not without limitations—

found that the program was associated with fewer reported unmet needs among participants than the control group and higher satisfaction with paid care.²¹⁶

Leaving training to the discretion of consumers raises several concerns, however, for both consumers and the independent providers who support them. The first concern is whether consumers are adequately prepared and willing to oversee their workers' training needs. Information and support for consumers is embedded in the federal requirements for consumer-directed services,²¹⁷ but *training* for consumers-as-employers is rarely an explicit state or program requirement. One study of consumer-directed programs in four states (California, Colorado, New York, and Virginia) found that only one required a training course and completion of a proficiency exam for prospective enrollees; the other states offered voluntary training programs only.²¹⁸ Another study of the implementation of consumer direction through managed long-term care in five states (Arizona, Massachusetts, New Mexico, Tennessee, and Texas) similarly found that

Seven states do not have any training requirements for personal care aides, and only 14 have uniform standards for all agency-employed workers.

only one state required consumer training.²¹⁹ Aside from questions about training standards and programs for independent providers, it is essential that consumers' own training needs are met. The mandatory person-centered planning process in consumer-directed programs provides a key opportunity to discuss consumers' training needs, as well as the specific competencies that their workers will need, and to identify relevant training programs and resources accordingly.

The second concern regards quality assurance: how do we know that independent providers—including paid family members—are receiving the right training to fulfill their roles safely and effectively? There is some evidence that independent providers obtain informal training through a range of methods and sources, not just from

consumers but also from physicians, home-health nurses, and/or therapists, and “that this training is recipient specific and thus targeted to specific care needs.”²²⁰ One study of consumer direction reported mixed findings about independent providers’ job preparedness: some with previous caregiving experience or postsecondary credentials felt prepared, while others commented on their lack of preparation and training.²²¹ An earlier comparative study of agency and consumer-directed models reported more conclusively that “whatever the service model, adequate training and pertinent information on the recipient’s condition are associated with more satisfaction and less stress.”²²²

One study of former paid related workers in California’s In-Home Supportive Services program found that nearly half continued in other paid caregiving jobs. Among those who left, more than 40 percent indicated that they would consider caregiving again.

In particular, just like unpaid caregivers,²²³ independent providers are very likely to perform nursing or other health-related tasks as well as providing nonmedical personal assistance—which may require a higher degree of technical training. An analysis of the Cash & Counseling evaluation data, for example, found that more than 80 percent of independent providers, including family and non-family paid caregivers, provided assistance with nursing care, and more than half helped with moderate- or high-complexity tasks.²²⁴ These types of tasks, especially the higher-complexity tasks, were associated with significantly higher caregiver strain.

A third concern is economic and career stability. Currently, the career of an independent provider is tied directly to their current appointment; when that employment relationship ends, the worker is back to square one in the job market. This is a limitation not just for non-family independent providers, but also for the significant minority

of paid family members and friends who could help address the workforce shortage in home care. (One study of former paid related workers in California’s In-Home Supportive Services (IHSS) program found that nearly half (47 percent) continued in other paid caregiving jobs and, among those who left caregiving, more than 40 percent indicated that they would consider caregiving again.²²⁵) In summary, although on-the-job experience is valuable and transferrable, the lack of an accepted credential may hinder the ability of independent providers to find future caregiving jobs or transition into those jobs effectively—or may discourage them from even trying.

EXAMPLES OF TRAINING REQUIREMENTS IN CONSUMER DIRECTION

Although training often appears to be a divisive issue in consumer direction—given the tensions between autonomy and oversight, or between individual choice and collective concerns—there is actually considerable overlap in goals related to quality, safety, workforce supply, and more. According to a set of guiding principles for partnerships in consumer direction that were developed by leaders from the disability and labor communities in 2011, consensus about training standards can be forged when:

- Training strategies are developed at the local or state level with collaboration from a range of stakeholders;
- Training requirements are funded independently of individuals’ budgets;
- Training requirements recognize the unique experience of family members and friends who are hired through consumer direction; and
- Training curricula, where standardized, are designed in collaboration with consumers and workers and reflect the values and practices of self-determination.²²⁶

To summarize, training standards and curricula for independent providers should be developed with meaningful input from consumers and their allies and should include content that is specific to the principles and practices of consumer direction.

Washington State offers a useful example of an innovative, although not uncontroversial, approach to developing training standards for independent providers.²²⁷ There are approximately 37,000 independent providers in Washington, 70 percent of whom are consumers’ family members or friends. (Washington State has authorized payment to family members through consumer direction since 1981.) All independent providers are represented by SEUI Local 775, the union for home care and nursing

home workers in Washington and Montana, through which they receive medical insurance, paid time off, and retirement benefits—as well as voluntary and mandatory training at no cost.

In the past, Washington’s statewide training standard for personal care aides was set at 28 hours of entry-level training and 10 hours of continuing education. (Home care agencies determined their own training requirements for personal care aides serving private-pay clients.) In the mid-2000s, however, a statutory Long-Term Care Worker Training Workgroup was convened to overhaul the state’s training requirements and fragmented delivery system in response to the changing LTSS landscape. (By 2017, 9 out of 10 LTSS recipients in Washington lived at home or in the community, up from one in two in 1992, and there were twice as many people with high care needs in HCBS in 2015 than in nursing homes.) The training requirements are now substantially higher, but calibrated for different types of providers (see Figure 5.1). Furthermore, the training system is now more centralized through the SEIU 775 Benefits Group, a partnership between the union and the state which trains roughly 70 percent of the workforce—and 92 percent of trainees report satisfaction with their training, according to the Benefits Group.²²⁸

Implementation of Washington’s new training standards and delivery system has not been without challenges,

however—aside from the considerable costs incurred, which are intended to be offset through improved workforce and consumer outcomes.²²⁹ One challenge has been certification: in the new system, the certification rate for trainees is less than 60 percent, despite a range of targeted efforts to increase it. Relatedly, consumers and family members continue to express concerns about the impact of the new training requirements on workforce supply and management, including concerns about finding certified workers, particularly but not only respite workers (who may not be able to meet the 35-hour training requirement due to scheduling, transportation, or other barriers). Consumers also report that their input in developing and revising the training curricula has been and continues to be too limited. How Washington addresses these ongoing implementation concerns will be instructive for other states considering personal care aide training reforms.

Another innovative example of training for independent providers is the IHSS+ Home Care Integration Training Program.²³⁰ This training program is offered by the California Long-Term Care Education Center, LA Care Health Plan (the nation’s largest publicly operated health plan), and SEIU Local 2015 (the largest long-term care union in California). In the 10-week, 35-hour program, independent providers study a range of topics including roles and responsibilities, personal care, infection

FIGURE 5.1 | Most personal care aides in Washington State must complete 75 hours of pre-service training.

Training Requirement	Consumer-Employed PCAs	Agency-Employed PCAs	Other Health Professionals*	Paid Parent Providers (Physical Disabilities)	Paid Parent Providers (IDD)	Respite Workers
Safety Training	2 Hours	2 hours	None	2 Hours	2 Hours	2 Hours
Orientation	3 Hours	3 Hours	None	3 Hours	3 Hours	3 Hours
Basic Training	70 Hours	70 Hours	None	30 Hours	7 Hours	30 Hours
Continuing Education	12 Hours	12 Hours	12 Hours	None	None	12 Hours

Source: Campbell, Stephen. 2017. *Training Standards for Personal Care Aides: Spotlight on Washington*. Bronx, NY: PHI. https://phinational.org/wp-content/uploads/2017/11/wa_case_study_pca_training_standards_2017.pdf. * Other health care professionals include registered or licensed practical nurses, certified nursing assistants, physical and occupational therapists, and home health aides.

control, nutrition and diet, and more. Each independent provider must enroll in tandem with their client, who is also invited to attend the first and final classes of the program. Nearly 1,000 workers completed the program in the first year, and evaluation data show, among other findings, lower levels of depressive symptoms, stress, and loneliness among trainees, as well as greater confidence in communicating with the consumer's care team and improved knowledge about navigating health services.

TRAINING REQUIREMENTS OUTSIDE THE PUBLIC FUNDING SYSTEM

Neither Medicare nor Medicaid training requirements apply to home care workers who work for private-pay home care agencies or who are employed directly and paid out-of-pocket by individuals. However, among the 26 states that have a licensure category for all home care agencies, 22 include some type of entry-level training requirement for personal care aides in their regulations.²³¹ Of these 22 states, 13 specify a minimum number of training hours (with eight states requiring 40 or more hours) and 17 require some form of competency assessment. Sixteen states include in-service training requirements in their licensing regulations.

Independent providers employed through private-pay arrangements (on the so-called gray market) are, for the most part, exempt from regulatory oversight, including training requirements. Arkansas is a notable exception with regards to training requirements for these workers, however. In Arkansas, all personal care aides must complete a 40-hour "in-home assistant" training course, including those who work for private home care agencies or in gray market arrangements, if they are providing assistance with activities of daily living (ADLs) to a person aged 50 years or above.²³² Exemptions are granted for certain workers, including those with at least one year of experience working in a home health agency, hospital, hospice, or long-term care facility; certain family members or legal guardians of the recipient; and individuals with other qualifying credentials, including physicians, nurses, social workers, and certified nursing assistants. Those who are "not compensated" for providing assistance are also explicitly exempt.

TRAINING COSTS AND DELIVERY

The biggest barrier to improving training for home care workers is cost, given that pre-employment training costs are not reimbursable through Medicaid and there is very limited alternative funding within the health system.

The high rate of turnover within the sector also mitigates against investment in workers' training at the agency-employer level, as well, notwithstanding the links between training, job satisfaction, and workforce retention. As a result, most training interventions—from small-scale pilots to national demonstration projects—tend to be grant-funded and therefore unsustainable.

In the absence of a well-funded training infrastructure, training for home care workers is delivered by a patchwork of different training providers, including home care agencies; colleges, high schools, and other educational establishments; labor union organizations and community-based organizations; and proprietary training schools. Training resources are also available online; for example, the College of Direct Support offers nationally accredited training for direct support professionals, meaning direct care workers who support individuals with intellectual and developmental disability.²³³ (The promise of technology for improving training in home care is discussed further in Chapter 8.)

Costs for trainees vary by training provider and by state; some states regulate allowable costs for trainees, while others do not, and some regulations apply to certain types of providers only. For example, in New York, home care agencies may not charge tuition for their training programs (but may charge up to \$100 for training materials), but the same rules do not apply to community colleges or trade schools.²³⁴ Proprietary training schools tend to be the most expensive option for trainees, often costing several hundred dollars.

Integrating training programs into high schools and colleges is a good way to leverage existing educational infrastructure in local communities. High school training programs can help build a pipeline of younger workers into the field, enabling trainees to attain their high school diploma (and college credit, in some cases) and move directly into a job after graduation. Given that nearly one in five current home care workers does not have a high school diploma,²³⁵ this is a strategic way to reach potential workers "upstream" and strengthen their career prospects. Community college-based training programs are also a good option for some prospective home care workers but may be inaccessible to others due to: cost; attendance barriers such as childcare, transportation, or lost wages; and/or limited confidence in pursuing postsecondary education.

One way to reduce barriers to training and boost retention is to bridge the gap between training programs and employment opportunities. As an example, PHI has

worked with partners in New York City—including the New York Alliance for Careers in Healthcare, the City University of New York (CUNY) system, and home care agencies—to introduce home care training programs at a number of CUNY campuses and guarantee job placement for those who successfully complete the program. Early evaluation data have been promising: in 2015, the program enrolled 394 trainees, with 80 percent completing; and in 2016, 408 enrolled with 88 percent completing. Just over three-quarters of trainees from the first full year of implementation went on to secure employment (241 of 394 enrolled), and 75 percent of those retained their jobs after three months.

In the first year of implementation, a program to introduce home care training and job placement through community colleges showed that just over three-quarters of trainees secured employment.

The United States Department of Labor Employment and Training Administration’s “Long-Term Care Registered Apprenticeship Program (LTC RAP)” is another mechanism for linking training and employment. The LTC RAP includes registered apprenticeships for two HCBS occupations: direct support specialists (for those who work with individuals with intellectual or developmental disabilities) and home health aides. However, although the goals of the LTC RAP—to improve workers’ skills, increase job mobility, and enhance care quality—are laudable, implementation of the program has been limited by inadequate funding for training costs and associated wage increases.²³⁶ Perhaps as a result, a 2010 evaluation found remarkably low completion rates, particularly among home health aides: from 2005 to 2009, 27 percent of all apprentices completed their training program, versus 34 percent who disenrolled. Among home health aide

apprentices, only 13 percent completed their training, while 62 percent cancelled their enrollment.²³⁷

Individual states are also exploring innovative ways to invest in training for the LTSS workforce, including home care workers. A key example is New York’s Managed Long Term Care Workforce Investment Program, which is administered through the state’s Medicaid Redesign Team waiver program to fund “initiatives to retrain, recruit and retain healthcare workers in the long-term care sector.”²³⁸ Through the Workforce Investment Program, managed long-term care plans (including integrated plans for those who are dually eligible for Medicare and Medicaid) have contracted with designated workforce training centers to develop the LTSS workforce and ensure its effective deployment, particularly to expand home-based and respite care.

The 2014 Workforce Innovation and Opportunity Act (WIOA), designed to strengthen and coordinate the public workforce system, provides another mechanism for states to develop education, training, employment, and support services for home care workers.²³⁹ However, WIOA programs typically skew towards health care jobs that offer better compensation and career ladders, creating a catch-22 situation for the currently underdeveloped home care workforce.

States may also leverage other sources of funding to build a better pipeline of workers into home care, an occupation that is projected to add more jobs than any other in the years ahead. One example is the training and employment funding under the Supplemental Nutrition Assistance Program (SNAP) program—an “untapped resource” within the workforce development system.²⁴⁰ Comprehensive guidance for states about potential training funds and how to leverage them, however, is urgently needed.

To summarize, the most promising examples of training programs for home care workers are those which are offered at no cost, aligned with workforce supports that enable trainees to succeed, and closely linked to employment opportunities. Looking ahead, investment in a cross-sector, statewide approach for providing entry-level and ongoing training is essential—leveraging technology to expand and enhance training, as discussed in Chapter 8. Without strategic and sustained investments in the home care training system, funds will continue to be “diverted to maintaining status quo and responding in isolation to micro-[level] workforce challenges,” including the costs of recruitment and turnover.²⁴¹

TRAINING CONTENT: MOVING TOWARD COMPETENCY-BASED CURRICULA

The National Institutes of Health define competencies as “knowledge, skills, and abilities, combined with other personal characteristics such as values, initiative, and motivation, that contribute to successful individual and organizational performance.”²⁴² Core competencies can serve as the building blocks for a training system and career development structure for direct care workers

(including but not limited to home care workers) that facilitates individual career mobility and advancement while also strengthening the capacity of the workforce to provide a consistent quality of care across a range of settings and for different populations.

As shown in Table 5.1, a number of competency sets for direct care workers are currently in circulation, but these vary widely with regards to their level of stakeholder input as well as their content, reliability, and validity.²⁴³

TABLE 5.1 | Competency sets for direct care workers in LTSS, by date of publication

Competency Set	Description	Core Competencies
Community Support Skill Standards (CSSS): Tools for Managing Change and Achieving Outcomes ²⁴⁴	<p>The CSSS represent practice standards for direct service workers in a wide variety of human service program settings, regardless of specific job title or population served.</p> <p>Development and validation of the CSSS, which involved a national coalition of key stakeholders, was led by the Human Services Research Institute (HSRI) with support from the Departments of Labor and Education.</p> <p>The CSSS became the basis of the College of Direct Support national online training program, which is mentioned above.</p>	<ol style="list-style-type: none"> 1. Participant Empowerment 2. Communication 3. Assessment 4. Community and Service Networking 5. Facilitation of Services 6. Community Living Skills and Support 7. Education, Training and Self Development 8. Advocacy 9. Vocational, Educational and Career Support 10. Crisis Intervention 11. Organizational Participation 12. Documentation
PHI Competencies for Direct Care Workers	<p>PHI’s Competencies for Direct Care Workers, which apply to PCAs, HHAs, and CNAs, are the basis of the organization’s flagship entry-level training programs.</p> <p>This competency set was included in the development of the Department of Labor’s Long-Term Care and Supports Competency Model described below, and have informed numerous other training models and curricula, including the curricula that were implemented in the PHCAST program.</p>	<ol style="list-style-type: none"> 1. Role of the Direct Care Worker 2. Consumer Rights, Ethics, and Confidentiality 3. Communication, Problem-Solving and Relationship Skills 4. Personal Care Skills 5. Health Care Support 6. In-Home and Nutritional Support 7. Infection Control 8. Safety and Emergencies 9. Apply Knowledge to Needs of Specific Consumers 10. Self-Care

Competency Set	Description	Core Competencies
National Alliance for Direct Support Professionals' (NADSP) Direct Support Professionals Competencies ²⁴⁵	<p>This set of 15 competencies, which is based on the CSSS, underpins the NADSP voluntary credentialing program for direct support professionals (DSPs) working in community human services.</p> <p>There are four levels of the credentialing program:</p> <ul style="list-style-type: none"> • DSP-Registered (DSP-R) • DSP-Certified (DSP-C) • DSP-Specialist (DSP-S) • Frontline Supervisor (FLS) <p>The NADSP competency set is used in a number of competency-based training programs and statewide certification programs, including in Georgia, Ohio, New Jersey, and Indiana, and is the basis of the national DSP Apprenticeship Program through the Department of Labor.</p>	<ol style="list-style-type: none"> 1. Participant Empowerment 2. Communication 3. Assessment 4. Community and Service Networking 5. Facilitation of Services 6. Community Living Skills and Supports 7. Education, Training and Self-Development 8. Advocacy 9. Vocational, Educational and Career Support 10. Crisis Prevention and Intervention 11. Organizational Participation 12. Documentation 13. Building and Maintaining Friendships and Relationships 14. Provide Person Centered Supports 15. Supporting Health and Wellness
Department of Labor Employment and Training Administration's Long-term Care, Supports, and Services Competency Model ²⁴⁶	<p>The Employment and Training Administration (ETA) worked with technical and subject matter experts from education, business, and industry to develop this competency model for the LTSS industry. The model is designed as a resource for workforce development such as writing job descriptions and developing curricula.</p> <p>Presented as a pyramid (with competencies within each tier), the model depicts the increasing specialization and specificity in the application of skills as workers progress in their role.</p>	<ol style="list-style-type: none"> 1. Personal Effectiveness Competencies <i>e.g. interpersonal skills, dependability</i> 2. Academic Competencies <i>e.g. reading, writing, critical and analytical thinking, communication</i> 3. Workplace Competencies <i>e.g. teamwork, problem-solving</i> 4. Industry-Wide Technical Competencies <i>e.g. supporting daily living, documentation</i> 5. Industry-Sector Technical Competencies <i>NADSP competency areas</i> 6. Management Competencies/ Occupation-Specific Competence <i>No competencies specified</i>
Administration for Community Living's (ACL) Long-Term Services and Supports Workforce Competency Mode ²⁴⁷	<p>The ACL developed the Long-Term Services and Supports Workforce Competency Model from the Department of Labor model described above.</p> <p>In the ACL model, the first through fourth foundational tiers apply to the full long-term care workforce, including direct care workers such as PCAs and HHAs, but also care managers, counselors, administrators, directors, etc. The fifth tier encompasses competencies required for the specific setting, such as a home health agency or Area Agency on Aging, and the top tier covers occupation-specific competencies.</p>	<ol style="list-style-type: none"> 1. Personal Effectiveness Competencies <i>e.g. interpersonal skills, dependability</i> 2. Basic Education Competencies <i>e.g. reading, writing, critical and analytical thinking, communication</i> 3. Workplace Competencies <i>e.g. teamwork, problem-solving and decision-making</i> 4. Industry-Wide Technical Competencies <i>e.g. supporting daily living, documentation</i> 5. Industry-Sector Technical Competencies <i>No competencies specified</i> 6. Occupation-Specific Requirements <i>No competencies specified</i>

Competency Set	Description	Core Competencies
Centers for Medicare and Medicaid Services (CMS) Direct Service Workforce Core Competencies ²⁴⁸	Led by the National Direct Service Workforce Resource Center, the Direct Service Workforce Core Competencies were developed through a rigorous process involving a literature review and content analysis with expert input. With applicability across community-based LTSS settings, the competency set is designed to serve as resource for training development and performance improvement and to serve as foundation for career ladders and lattices.	<ol style="list-style-type: none"> 1. Communication 2. Person-centered Practice 3. Evaluation and Observation 4. Crisis Prevention and Intervention 5. Safety 6. Professionalism and Ethics 7. Empowerment and Advocacy 8. Health and Wellness 9. Community Living Skills and Supports 10. Community Inclusion and Networking 11. Cultural Competency 12. Education, Training, and Self-Development
LeadingAge's Personal Care Attendant Competency Model ⁴⁹	LeadingAge's Personal Care Attendant Competency Model is designed to specify the skills, knowledge and behaviors that will help PCAs deliver effective supports and services across a variety of positions and LTSS settings, including HCBS, residential, and institutional settings. The model is built around four broad competency areas.	<ol style="list-style-type: none"> 1. Technical Skills <i>e.g. ADL and IADL care, infection control, role of the direct care worker</i> 2. Applied Understanding <i>e.g. dementia, end-of-life care, professionalism and ethics</i> 3. Interpersonal Skills <i>e.g. relationship skills, teamwork, communication, accountability</i> 4. Self-Directed Care <i>e.g. cultural competency, individualizing care</i>

CNA = certified nursing assistant; HHA = home health aide; PCA = personal care aide

The Personal and Home Care Aide State Training Demonstration Program (PHCAST), which was funded through the Affordable Care Act from 2010 through 2012, represents the most coordinated effort to develop competency-based training for personal care aides.²⁵⁰ Six states participated in PHCAST: California, Iowa, Maine, Massachusetts, Michigan and North Carolina. Each grantee developed or adapted training programs for personal care aides using PHI's existing competency-based core curriculum (see Table 5.1). States developed training programs that varied in length from 50 to 120 hours, created competency assessments, and trained both new and incumbent workers. The PHCAST evaluation was limited by the lack of standardized measures for quality of care or quality of life outcomes; the best measure of training impact was perception of increased knowledge. However, trainees did report high

levels of satisfaction with the core competencies training, ranging from 92 to 100 percent satisfaction; and attrition rates in the PHCAST demonstration were remarkably low, ranging from 1 to 12 percent, due to the additional recruitment and retention supports devised by each state.

The PHCAST project did not result in a recommendation for the minimum number of hours for personal care aide training, which was one of the original goals; instead, the evaluators concluded that "given that the duties of [personal care aides] vary by state, states may be best positioned to determine the minimum number of hours of initial training."²⁵¹ However, the project did make significant progress toward promoting competencies as the appropriate basis of training, credentialing, and career development for personal care aides.

Outside of the PHCAST states, there are other promising examples of competency-based approaches to training the direct care workforce. For example, through a lengthy multi-stakeholder engagement process, Arizona enacted new training standards in 2012 which require that all direct care workers, not including independent providers, are trained according to an agreed set of core competencies. The state provides a model curriculum based on these competencies, *The Principles of Caregiving*.²⁵² (Training providers are also free to use other state-approved curricula, but few exercise this option.) Alaska has also developed a core competency set—the *Alaskan Core Competencies for Direct Care Workers in Health and Human Services*, released in 2010—which is designed to meet the training needs of direct care workers across LTSS settings. There is no state mandate to use this competency set, however.

TRAINING METHODS MATTER, TOO

Stories from the field indicate that, given time and resource constraints, home care trainers tend to rely on traditional didactic methods, such as lectures and rote practice—leaving many learners feeling unprepared to critically apply their new knowledge in the field.

An alternative to these methods is the adult learner-centered approach.²⁵³ Building on Malcolm Knowles' concept of "andragogy," this approach assumes that adult learners are intrinsically motivated, problem-oriented, and focused on acquiring the skills they need to fulfill specific social or professional roles.²⁵⁴ The adult-learning classroom is oriented around the students' learning process—not the teacher or trainer's expertise—with an emphasis on inquiry, interaction, application, and reflection. The teacher uses various techniques and learning activities to facilitate that learning process, building on what learners already know through life experience.

Given that home care trainees typically have low educational attainment, and in many cases limited workplace experience as well, teaching methods that also foster a safe and supportive learning environment are valuable for two reasons. First, trainees are more likely to complete a training course if they have a positive experience in the classroom. Second, through the behaviors that are promoted in a supportive classroom (such as teamwork and respectful communication), trainees develop transferrable skills for the workplace—and are thereby more prepared to work effectively with consumers, families, and other members of the care team.

The Homecare Aide Workforce Initiative (HAWI) provides modest evidence of the association between training methods, trainee satisfaction, and workplace outcomes.²⁵⁵ Designed by PHI and undertaken at three licensed home care agencies in New York in 2013 through 2014, the HAWI project delivered a 120-hour adult learner-centered home health aide training program to all participants, while also including additional intervention components that were implemented unevenly across the sites, such as new recruitment practices, peer mentoring, and case management. Of the 531 individuals who enrolled, 90 percent completed the training course and 88 percent of those were retained in their new jobs after three months. Retention rates dropped somewhat to 77 percent at six months and 60 percent at 12 months; in each case, however, retention rates were significantly higher among HAWI graduates than other new workers. Among the trainees who responded to a follow-up survey (n=228), 91 percent reported that they were satisfied or very satisfied with their new jobs after three months. Aligning with the previous chapter's arguments on job quality, the HAWI evaluation also identified a range of reasons for job dissatisfaction—including compensation, supervision, and hours—which can dampen the positive effects of pre-service training.

BRINGING THE ELEMENTS TOGETHER: STATE EXAMPLES

Developing a well-prepared and stable yet flexible workforce requires a competency-based training system through which workers can achieve recognized credentials that enable lateral and/or upward career mobility (as discussed further in Chapter 7).

A small number of states are leading the way in developing this type of coordinated training system. As described above, Washington has developed a comprehensive training program for all personal care aides that is delivered primarily through a partnership with the SEIU 775 Benefits Group. The program is explicitly built on the principle of "reciprocity to the maximum extent possible under federal law" between occupations; therefore, personal care aides may take certification exams to become certified nursing assistants after completing an additional 24-hour training course (rather than starting from scratch), and workers who already hold certification or licensure in other health care occupations can pass a challenge test to become personal care aides (again, rather than having to complete the basic training requirements).

Iowa, one of the PHCAST states, has also attempted to create a coordinated, competency-based training and credentialing system for all direct care workers.²⁵⁶ In 2006, the state legislature convened a Direct Care Worker Task Force, which recommended the creation of a streamlined system—to be overseen by a state governance body—in which all direct care workers would receive training in the same core competencies, rather than setting-specific skills. A Direct Care Worker Advisory Council that was convened in 2010 further developed these recommendations, suggesting that all direct care workers should be required to complete a core module to become certified as direct care associates, and then have the opportunity to complete further training to become certified as community living professionals, personal support professionals, and/or health support professionals (see Figure 5.2). With PHCAST and other

grant funding, the state developed and successfully pilot-tested a universal competency-based curriculum, *Prepare to Care*, to underpin this occupational framework.

Due to political challenges, Iowa has not yet fully implemented the advisory council’s recommendations or mandated new statewide training requirements. However, many instructors continue to provide the *Prepare to Care* curriculum throughout most colleges in the state’s community college system, suggesting that the model has momentum and promise for the future.

Tennessee presents a third instructive example.²⁵⁷ TennCare is an integrated managed care program that provides medical and behavioral health benefits to approximately 1.4 million Tennessee residents. Since 2010, TennCare has also provided managed long-term services

FIGURE 5.2 | Iowa’s proposed training and credentialing system creates four direct care occupations based on the same foundational competencies.

Training Requirement	Personal Care Aides			Home Health Aides / Nursing Assistants
	Direct Care Associate	Community Living Professional	Personal Support Professional	Health Support Professional
Core Training (6 Hours)	●	●	●	●
Personal Support (9 Hours)		●	●	
Instrumental Activities of Daily Living (11 Hours)		●	●	
Home and Community Living (13 Hours)		●		
Health Monitoring and Maintenance (27 Hours)				●
Personal Activities of Daily Living (48 Hours)			●	●
Total Training Duration	6 Hours	39 Hours	74 Hours	81 Hours
Continuing Education Requirements	6 Hours / 2 Years	18 Hours / 2 Years	18 Hours / 2 Years	18 Hours / 2 Years

Source: Campbell, Stephen. 2017. *Training Standards for Personal Care Aides: Spotlight on Iowa*. Bronx, NY: PHI. <https://phinational.org/resource/training-standards-for-personal-care-aides-spotlight-on-iowa/>.

and supports (MLTSS) to eligible older adults and adults with physical disabilities and, since 2016, to individuals with intellectual and developmental disabilities. Through a current TennCare initiative known as Quality Improvement in LTSS (QuILTSS), the state is aiming to overhaul the training system for direct care workers (to address problems with quality, consistency, and portability) and establish direct care as a viable career path.²⁵⁸

The workforce development initiative has seven key features, including:

- Competency-based training, corresponding with the CMS core competencies set;
- Required demonstration of competence (through a statewide network of assessment centers);
- Micro-credentialing, to recognize incremental training achievements (i.e., “competency badges”);
- A credit-bearing framework for those who seek further education;
- Portability of credentials using a statewide registry;
- Mentorship as an intentional element across all jobs; and
- Clear career pathways.

With these features, TennCare’s QuILTSS program is leading the way in creating an integrated workforce development program—linking to secondary schools, community colleges and vocational schools, and four-year institutions—that enhances career mobility for direct care workers.²⁵⁹

Finally, a “universal home care worker” occupation proposed by the California Future Health Workforce Commission bears mentioning here.²⁶⁰ The remit of the workforce commission, which was convened in 2017, was to create a comprehensive strategy for closing the gap between the existing health care workforce and the one that will be needed in the future. As one of their recommendations for strengthening the “capacity, effectiveness, well-being, and retention of the health workforce,” the commission recommended a universal home care worker occupation with three competency-based levels:

- Level 1: Personal care (ADLs and IADLs);
- Level 2: Level 1 plus “paramedical tasks for those with moderate functional limitations and cognitive decline,” such as oral medications and catheter care; and
- Level 3: Level 2 plus “paramedical services for the most complex individuals.”

Importantly, the commission recommended that these three occupational levels should be consistently adopted across all home care programs (to resolve inconsistencies for workers and consumers), and that each must be accompanied by enhanced compensation to match the additional training and responsibilities involved.

While a competency-based training system with recognized and transferrable credentials is not yet the standard nationwide, these examples show that some states are moving in that direction.

CONCLUSION

In summary, the training system for home care workers, and for direct care workers in LTSS overall, is fragmented, underfunded, and, for the most part, inadequate. Many workers enter the field without sufficient training or job preparation, while others find that their skills are not recognized from one job to the next. In the bigger picture, the lack of a clear career pathway in home care—which should start with a coherent framework for training and credentialing—thwarts recruitment and retention efforts. Thereby care quality and equity concerns arise, as consumers’ access to and experiences with care depend on the size and competence of the workforce.

What is still needed is consensus on the core competencies for direct care, including home care, and their incorporation into a coordinated training system—with enough standardization to address the current inefficiencies and inconsistencies in the training landscape, but simultaneously with enough flexibility for states or regions to develop the workforce to meet local and evolving population needs. The training system must also adequately account for the training needs of independent providers in consumer-directed programs, including the significant proportion of paid family caregivers, in ways that account for their unique position in the workforce and the preferences of the consumers they serve. As suggested by the examples provided, coordinated and standardized training systems, which rely on strong partnerships between stakeholders, are critical for enhancing career mobility and supporting quality assurance across services.



Part III:
Opportunities
for Innovation and
Sustainability

STRENGTHENING HOME CARE PAYMENT

VISION ▶ A person-centered long-term services and supports (LTSS) system that is adequately funded and, in coordination with other health care and social services, organized around both individuals and populations.

As noted in Chapter 1, individuals who require personal assistance rely first and foremost on family members and friends—whose unpaid contribution to the long-term services and supports (LTSS) system was valued at \$470 billion in 2013.²⁶¹ But as their needs and caregiving networks change, individuals may turn to the formal, paid LTSS system. Historically, among those who were eligible for public funding, accessing paid LTSS services meant moving into institutional care. With “rebalancing,” however—which has been driven by consumer preferences, legal requirements, and cost incentives—services are increasingly provided in individuals’ homes and other community-based settings.²⁶²

This chapter begins by describing how home and community-based services (HCBS) are currently funded, before examining key elements of payment reform in health care and their real or potential implications for home care delivery and the home care workforce.

SOURCES OF PAYMENT FOR HOME CARE SERVICES

The national median hourly cost of home care was estimated at \$21 to \$22 in 2017, amounting to a median annual cost of approximately \$50,000 for those receiving 44 hours of care per week.²⁶³ Although many consumers require fewer hours of weekly support, these rates still exceed most consumers’ ability to pay out-of-pocket for LTSS, especially as their savings are depleted. Therefore, only a small fraction of LTSS are privately funded. (It is not possible to estimate the precise proportion, given that private-pay arrangements are not systematically tracked.)

An even smaller proportion of services are covered by long-term care insurance. Just over seven million Americans had long-term care insurance in 2014, including approximately 10 percent of people aged 65 and over and just 5 percent of younger people (a drop from 7 percent in 2002).²⁶⁴ Facing more and

longer uptake of benefits than expected, most companies have dropped out of the long-term care insurance marketplace; the number of insurance providers has plummeted by 90 percent since 2000. The remaining policies are expensive—one company’s average annual premium in 2014 was estimated at \$2,400²⁶⁵—which means that coverage is unevenly distributed by income, and also by race and ethnicity. Policies also tend to have high deductibles and restrictions that do not align with consumers’ needs and preferences, including restrictions related to level of need, duration of benefits, and/or care setting.²⁶⁶ A more recent alternative to traditional coverage are hybrid policies that link life insurance with long-term care, but these policies tend to be much more expensive.²⁶⁷ For these reasons, long-term care insurance coverage is not expected to increase in the foreseeable future.

The remainder of this section will describe the public payment sources which comprise the majority of spending on home care services.

MEDICAID

Medicaid, the primary payer for all LTSS, is a public means-tested health insurance program that is jointly financed by the federal government and each state.²⁶⁷ Although the federal government sets broad requirements for Medicaid programs, states have considerable latitude over how to administer those programs, which leads to considerable interstate variation in service coverage, eligibility requirements, provider reimbursement, and other program characteristics. Overall, because it is the primary payer, Medicaid largely defines the LTSS sector—and any sustainable innovation in the sector must be driven through its policies and programs.

All state Medicaid programs must cover nursing home and home health services for those who qualify, and may also offer optional services such as personal care services and other HCBS.²⁶⁹ The balance of Medicaid coverage

has shifted from institutions to the community since the passage of the Americans with Disabilities Act in 1990 and the 1999 *Olmstead vs. L.C.* decision, which requires states to administer services, programs, and activities “in the most integrated setting appropriate to the needs of qualified individuals with disabilities.”²⁷⁰ In federal fiscal year (FY) 2016, Medicaid spending on HCBS was \$94.4 billion, which was 57 percent of total Medicaid spending on LTSS—and HCBS represented a majority of LTSS expenditures in 30 states (with a range of 27 percent in Mississippi to 81 percent in Oregon).²⁷¹

In 2016, Medicaid spending on HCBS was \$94.4 billion, which was 57 percent of all Medicaid expenditure on LTSS. HCBS represented a majority of LTSS spending in 30 states.

States can apply for federal permission to provide HCBS through waiver programs, as well as through state plans.²⁷² Spending on 1915(c) HCBS waivers in particular accounted for 51 percent of Medicaid expenditure on HCBS in FY 2016.²⁷³ Each state can have multiple waivers, and each waiver may have different eligibility requirements and benefits. For example, 47 states have approved 1915(c) waiver programs but, depending on the state, these waivers may target older adults, people with physical disabilities, people with intellectual or developmental disabilities, children who are medically fragile, and/or other specific populations.²⁷⁴ Some states, including Washington and Vermont, have even used waivers to expand HCBS access to “pre-Medicaid” individuals in order to prevent or delay the need for more expensive LTSS services.²⁷⁵

States have also leveraged other sources of federal funding to rebalance their Medicaid LTSS systems. A key example is the Money Follows the Person demonstration program,

launched in 2007, which aims to transition individuals from nursing homes to the community. The program, which has been implemented by 43 states and DC and has served approximately 88,000 people, is currently funded through December 2019.²⁷⁶ Another example is the Balancing Incentive Program, funded in 2011 through 2015, which was designed to help states streamline and coordinate access to non-institutional LTSS to achieve a “balancing benchmark” (at least 50 percent of Medicaid LTSS dollars spent on HCBS).²⁷⁷ Twenty-one states were approved for Balancing Incentive funding.

To contain the rising costs of home care—caused by growing overall demand for LTSS and the rebalancing of services from institutions to the community—many states limit the number of beneficiaries or the amount of services provided through Medicaid HCBS waiver authority. In 2016, 42 states implemented some form of cost control, including hourly limits on services, fixed expenditure caps, and/or geographic limits on services.²⁷⁸ Nineteen states used at least two of these cost control strategies, and one state (Minnesota) used all three. Other cost-containment strategies include enrollment caps and waiting lists; 39 out of 51 states reported waiting lists for waiver programs in 2016, with an average wait time of 23 months (ranging from 5 to 48 months). According to a different source, among the 48 states with 1915(c) waivers in 2015, 35 states reported a combined waiting list of more than 640,000 individuals.²⁷⁹ These figures indicate the pressing need for payment reform to address significant levels of unmet need for home care services across the United States.

MEDICARE

Medicare is a federally administered universal health insurance program for people who have worked in the United States and are above the age of 65 or younger than 65 with a qualifying disability.²⁸⁰ Beneficiaries can choose to receive their coverage in one of two ways: (1) through the traditional fee-for-service Medicare program administered by the federal government; or (2) through private managed care plans, called Medicare Advantage plans.

Medicare covers home health services for those who are assessed as “home-bound,” but will only reimburse personal care services for individuals who also require “skilled” services, such as nursing care or physical, occupational, or speech therapy. Purely “custodial” services, such as housekeeping, laundry, and meal preparation, are not covered by Medicare. Home care services may be provided daily, but for no more than eight hours per day or 35 hours per week.

Although eligible individuals are technically entitled to the Medicare home care benefit indefinitely (i.e., as long as they are homebound and in need of intermittent skilled services), these services are typically provided only for short-term post-acute care, such as when a consumer is recovering from surgery.²⁸¹ Home care services therefore only account for approximately 3 percent of Medicare payments.²⁸²

As of 2019, however, Medicare Advantage plans now have the option of providing “non-skilled” home care services, such as personal care aide services, as a supplemental benefit.²⁸³ This benefit has only been offered by an estimated 3 percent of plans so far, likely due to the short timeframe for incorporating it into 2019 plans.²⁸⁴ Whether the new benefit helps expand access to personal assistance services for Medicare beneficiaries remains to be seen.

SUPPORT FOR DUALY ELIGIBLE INDIVIDUALS

For dually eligible individuals (i.e., those who are enrolled in both Medicaid and Medicare), Medicare is the primary payer for most hospital, physician, and prescription drug services, while Medicaid covers LTSS and certain behavioral health services.

The dually eligible population, which numbers more than 11 million individuals, tends to have higher needs and health service utilization than the general Medicare population, and accounts for a disproportionate share of Medicare and Medicaid expenditures overall.²⁸⁵ Several programs have been created over the last several decades to address problems in care coordination, navigability, efficiency, and outcomes for this population.

One successful example, although limited in reach, is the Program of All-Inclusive Care for the Elderly (PACE). PACE providers receive capitated payments to provide comprehensive medical and social services for certain community-dwelling older adults, most of whom are dually eligible. This allows providers flexibility in determining which services each consumer needs, rather than having their decisions guided by what can be reimbursed under one program or the other.²⁸⁶ States are also testing other approaches to integrating Medicare and Medicaid coverage, including through Financial Alignment Initiatives (described below) and Dual Eligible Special Needs Plans (D-SNPs), a type of Medicare Advantage managed care plan.

Although promising, these various Medicare-Medicaid integration programs only enroll about 750,000 dually eligible individuals (as of March 2017), which is a small fraction of the total population.²⁸⁷

OTHER PUBLIC PROGRAMS

The Veteran’s Health Administration (VHA) provides home care coverage, including skilled nursing and personal assistance services, on an ongoing and respite basis.²⁸⁸ Since 2008, the VHA has partnered with the Administration on Community Living to offer the Veterans Directed Home and Community Based Services (VD-HCBS) program. Under this option, veterans who require a nursing home level of care, but prefer to remain in the community, receive a budget to purchase their own services in accordance with an agreed plan of care. Allowable services and supports include home care workers (who may be family members, including spouses), assistive devices, and other types of LTSS. According to April 2019 data, the VD-HCBS Program currently serves nearly 2,200 veterans in 37 states, DC, and Puerto Rico.²⁸⁹

Through Title III, the federal Older Americans Act (which is currently awaiting reauthorization) also supports HCBS across states, including supportive home care services as well as nutrition programs, health promotion and disease prevention services, and family caregiver support.²⁹⁰ Nearly \$382 million in Title III grants for supportive services were allocated to states in FY 2018.²⁹¹

Finally, there is a limited patchwork of other state-level programs that support the LTSS needs of low-income individuals who do not qualify for Medicaid. These diverse programs may provide home care services and respite, as well as cash assistance, transportation, adult day services, assistance with home modifications, and/or other supports.

TRENDS AND OPPORTUNITIES IN HOME CARE PAYMENT AND SERVICE DELIVERY

Overall, the home care financing system described above is fragmented and inadequate. Few individuals can afford to pay out-of-pocket for the assistance they require, and private long-term care insurance coverage is negligible. Contrary to many Americans’ belief,²⁹² Medicaid rather than Medicare is the main payer of all LTSS and, because it is a means-tested safety net program, it only covers individuals who are or become impoverished. As demand continues to increase precipitously, there is a critical need to develop new ways to organize and finance home care services. Here, we identify five trends and opportunities in LTSS in terms of their implications for home care availability, access, and quality in the years ahead.

PROMOTING SOCIAL LONG-TERM CARE INSURANCE

First, it is important to recognize publicly funded long-term care insurance as a payment option for the future. This option was put forward in the United States in 2010 through the Community Living Assistance Services and Supports (CLASS) Act, a component of the Affordable Care Act. Through the CLASS Act insurance program, working adults would have been able to make voluntary premium contributions through payroll deduction or direct contribution, and would then have been eligible to receive a cash benefit to purchase nonmedical LTSS in the future.²⁹³ The CLASS Act was repealed in 2011 due to concerns about the cost to individuals and the long-term sustainability of the program.²⁹⁴ However, a number of proposals to add a complete LTSS or a home care benefit to Medicare have recently been put forward,²⁹⁵ and momentum around creating social long-term care programs at the state level has been growing.

In May 2019, Washington became the first U.S. state to enact a universal long-term care benefit, which will provide a \$100 daily allowance for eligible state residents starting in 2022.

Hawaii, for example, enacted the Kupuna Caregivers program in July 2017. Through the program, which is administered by the Hawaii Executive Office on Aging and implemented through local Aging and Disability Resource Centers, unpaid family caregivers of older individuals can receive up to \$70 per day to cover the costs of adult day services, home-delivered meals, homemaker services, personal care, respite care, or transportation.²⁹⁶ The program is funded through an annual appropriation, however, which again raises concerns about sustainability. As another example, advocates in Maine developed a universal home care initiative which would have been funded by a 3.8 percent tax on incomes above the amount subject to Social Security taxes; however, this proposal failed to pass a ballot initiative in November 2018.²⁹⁷

The most groundbreaking development has occurred in Washington, however, which in May 2019 became the first U.S. state to enact a full, universal long-term care benefit.²⁹⁸ Funded through a payroll tax, the program will provide a \$100-per-day allowance for eligible state residents starting in 2022. The funds may be spent on a range of services and supports, including in-home personal assistance (with family caregivers eligible for payment).

SHIFTING FROM FEE-FOR-SERVICE TO MANAGED CARE

We now examine two broad and related trends within health care that are reshaping the current home care payment system: first, the move from fee-for-service to managed care, and second, the increasing emphasis on value as the basis of payment arrangements.

In traditional fee-for-service arrangements, providers are reimbursed for each service they deliver. By contrast, in managed care, Medicaid (and/or Medicare) pays a set per-member/per-month capitated payment to an insurance company to cover applicable services for a group of consumers. Managed care programs may cover different types or amounts of services and may serve different populations (e.g., only older adults, people with disabilities, or those with intellectual or developmental disabilities). The trend toward managed long-term services and supports (MLTSS) is clear: as of May 2019, 23 states were operating MLTSS programs, an increase from 16 states in 2012 and just eight states in 2008.²⁹⁹

States have typically implemented managed care programs with the goals of improving quality of care and reducing costs.³⁰⁰ In theory, managed care companies are more “nimble” than state governments, which allows them to implement innovative practices to meet these twin goals. In practice, however, managed care companies—many of which do not have experience with LTSS services and populations—may be motivated more by cost-reduction than by person-centered outcomes. It is also important to stress that the state remains ultimately responsible for defining the financing and delivery of HCBS through Medicaid policy, even in a managed care environment. Therefore, it is incumbent on states to establish rigorous approval and monitoring mechanisms for MLTSS programs, based on appropriate quality standards as discussed below, and to evaluate and update rate-setting and other public policies as needed.³⁰¹

With those significant caveats in mind, this section will discuss several potential opportunities for innovation in home care through managed care.



First, the shift to managed care provides an opportunity to improve care coordination, which is a long-standing problem for LTSS consumers. As stated in the U.S. Senate Commission on Long-Term Care's 2013 Report to Congress, the "fragmented, provider- and setting-centered approach (as opposed to a person-centered approach) results in service and supports needs that go unmet, putting individuals at risk for injuries and/or adverse health consequences requiring medical attention."³⁰² As care manager, an MLTSS plan can in theory use capitated funds to secure the most appropriate configuration of services for each consumer, based on comprehensive information about the consumer—versus the consumer receiving a disconnected array of services that are reimbursed through different mechanisms. In practice, establishing pathways of communication—and interoperability of information systems—between historically siloed providers in order to ensure care coordination remains an ongoing challenge.

Several states are using managed care as a mechanism for serving dually eligible consumers, for example with Medicaid MLTSS plans also offering Medicare Advantage Dual Eligible Special Needs Plans (D-SNPs), or vice

versa. One vehicle for these efforts is the Financial Alignment Initiative (FAI) program, created by the Medicare-Medicaid Coordination Office and the Center for Medicare and Medicaid Innovation. The FAI program covers two models: a capitated model (involving a three-way contract between CMS, the state, and a health plan) and a fee-for-service model. Through the FAI demonstration projects, states are expected to integrate care for consumers across medical, LTSS, and behavioral health systems, and achieve improved outcomes through "comprehensive risk assessments and health action plans, person-centered planning, and navigation assistance to access services."³⁰³ As of May 2019, FAI demonstration projects were underway in 10 states, with 9 of the 10 states using capitated models.³⁰⁴

Preliminary findings from the capitated demonstration projects indicate several implementation challenges.³⁰⁵ Plans have struggled to: hire and retain sufficient numbers of care coordinators; ensure timely completion of health risk assessments and comprehensive care plans; engage all interdisciplinary care team members; ensure that information is shared across providers and systems; and address providers' concerns about reporting burden and

payment adequacy. Consumers do appear to appreciate the support offered by care coordinators, however, although some have reported difficulties with the enrollment process. As CMS has begun tracking experiences with care coordination through supplemental questions on the Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey, more consumer feedback will be available in the future. Data on the cost outcomes of the managed care FAI programs are not yet available, although early evidence from the fee-for-service demonstrations is somewhat promising; Colorado, for example, demonstrated savings of \$120 per member per month.³⁰⁶

MLTSS has mixed implications for consumer-directed programs. On one hand, the two approaches seem contradictory: managed care plans feature top-down decisionmaking, while consumer direction is intended to

Tennessee, Arizona, and Pennsylvania are all examples of states that have included workforce requirements in their managed long-term care contracts.

devolve choice and control to the individual. On the other hand, the two approaches share similar commitments to person-centeredness, care coordination, and cost efficiency. In any case, consumer direction is a required element of MLTSS programs, according to 2013 guidance from CMS for Medicaid MLTSS programs.³⁰⁷ Further work is needed to clarify expectations for the structure and operation of consumer direction in MLTSS, however, including through more explicit contract language and educational outreach—in order to ensure that plans have sufficient knowledge about consumer direction and understanding of roles and responsibilities. Specific quality measures for consumer-directed services in MLTSS are also lacking. As one exception, Tennessee has developed 11 performance measures for consumer direction in MLTSS, including enrollment/disenrollment rates and average time from referral to services.³⁰⁸

Finally, the transition from fee-for-service to managed care offers potential opportunities to strengthen workforce development in LTSS. First, states have the option to include workforce development requirements in their contracts with MLTSS plans, thus supporting statewide efforts to improve recruitment, job quality, and/or workforce stability. Tennessee, Arizona, and Pennsylvania are all examples of states that have included workforce requirements in their managed care contracts. Second, MLTSS plans could lead the way toward leveraging the role of home care workers because “theoretically they will have an incentive to look for the most cost-effective way to deliver quality care, and making greater use of a large low-wage workforce fits this strategy.”³⁰⁹ In other words, from their vantage point as care coordinators, managed care plans can identify new ways to deploy home care workers to meet consumers’ needs, and then evaluate the impact on members’ health and quality of life outcomes. Uptake of this opportunity to upskill or redeploy home care workers has been very limited so far. However, one notable exception is the Care Connections Senior Aide project described in Chapter 7, which was led by PHI and Independence Care System (ICS), a nonprofit managed long-term care plan at the time that served older adults and adults with physical disabilities and chronic health conditions in New York City.

MOVING FROM VOLUME-BASED TO VALUE-BASED PAYMENT

In recent years, the U.S. health care system has been shifting toward value-based payment models, following the argument that payment should be based on the quality rather than the volume of services provided. Figure 6.1 presents a framework for understanding the shift away from fee-for-service arrangements toward alternative payment models. Levels of financial gain and risk for the provider increase with every category in the framework; by Category 4, providers are incentivized to provide person-centered, coordinated care for an entire population, in order to reap the financial benefits (and avoid the costs of falling short). According to one estimate, by 2020 approximately 50 percent of fee-for-service payments will have moved to alternative payment models.³¹⁰

Value-based payment holds promise for improving quality in LTSS services—particularly in programs that jointly administer Medicare and Medicaid benefits, such as the FAI programs described above—because it can incentivize coordination between payers and providers to improve outcomes and share the financial reward. Value-based payment also provides a new opportunity

to directly or indirectly incentivize investment in the home care workforce.³¹¹ For example, workforce targets may be included in a value-based payment model to *directly* reward providers who demonstrate effective recruitment and retention practices and also to incentivize others to adopt similar approaches. Further, many home care outcomes are sensitive to home care workers’ contributions, including both health and quality of life outcomes. By explicitly recognizing and rewarding these quality outcomes, value-based payments may *indirectly* incentivize efforts to elevate home care workers’ role on the care team.

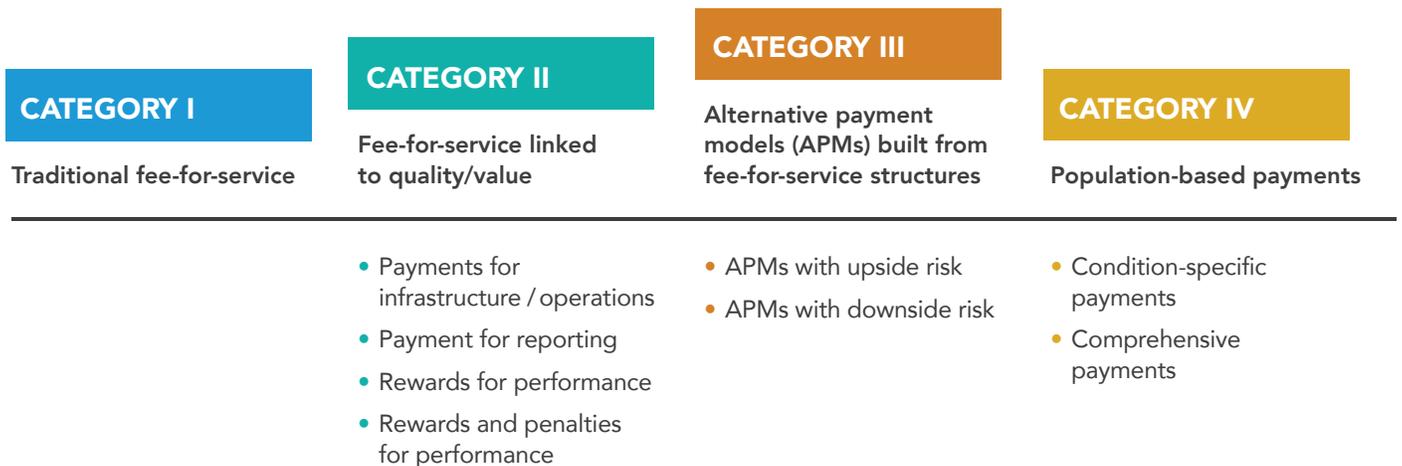
A primary barrier to adopting alternative payment models in home care, however, is the lack of standardized quality measures for Medicaid-funded LTSS, as discussed further in Chapter 9. Quality measurement is particularly complex since home care serves a diverse range of populations and spans multiple domains. Some examples of these domains include: physical health; physical function and independence; care transitions; quality of life, person-centeredness, and consumer satisfaction; and community integration. In the absence of agreement on the main quality measures in home care, states must choose their own measures—or import recognized measures from acute care settings, which may be necessary but insufficient for home care.³¹² For example,

New York utilizes “potentially avoidable hospitalizations,” as the primary quality measure in home care.³¹³ Currently, all states report having at least one quality measure in place in an HCBS program, but these measures vary by state and between programs within states.³¹⁴

Further, many home care providers operate with limited information technology infrastructure, as compared to primary or acute care providers, which hinders their ability to report quality metrics to states or MLTSS plans.³¹⁵ Evidence from the field suggests that information blockages also limit the ability of agencies and managed care plans to meet quality targets in the first place; for example, agencies or plans often receive insufficient or delayed information from hospitals about admissions and discharges, which may impede them from implementing timely transitional care interventions and thereby reduce rehospitalization rates.³¹⁶

Despite these challenges, a number of state Medicaid systems have begun introducing value-based payment into LTSS, including Arizona, Minnesota, New York, Tennessee, Texas and Virginia, among others.³¹⁷ New York, for example, is now moving nearly all Medicaid payments to value-based payment arrangements, including payments through MLTSS plans. The recent CMS Medicaid managed care rule which requires states to

FIGURE 6.1 | From fee-for-service to population-based payment models



Source: Adapted from Alternative Payment Model Framework and Progress Tracking Work Group. 2016. *Alternative Payment Model (APM) Framework: Final White Paper*. Washington, DC: U.S. Department of Health and Human Services, Health Care Payment Learning & Action Network (LAN). <https://hcp-lan.org/workproducts/apm-whitepaper.pdf>.



develop standard quality measures for MLTSS contracts may spur more progress toward value-based payment.³¹⁸

In April 2018, 10 states were selected to participate in a Medicaid Innovation Accelerator Program on value-based payments for HCBS; participating states include Hawaii, Indiana, Kentucky, Louisiana, Minnesota, Missouri, New Jersey, Ohio, Texas, and Washington. These states are receiving technical assistance and peer support to build knowledge and capacity around value-based payment in HCBS and to move toward implementation. Texas is explicitly exploring the potential for value-based payment arrangements with MLTSS plans “to improve [personal care aide] recruitment and retention by rewarding a better-trained PCA workforce.”³²⁰ The results from this project should be very instructive for workforce development in value-based payment in other states.

Of note, Medicare has outpaced Medicaid in implementing value-based payment in home health care, with programs implemented in nine states already (Arizona, Florida, Iowa, Maryland, Massachusetts, Nebraska, North Carolina, and Tennessee) and plans in place for national expansion.³²¹ Through these programs, Medicare-certified home health agencies were accorded

positive or negative adjustments to their rate starting at three percent in 2018, with a planned increase to eight percent in 2022.³²² The initial quality measures used in these payment arrangements are rehabilitative rather than holistic, reflecting the short-term, post-acute nature of most Medicare-funded home care—and do not include workforce measures. This is a major shortcoming when considering the important role of home care workers in affecting home care outcomes, as well as the need for better-quality jobs.

Finally, little is yet known about how to incorporate consumer-directed services into value-based payment initiatives, given the lack of standardized tools and methods for measuring quality and implementing service delivery changes in consumer direction.

IMPROVING CARE COORDINATION

Care coordination, which is intrinsic but not exclusive to managed care and value-based payment, has become a key priority in the evolving U.S. health care landscape. Care coordination is defined by the Agency for Healthcare Research and Quality as “the deliberate organization of patient care activities between two or more participants

(including the patient) involved in a patient’s care to facilitate the appropriate delivery of health care services.”³²³ Requiring team-based approaches that bridge the traditional divides among settings, providers, and payers, care coordination is intended to increase access to timely treatment, improve continuity of care, and decrease adverse outcomes and service utilization.³²⁴

Aligning payment sources, for example through programs for the dually eligible population (discussed above) is an essential step toward achieving care coordination. Accountable Care Organizations (ACOs) may be another mechanism for enhancing care coordination. Promoted by the Affordable Care Act, ACOs are groups of health care providers who collaborate to deliver coordinated

Clearly, there is potential for improving service delivery and outcomes and decreasing costs by incorporating LTSS partners, including home care providers, into care coordination efforts.

services to a group of patients in a value-based payment arrangement. Although 12 states had implemented Medicaid ACOs as of early 2018,³²⁵ the majority focus on primary care and, to a lesser extent, on behavioral health services—and do not include LTSS, due to the challenges raised above, such as data collection and reporting limitations, quality measurement challenges, and differing payment streams.³²⁶ However, Massachusetts is a notable exception, with one long-established Medicaid ACO in place (Commonwealth Care Alliance) and a recently launched network of 18 ACOs that will provide LTSS, among other services, through contracts with community partners.³²⁷ Rhode Island, as another example, is in the process of developing an “accountable entities” system focused on the total cost of care, including LTSS. One of the intended outcomes of the program is an improved

balance of LTSS spending and utilization in the community versus nursing homes by 2020.³²⁸

The Medicaid Health Home State Plan Option, authorized under the Affordable Care Act, is another mechanism for coordinating physical, behavioral, and long-term care for Medicaid beneficiaries, specifically those with chronic conditions and/or serious mental health conditions. As of September 2018, there were 35 approved Medicaid health homes in 22 states and DC.³²⁹ The evidence base on the positive impact of Medicaid health homes on service utilization and costs is modest but promising.³³⁰

Clearly, there is potential for improving service delivery and outcomes and decreasing costs by incorporating LTSS partners, including home care providers, into care coordination efforts. As discussed further in Chapter 7, home care workers are particularly well-positioned to serve as a link among consumers, families, and other care providers, due to their frequent and sustained interaction with consumers. However, effective communication to support care coordination has long been a challenge in home care. This becomes particularly obvious and problematic during care transitions, when there is often little to no direct interaction between providers across settings.³³¹ Additional staff and better information and communication systems are needed to ensure that home care providers are prepared to participate in coordinated care teams. In principle, the acute care cost savings that accrue over time will offset these extra investments, to the benefit of consumers as well as all other partners in the coordinated care arrangement.

ADDRESSING SOCIAL DETERMINANTS OF HEALTH

Finally, there are clearly emerging opportunities to better recognize and address social determinants of health within HCBS payment and service delivery models.

According to the World Health Organization, social determinants of health are “the conditions in which people are born, grow, live, work, and age” that impact health outcomes—ranging from housing, employment, and education to discrimination and pollution.³³² Collectively, these social, behavioral, and environmental factors may have triple the impact on health outcomes than health care or genetics, but historically they have not been the focus of public spending in the United States.

One research team found in 2009 that of all 30 countries in the Organisation for Economic Co-operation and Development, the U.S. had the highest ratio of health care to social services spending.³³³ That spending ratio,

according to the researchers, was a stronger predictor of health outcomes than total expenditure, a finding which holds true across U.S. states as well—indicating that cost savings and improved outcomes can be realized by rebalancing spending from health care to social services.

As examples of tying social determinants of health into LTSS, recent changes to the rules for Medicaid managed care allow certain social services to be covered as plan benefits,³³⁴ and states are exploring a range of models for incorporating “health-related supportive services and other non-medical interventions” into their Medicaid state plans.³³⁵ Medicaid ACOs, as noted above, can also be used to integrate medical, behavioral health, and LTSS spending to meet each member’s comprehensive needs.³³⁶ Finally, self-directed programs with budget authority enable consumers to purchase the combination of equipment and services, including social services, that best supports their independence and wellbeing.

Housing has been identified as one of the social determinants of health that is most responsive to investment in terms of improved outcomes and cost savings.³³⁷ Many states already include some degree of housing-related services in LTSS, especially through the Money Follows the Person program. These services include “transition or relocation services (e.g., case management, coverage for one-time set up costs etc.) and services designed to help individuals locate and maintain housing in the community (e.g., tenancy supports, housing coordination, or supported housing).”³³⁸

Going further, states can better integrate LTSS and affordable housing for low-income older adults and people with disabilities through a “housing plus services” approach. According to the LeadingAge Center for Housing Plus Services, a national catalyst for innovation on this topic, housing plus services programs:

- Build on existing housing, health care, and community services infrastructure.
- Offer economies of scale by serving a concentration of high-risk/high-cost individuals, many of whom are dually eligible.
- Enhance access to services for residents, encouraging utilization and follow-through.
- Provide a more regular staff presence for residents, which facilitates trust, relationship-building, and early identification of problems.
- Help individuals move out of institutions and/or age in place.³³⁹

Among states, Massachusetts appears to be the leader in offering supportive housing with services for older adults and people with disabilities, through a program which is designed to help prevent or delay admission to nursing homes for eligible individuals. The Massachusetts Supportive Housing Initiative program is a collaborative effort between the Department of Housing and Community Development and the Executive Office of Elder Affairs.

As another localized example, an affordable-housing development that is currently under construction in New York City is intended to provide housing for low-income housing for seniors coupled with on-site support services offered by Hebrew Home, a nursing home based in Riverdale, New York.³⁴⁰ The services will be funded through the Empire State Supportive Housing Initiative, which is administered by the state Department of Health.

One tested housing with services model is Vermont’s Support and Services at Home (SASH) program, which launched in 2011. The program now has 54 groups of up to 100 members that are hosted at U.S. Department of Housing and Urban Development (HUD) or nonprofit affordable housing properties statewide.³⁴¹ Each SASH group includes a full-time coordinator and quarter-time nurse and provides a range of services, including individualized assessment and care planning, care coordination, health and wellness programming, and links with local service providers to offer direct services, such as home care. A recent evaluation found evidence of improved health and functional status among participants, but mixed results on Medicare expenditure per participant.³⁴² A future evaluation will consider the impacts of the program on Medicaid spending and LTSS utilization by participants.

Financing for housing plus services remains an open question. A research team from the LeadingAge LTSS Center @UMass Boston is currently exploring potential mechanisms, which may include building alternative payment models into existing programs (such as patient-centered medical homes or health homes); incorporating housing plus services as a plan benefit in managed care; and/or creating new “intermediary entities” that can deliver services across multiple housing properties to a given population of patients or members.³⁴³ The promise of housing with services models is limited, of course, by the overall supply of affordable housing in any given locale.

Evaluation of the Medicaid Housing-Related Services and Partnerships program supported by the Medicaid Innovation Accelerator Program may also help provide insight about how to successfully integrate housing

services into Medicaid programs.³⁴⁴ The program was developed in collaboration with a range of federal agencies, including HUD, the Substance Abuse and Mental Health Services Administration, the Office of the Assistant Secretary for Planning and Evaluation, and the Interagency Council on Homelessness. The goals of the program are (1) to develop public and private partnerships between Medicaid and housing systems and (2) to support states in creating action plans for expanding community living opportunities for Medicaid beneficiaries. Eight states participated in 2016 (California, Connecticut, Hawaii, Illinois, Kentucky, New Jersey, Nevada, and Oregon) and an additional eight participated in 2017 (Alaska, Massachusetts, Michigan, Minnesota, Nebraska, Texas, Utah, and Virginia). To our knowledge, no data on the impact of the program are yet available.

Social determinants of health are estimated to have triple the impact on individuals' health outcomes compared to health care or genetics, but historically they have not been the focus of public spending in the U.S.

A final point to raise about housing with services is the opportunity that it creates to deploy home care workers in new ways. For example, one home care worker assigned to a particular building or community may be able to provide more flexible and cost-efficient assistance to residents than a team of home care workers restricted by scheduling and transportation concerns. This “cluster care” approach—whereby designated workers assist a group of consumers as needed during any given shift, rather than spending extended time blocks with only one or two individuals—was tested with 229 consumers at seven public housing sites in New York City in the 1990s.³⁴⁵ The approach reduced costs by about 10 percent compared to the four comparison sites (N=175 consumers), but was found to be more beneficial for consumers with fewer ADL assistance needs than for those with higher needs. Updated research is needed on how a cluster care approach could

be implemented in the contemporary HCBS landscape, and particularly in the fragmented MLTSS context, and with what implications for consumers' health, wellbeing, and satisfaction with services.

CONCLUSION

This chapter began by describing the main sources of payment for home care—and making it clear that major changes in the financing system are needed to ensure that services are available and affordable for the increasing numbers who will need them in the years ahead.

The chapter then discussed several payment and service delivery trends in terms of their potential for improving home care access and quality and strengthening the home care workforce, starting with the nascent but growing momentum around social long-term care insurance programs. Managed care and value-based payment were identified as dominant trends in the health care and LTSS landscape that *may* be leveraged for positive impact in home care, but only with careful attention to a range of existing challenges, including: the lack of agreed quality measurement in HCBS, home care providers' underdeveloped data monitoring and reporting capacity, barriers to communication and system interoperability between providers, and the need for contracting requirements and guidelines for new payers entering the home care space. Finally, we discussed the potential for improving the cost efficiency and effectiveness of home care services through care coordination more broadly and by linking home care with social determinants of health, with a particular focus on housing.

An overarching message from this chapter is that, because home care is primarily funded through public dollars, Medicaid (and to a much lesser extent, Medicare) policies and payment reforms reverberate across the entire sector. Some of these changes may directly impact consumers, for example by determining whether and how they are able to access services. Much of the impact may be mediated or moderated by home care workers, however—because the amount and quality of care provided by the home care workforce depends on public investment in training, compensation, and career development. The next chapter considers how elevating home care workers' role and maximizing their contribution serves as one such critical investment in the future of home care.

MAXIMIZING THE CONTRIBUTION OF THE HOME CARE WORKFORCE

VISION ▶ A home care workforce that is prepared to support consumers and families to the fullest extent and empowered to take on advanced roles within the care team, with appropriate training, supervision, and compensation.

As part of the evolving health and long-term care landscape, home care services have expanded in recent years to assist consumers with increasingly complex physical, cognitive, behavioral, and/or social support needs. Although personal assistance remains central to home care delivery, a more multi-faceted, interdisciplinary approach is now required.³⁴⁶

Successfully meeting this challenge relies on effectively leveraging the capacity and contribution of the largest segment of the care team (aside from unpaid caregivers): the frontline home care workforce. The primary role of this workforce is to support consumers' independence, wellbeing, comfort, and quality of life. Through close, regular contact with consumers, however, home care workers are also well-positioned to directly support consumers' health care and outcomes, including by providing assistance with health-related tasks; coaching consumers in health behaviors; and/or reporting early signs of health status changes. However, there is still considerable progress to be made toward redressing the historic and persistent devaluation of home care workers and recognizing their full potential as members of the care team.

This chapter explores two key opportunities to optimize home care workers' role and impact. The first, picking up from Chapter 5, is to ensure that home care workers are better prepared to understand and address consumers' complex needs through specialized training and skills development. The second is to create and institutionalize advanced roles within home care, matching enhanced competencies and responsibilities with increased compensation. The chapter concludes with a discussion of how nurse delegation rules can help optimize home care workers' contribution.

SPECIALIZED SKILLS: MEETING CONSUMERS' CHANGING NEEDS

Home care workers spend more time and develop more sustained relationships with consumers than any other paid provider, and therefore tend to have the most extensive knowledge of consumers' needs, preferences, and wellbeing. Consequently, home care workers are well-positioned to help consumers manage their health on a day-to-day basis and "observe, record, and report" any changes of status to clinical partners. In this way, they can play an instrumental role as part of the health care team in supporting consumers' health-related quality of life and avoiding adverse and costly outcomes, such as emergency department visits and unnecessary hospitalizations.

To fulfill this role effectively, home care workers require dedicated training on the signs, symptoms, and management of common conditions among consumers. Of particular importance are those that are ambulatory-care sensitive, such as asthma, chronic obstructive pulmonary disease, congestive heart failure, diabetes, hypertension, bacterial pneumonia, and urinary tract infections.³⁴⁷

The Family Care Advocate training program offered through the Schmieding Center for Senior Health and Education in Arkansas is an example of upskilling home care workers to better support consumers' health outcomes.³⁴⁸ The 40-hour course is designed to provide workers with "the motivation, information, skills and confidence needed to provide person-centered, evidence-based, coordinated care for older individuals with chronic conditions in their homes," and includes content on consumers' health literacy and self-management and on workers' participation in the health care team, as well as condition-specific information.



With a \$3.6 million Health Care Innovation Award from the Center for Medicare and Medicaid Innovation, the Family Care Advocate program was implemented in Hawaii, Arkansas, California, and Texas in 2012, and reached nearly 3,500 trainees (164 percent of the target) within three years. The program evaluation found that 91 percent of sampled trainees (n=727) were satisfied with the training. The program also had a modest impact on workforce development when comparing outcomes for trainees versus non-trainees: trainees' wages were slightly higher (\$9.37 compared to \$8.96), and trainees were slightly more satisfied with their wages (30 percent versus 15 percent of non-trainees) and hours (59 percent versus 52 percent of non-trainees). Of note, the program also offered micro-loans to help defray tuition costs; however, the uptake was lower (and default rate higher) than expected, leading the evaluators to recommend that the loan program be replaced with non-repayable grants or scholarships. This last finding underscores the need to ensure that tuition fees are not a barrier to career advancement for home care workers, given their low wages and limited financial resources.

Unfortunately, the impact of the training on consumer care outcomes was not evaluated, making it difficult to build the case for its scale-up and sustainability. Thus, like many innovations in the home and community-based services (HCBS) sector, the training program is not expected to continue beyond the award period, except through the originating Schmieding Center in Arkansas.

Similarly, the Intervention in Home Care to Improve Health Outcomes pilot program offers a promising example of specialized training for home care workers, but so far without evidence on consumers' care outcomes.³⁴⁹ The program is designed to prepare home care workers to identify and manage acute clinical changes in condition at home, thereby avoiding unnecessary hospitalizations. A key element of the program is that trained workers are queried about possible changes in condition when they telephonically "clock-out" at the end of each shift. Their responses are captured through a web-based software program and transmitted to the agency's care manager for triage.

So far, the program has been pilot-tested with 22 franchise offices of Right At Home, a home care company with more than 310 offices in 45 states. A process evaluation found that caregivers liked the system overall, but identified a key shortcoming: the program lacked feedback to update workers about the outcome of their communications. This finding suggests a broader lesson: that *reciprocal* communication is an essential component of efforts to elevate the role of home care workers within the care team. A randomized trial to evaluate the effects of this training and communication program on health care utilization and outcomes is currently underway.

Trained senior aides reported improvements in job satisfaction, inclusion in the care team, and relationships with clients and families.

There are also limited examples of specialized condition-specific training for independent providers, designed to empower them to serve as a link between consumers and their care teams—if and when that aligns with each consumer’s preference.³⁵⁰ One example is a pilot program for independent providers in California’s In-Home Supportive Services (IHSS) program.³⁵¹ With a three-year, \$11.8 million Health Care Innovation Award, the California Long-Term Care Education Center implemented a 60.5-hour competency-based training for 6,375 IHSS consumer and provider dyads. Each of the 17 training modules, which cover a range of conditions and topics, includes an “integration activity” to help IHSS workers practice identifying a problem and communicating with the care team.

According to the evaluation of the program, nearly all (98 percent) of the trainees agreed that “knowledge about how to care for a person at home increased after taking this training program.” In focus groups, trainees also reported that the training increased confidence, which helped improve communication with both consumers and primary care physicians. Eighty-six percent of participating consumers also reported that they anticipated better communication between their workers and the care team after training. The program was also associated with better health outcomes: the average

rate of repeat emergency department visits declined 41 percent and the average rate of rehospitalization declined 43 percent by the second year after the training. The evaluation estimated that the program reduced costs by as much as \$12,000 per trainee (due to reduced emergency department visits and hospital stays) and improved recruitment and retention.

A second example, also from California, is the St. John’s Enhanced Home Care Pilot Program, funded within a non-profit network of federally qualified health centers in Los Angeles by a grant from the Tides Foundation/Center for Care Innovations.³⁵² This pilot program was designed to improve integration of care and health outcomes for HCBS consumers by upskilling independent providers in “paramedical tasks and chronic disease management” and equipping them to play an enhanced role on the care team and support health service planning and care coordination.³⁵³ Ninety-seven worker-consumer dyads participated in the program, which included a six-week training program for the workers as well as the creation of a care coordinator role to serve as their primary point of contact. Although modest in scope and duration, the program showed promising results. Independent providers attended nearly 80 percent of all medical visits during the program, and consumers’ medication adherence improved by 40 percent. The program was also associated with a decreased rate of hospitalizations (from an average of 4.3 to 2 per consumer per month) and emergency department visits (from 7 to 3.3 per month). Two out of three consumers (67 percent) reported better health-related quality of life, and consumers’ satisfaction with overall quality of care increased 13 percent.

Upskilling workers to help consumers manage their health and to “observe, record, and report” health-related information to clinical partners can help optimize their contribution, without detracting from the central importance of the personal assistance services they provide. This upskilling requires targeted, condition-specific training and clear two-way communication pathways (which can be supported by technology, as discussed in Chapter 8)—along with recognition by other members of the care team. As well as improving quality of care and potentially reducing costs, efforts to upskill home care workers through additional training can boost their job satisfaction and retention and thereby stabilize the workforce. Moreover, if condition-specific competencies are standardized and recognized at a system level—as intended with the TennCare “competency badges” described in Chapter 5—workers’ job mobility also improves, which can help reduce workforce attrition.

ADVANCED ROLES: SHIFTING THE PARADIGM

Alongside efforts to upskill the workforce overall, adding new rungs in the career ladder for capable and motivated workers can help improve recruitment and retention and ensure a more skilled and stable care environment for consumers.

For example, building on the specialized training described above, home care agencies can create condition-specific specialist roles, such as a diabetes specialist or dementia specialist. These specialist workers may be deployed in a number of ways: to work directly with particular consumers; to support and advise other home care workers on best practices; to liaise directly with the interdisciplinary team; and/or to assist with training on these conditions.

Upskilling workers to support consumers manage their health and to “observe, record, and report” health-related information to clinical partners can help optimize their contribution.

Related, but more generalized, is a senior aide position. Senior aides can provide on-the-job coaching, support, and supervision for entry-level home care workers; provide enhanced support and education for family caregivers; help resolve care challenges or add extra support during care transitions; and, again, serve as a resource to the interdisciplinary care team.

One example of an advanced role for home care workers is the Care Connections Senior Aide program that was implemented in 2014 by PHI and Independence Care System (ICS), a managed long-term care plan in New York City (now a care coordination provider), along with three home care agencies: Cooperative Home Care Associates, JASA, and Sunnyside Community Services.³⁵⁴ The project was designed to test an advanced role for experienced workers while strengthening care transitions

for consumers. The evidence clearly shows that care continuity during periods of transition is critical for consumers’ wellbeing and health outcomes. For example, one study of more than 43,000 home health episodes following a hospitalization found that handoffs between skilled nursing providers (as an indicator of discontinuity of care) substantially increased hospital readmissions—a single handoff increased the likelihood of a 30-day hospital readmission by 16 percent.³⁵⁵ Given the often-prohibitive cost of ensuring care continuity at the skilled nursing level, this indicates an opportunity for “task-shifting” to an advanced aide who can provide consistent support to the consumer and care team through the transition period.

To become a Care Connections Senior Aide, participants completed a three-month training program which focused on improving their observation and documentation skills, preparing them to support and educate other home care workers, and deepening their knowledge of the chronic conditions that were most likely to cause avoidable rehospitalizations among ICS members. The Care Connections program also included a technology intervention, similar to the Intervention in Home Care to Improve Health Outcomes described above. According to the evaluation of the small-scale pilot program (N=8 participants), the trained senior aides reported improvements in job satisfaction, inclusion in the care team, relationships with clients and families, and communication with clinical managers. Earnings for the senior aides increased by about \$11,000 per year above entry-level earnings, a 60 percent increase. Furthermore, the project was associated with an 8 percent drop in emergency department visits in the first full year of the program compared to the previous year, and caregiver strain appeared to improve for at least half the family caregivers involved. These findings suggest promise for the Care Connections model as a way to optimize the home care workforce, improve care transition practices, and leverage technology to reduce costly adverse outcomes.

Another advanced role for home care workers is as a health coach who supports consumers to achieve individualized health and wellness goals. Although sharing skills with community health workers, experienced home care workers who are trained as health coaches are uniquely positioned to integrate health coaching with personal assistance, the linchpin of their role.

In 2014, Partners in Care, Visiting Nurse Service of New York’s licensed home care agency, pilot-tested health coaching as an advanced role.³⁵⁶ In the program, home



health aides who had worked for Partners in Care for at least a year were invited to participate in a one-week intensive training program on health coaching, which covered topics such as symptom identification, self-management, readiness to change, and medication adherence. The trainees were then deployed through two pilot programs: one targeting high-risk heart failure patients after discharge from hospital, and the other incorporating health coaching into usual care for Fully Integrated Duals Advantage and managed care plan members. A mixed-methods evaluation found statistically significant improvements in self-care maintenance practices for both program groups and in health-related quality of life for the post-acute patients. The participating home health aides also responded positively to the training and career development opportunity; in their in-depth interviews, participants expressed “enthusiasm for health coaching as a career opportunity” and reported that the “transition to health coaching was seamless and enjoyable,” among other themes. The evaluation report does not indicate whether the participants received a pay increase for participation, however, which is a critical component of meaningful career development.

Health coaching is a valuable way for home care workers to support consumers with behavioral health problems, many of whom experience physical co-morbidities and “far too few [of whom] receive the help they need.”³⁵⁷ As well as providing personal assistance as needed, home care workers may support these consumers with scheduling and attending appointments, medication adherence, goal-setting and accomplishment, and more. This may be a particularly vital role in rural areas where there are pressing behavioral health care needs but limited services available.³⁵⁸

Finally, other advanced roles for home care workers include peer mentors, who support both new and incumbent workers in navigating on-the-job challenges; assistant trainers, who support licensed professionals in delivering entry-level or in-service training and provide one-on-one support to trainees; and assistant coordinators, who help improve care coordination.

Of note, a limited number of advanced roles have been implemented at the state level. Massachusetts, for example, has a long-standing Supportive Home Care Aide (SHCA) program, developed in 1995 and updated in 2014.³⁵⁹ In addition to 75 hours of entry-level home health aide

training, SHCAs complete 12 hours of advanced training to become either Mental Health Supportive Home Care Aides or Alzheimer’s Supportive Home Care Aides. Importantly, a three-hour supervisory training, called Partners in Care, has been added to help supervisors develop complementary competencies. SHCAs also participate in quarterly team meetings which feature further training, group supervision, and case reviews. These elements of the program appear to help ensure that SHCAs, although receiving fairly minimal advanced training, are continuously supported and upskilled over time.

Washington State, as another example, launched the Advanced Home Care Aide Specialist program in 2012.³⁶⁰ An apprenticeship program through the SEIU 775 Benefits Group (described in Chapter 5), the program includes 70 hours of advanced training along with peer mentoring. Trainees are paid to attend the program, receive an additional 50 cents per hour upon completion, and earn a nationally recognized apprenticeship certification from the Department of Labor. Washington is also developing a Behavioral Health Advanced Home Care Aide program to enable those with severe and persistent mental illness to receive services at home. The first cohort of trainees in the latter program is expected to graduate in 2020.³⁶¹

When rules for delegation are narrowly defined or conservatively interpreted (through agency policies and/or norms of practice), they can create inefficiency, irrationality, and inequity.

As the examples in these two sections suggest, there is some momentum gathering around specialized training and advanced roles for home care workers, but the evidence base is still very limited. However, the Improving Care for Vulnerable Older Citizens through Workforce Advancement Act, introduced in Congress by Representative Cartwright (D-PA) in July 2017, is an opportunity to strengthen the evidence base.³⁶² The Act would amend the Older Americans Act to direct

the Administration on Aging to award demonstration grants to test models of care involving direct care workers in advanced roles, namely those requiring “deeper clinical responsibilities” to support consumers with complex and serious health conditions. Although the future of the bill is unknown, it represents a step toward a national conversation on optimizing the direct care workforce in LTSS.

DELEGATION OPPORTUNITIES AND BARRIERS

Many of the expanded and advanced roles described above can be implemented within home care workers’ current allowable practice parameters. In other cases, however, amendments to nurse practice acts or other state or local statutes to allow delegation to home care workers may be required.

Nurse practice acts, which vary by state, determine which nursing services (i.e., “skilled nursing” or “health maintenance” tasks) can only be performed by or under the direct supervision of a licensed nurse.³⁶³ (Medicaid rules defer to nurse practice acts on this point.) As such, nurse practice acts can facilitate—or hinder—efforts to better leverage home care workers as part of the health care team.

Family caregivers and independent providers are generally exempt (implicitly or explicitly) from nurse practice acts. On the other hand, agency-employed workers are subject to delegation rules in nurse practice acts, which range from *broad* (with no limits on delegation) to *narrow* (specifying a limited number of allowable tasks or settings), with variation in between.³⁶⁴

Nurse delegation has been called “a force multiplier” in expanding access to LTSS in the community rather than skilled nursing facilities.³⁶⁵ But when rules for delegation are narrowly defined or conservatively interpreted (through agency policies and/or norms of practice), they can create inefficiency, irrationality, and inequity. Inefficiency occurs because consumers must wait to receive certain services, at a higher cost, from a licensed nurse rather than a home care worker. Irrationality arises from the fact that agency-employed workers, independent providers, and unpaid caregivers may all assist the same consumer, but under very different legal requirements. Inequity results because non-self-directing consumers may experience service delays at best and, at worst, adverse outcomes, such as unnecessary hospitalizations or nursing home admissions, if their agency-employed workers cannot provide the same level of care as an independent provider.³⁶⁶

Nurse delegation is included as a performance indicator on the AARP's LTSS State Scorecard, with states scored on the number of health-related tasks that can be delegated to direct care workers.³⁶⁷ (States receive a quarter point for each of 16 health maintenance tasks that can be delegated, for a total of four points; these points are then combined with an indicator for "nurse practitioner scope of practice" for a composite score.) According to the 2017 Scorecard, 24 states have improved on this indicator; 16 states (compared to 9 in 2013) now allow nurses to delegate all 16 health maintenance tasks; and 32 states and DC permit delegation of at least 12 tasks. Four states, however, still do not allow any of the 16 tasks to be delegated: Florida, Indiana, Pennsylvania, and Rhode Island.

New Jersey provides a notable example of how research can be used to drive changes in nurse delegation. Historically, attempts to expand HCBS in New Jersey faced at least two barriers: first, the New Jersey Board of Nursing (NJBN) did not permit delegation of medication administration to home health aides, and further, nurses and agencies were reluctant to delegate other tasks due to fears of liability.³⁶⁸ With permission from the NJBN, a pilot demonstration project was implemented from 2008 to 2010 to test the impact of allowing nurses to delegate a range of nursing tasks to home health aides. The demonstration was deemed a success: participating consumers reported more timely medication administration, as well as improvements in family respite, peace of mind, health, and independence—and no adverse outcomes were reported.³⁶⁹ Moreover, the evaluation found that delegation helped address unmet need: in approximately one out of five cases, the delegated task had not been performed at all prior to delegation, while in other cases, the task had been performed irregularly or without authorization. Given these findings, in 2016 the NJBN adopted new regulations that explicitly allow nurses discretion over delegation to home health aides, including medication administration.

The Advanced Home Health Aide (AHHA) role in New York State provides another example of expanding delegation while also creating a career pathway for home care workers.³⁷⁰ AHHAs are home health aides who are authorized to administer medications, under nurse delegation and supervision, to consumers who are medically stable. This is a modest step forward—an advisory group informing the development of the advanced role recommended a much larger set of allowable tasks³⁷¹—but it does achieve some parity, at least in principle, between home health aides and independent providers in consumer-directed services.

(New York's nurse practice act was amended more than two decades ago to explicitly allow consumer-directed personal care aides to perform a range of skilled nursing tasks, including medication administration, that are not permissible for agency-employed workers.³⁷²) However, given the lack of designated funding for AHHAs' training, supervision, or increased wages, widespread uptake of the new role does not seem likely.

CONCLUSION

This chapter has discussed opportunities to elevate home care workers' role and contribution, including by enhancing their condition-specific knowledge and "observe, record, report" skills and by creating advanced roles for workers who wish to move up the career ladder.

The success of these efforts relies on several foundational elements. Effective training and supervision are needed to ensure that workers have the baseline competencies and sufficient ongoing information, support, and oversight to fulfill their roles effectively. Workers must also be explicitly authorized to perform specialized or advanced tasks, either through organizational or public policy change. The more these policies are standardized across settings and states, the more the home care workforce can help prevent gaps and inefficiencies in care.

If home care workers' voices are to be heard and respected within the interdisciplinary care team, enhanced teamwork and communication skills are also required by *all* members of the team. Given that team science in health care has largely been developed in acute settings, more research on how to build and support strong teams in HCBS is needed.³⁷³ Formal structures are also needed to facilitate communication between home care workers and clinical partners, such as the technology-supported communication pathways described here and in the next chapter.

Finally, success depends on the availability of sustainable funding to cover the costs of training and compensation for home care workers who develop their skills and take on new roles and responsibilities. Otherwise, particularly given the high rate of turnover within the workforce, individual employers are unlikely or unable to invest directly in enhanced training and advanced roles—and workers lack any extrinsic incentive to invest their own time and resources. If all these elements are in place, evidence suggests that efforts to leverage the home care workforce will result in cost savings to the health system; more timely and appropriate support for consumers; and better recruitment and retention in the workforce.

LEVERAGING TECHNOLOGY IN HOME CARE SERVICES

VISION ► The strategic introduction and use of technology to support home care consumers' health and quality of life, improve home care jobs, and maximize home care workers' positive impact on service delivery and outcomes.

As described throughout this report, increased longevity and the growing number of older people are two primary factors driving up demand for home and community-based services (HCBS). At the same time, the diminishing proportion of working-age adults and the poor quality of home care jobs are undermining recruitment and retention in home care, creating a workforce crisis that impacts the availability and quality of HCBS nationwide. Part of the solution to this crisis—alongside improvements in compensation, training, career development, and other domains—is technology. While not a replacement for high-quality direct care, certain technologies may be harnessed to improve home care jobs, service delivery, and consumer outcomes.

Acknowledging that there are many cross-cutting technological developments impacting HCBS—including telehealth, smart home devices, and wearable technologies³⁷⁴—this chapter focuses on four categories of technology that most directly affect the efficiency and effectiveness of the home care workforce. These include technologies that:

- Support workers' training and skills development;
- Augment direct assistance with activities of daily living (ADLs);
- Facilitate interdisciplinary communication; and
- Improve workforce development and management.

In discussing each of these categories, the chapter provides specific examples of technological developments; highlights potential benefits and risks or barriers; and considers the cost implications, from initial investment through training and ongoing operations.

TECHNOLOGICAL DEVELOPMENTS IN HOME CARE

As stated, with widespread technological changes as the broader context, this chapter focuses on four types of technology that most directly impact individual home care workers and the home care workforce overall, starting with e-learning.

SUPPORTING WORKERS' TRAINING AND SKILLS DEVELOPMENT

As discussed in Chapter 5, due to the inadequacy of current home care training standards and systems, many workers start their jobs feeling unprepared—and benefit from few, if any, opportunities to accrue new skills through ongoing training. Even where training opportunities exist, workers are often prevented from participating by time, cost, accessibility, and other barriers.

Given these challenges, e-learning represents an important strategy for improving access to training for home care workers while also enhancing their learning outcomes. E-learning uses a variety of methods and modalities—ranging from non-interactive resources, such as audio and video files and PowerPoint presentations, to interactive lessons, real-world simulations, online collaborative learning projects, and interactive classrooms³⁷⁵—to expand access to educational curricula both within and outside traditional classroom settings.

E-learning can augment in-person training for home care workers—or fill a training gap—in a number of ways. First, e-learning courses can extend training to workers who may otherwise have few training opportunities—including independent providers and workers in rural areas or other locations with limited training infrastructure.

The MOBILE UP program, which is offered by the California Long-Term Care Education Center (CLTCEC) through a partnership with the Workforce and Economic Development Division at the California Federation of Labor, provides one modest illustration of this benefit of e-learning.³⁷⁶ Supported by SEIU Labor-Management Training Funds, MOBILE UP is an e-learning program built to provide “anytime, anywhere instruction” through workers’ mobile phones, without requiring Internet access. Currently, the program offers instruction in English as a second language for home care workers, although it may be expanded to offer additional training and personalized career coaching in the future. According to a short documentary about MOBILE UP, users report that the program is convenient to use and that it helps improve their self-confidence as well as communication skills, which in turn enhances their career progression opportunities.³⁷⁷

Second, e-learning can be used to enhance traditional teaching methods, within and beyond the classroom. Instructors can integrate technological teaching tools into in-person training sessions, that is, but may also invite or require students to deepen their learning by accessing complementary training content and activities between sessions. Virtual reality is one example of a technological teaching tool that is increasingly being used to reinforce and strengthen existing training content. Embodied Labs in California, for example, offers virtual reality simulations for hospice care, Alzheimer’s disease, macular degeneration, and hearing loss.³⁷⁸ These simulations are designed to help workers understand the complexity of consumers’ experiences and needs in “real-world” settings, bridging the gap between training and practice.

Third, e-learning can provide opportunities for workers to develop specialized competencies, such as population- or condition-specific competencies. PHI is currently developing a suite of specialty curricula for home care workers on topics ranging from diabetes to falls prevention to palliative care. For each topic, the training curriculum prepares workers to observe and report early signs and symptoms that may lead to health complications, and to promote lifestyle practices that support consumers’ health, such as diet, physical activity, and medication management. These curricula are based on a blended training model—with in-person instruction complemented by progressive levels of interactive technological content, designed to suit different settings—with the goals of ensuring consistent training quality, enhancing learners’ engagement, and reducing the length of training needed to convey complex health information.

Finally, e-learning can enable workers to access as-needed information, using handheld devices, when they encounter unfamiliar situations in practice. This functionality is particularly important given that home care workers, in many cases, work in isolation with limited access to in-person support.

For employers, e-learning provides a potentially cost-effective, scalable way to train workers—supplementing existing training or addressing an unmet training need. For workers, including agency workers and independent providers, e-learning can help introduce new training content and reinforce existing knowledge. Moreover, e-learning tends to be self-directed and self-paced, which aligns with adult learner-centered principles as well as practical scheduling limitations.

E-learning can enable workers to access as-needed information, using handheld devices, when they encounter unfamiliar situations in practice.

Although the evidence base for the effects of e-learning on competency development in home care is underdeveloped, a recent Cochrane review found that e-learning among health care providers more broadly improves learners’ knowledge and skills compared to no training, and that outcomes of e-learning are comparable to those of in-person training.³⁷⁹ Systematic reviews in nursing have found that e-learning can be particularly effective for novice learners³⁸⁰; and, as above, indicate that knowledge and skills development, as well as satisfaction with training, are comparable between e-learning and traditional teaching programs.³⁸¹ One intervention study that compared an e-learning program on handwashing to conventional instruction provides a useful example, although the participants were nursing students rather than home care workers.³⁸² The study found that knowledge scores increased significantly from baseline in both groups and skill performance scores were similar two weeks later. The study concluded, therefore, that e-learning is at least as effective as face-



to-face methods for teaching both the theory and skills of handwashing. While this evidence supports the value of investing in e-learning, more research on the efficacy of e-learning for building the competencies of home care workers in particular is critically needed, including with attention to the optimum balance of in-person instruction and self-directed learning content.

Just as with classroom training, methods matter in e-learning—to encourage student engagement, maximize learning, and minimize attrition. The evidence suggests that successful elements of e-learning design include: multimedia and visual teaching methods; game-based learning activities; scenario-based learning; real-time or delayed feedback; and pre- and post-test assessments to gauge impact.³⁸³ PHI's specialty curricula, described above, illustrate a number of these best practices. With each topic, the learner is introduced to a consumer using a narrative approach, developed through pictures and audio. Learners are then guided through scenarios which give them the opportunity to practice key caregiving skills with that fictional individual. The narrative and related scenarios are designed to unfold in unexpected ways, with opportunities for learners to reflect on their experiences and learning.

There are a number of systemic challenges that must be addressed in establishing e-learning as a widespread training tool for home care workers. One is the persistent digital divide, which separates those with computer and Internet access and computer literacy skills from those without. According to the most recent federal report on broadband access, over 24 million Americans still lack access to high-speed terrestrial broadband (defined as 25 Mbps/3 Mbps), while 15.2 million Americans living in rural areas or on tribal lands lack mobile broadband (10 Mbps/3 Mbps).³⁸⁴ The report also found that poverty is a key differentiator in Internet access rates. These figures indicate that access to e-learning for those who might benefit the most—individuals in rural and other underserved areas—may be the most limited, until broader disparities in digital connectivity are addressed.

Another challenge is the cost associated with e-learning. Although e-learning may save money in the long run and/or at a systemic level—by reducing overhead costs and facilitating scale-up to a wider pool of learners—there are significant upfront and ongoing costs entailed for individual organizations (such as home care agencies) in developing, updating, and implementing e-learning curricula. Off-the-shelf software, online programs, and mobile apps can now be used to develop sophisticated

digital teaching tools, and the prices of more specialized software have dropped in recent years. However, organizations must still possess a significant amount of in-house technological capacity—including computer hardware and tech-savvy staff—in order to make use of these tools. As this level of technological capacity is not currently the norm for most home care agencies, policy action is needed to drive the development and expansion of evidence-based e-learning programs for home care workers. Targeted funding to disseminate training content to independent providers via e-learning—which is a promising option for helping those workers increase their knowledge and skills in line with training standards and their consumers’ needs and preferences—is also required.

AUGMENTING DIRECT ASSISTANCE WITH ACTIVITIES OF DAILY LIVING

The second category of technology that directly impacts the provision of personal assistance services is assistive technologies. Also known as assistive products, these technologies include “any product (including devices, equipment, instruments, and software), either specially designed and produced or generally available, whose primary purpose is to maintain or improve an individual’s functioning and independence and thereby promote their wellbeing.”³⁸⁵ Assistive technologies address a range of domains including sensory functioning, mobility, communication, cognition, environment, and self-care.³⁸⁶

Assistive technology is a rapidly developing field. The AbleData database of assistive technology, which is an online resource funded by the National Institute on Disability, Independent Living, and Rehabilitation Research (under the Administration for Community Living), contains information on almost 40,000 assistive products.³⁸⁷ However, research and development on assistive technologies that support home care workers and consumers together—for example, technologies to help reduce the strain associated with lifting and repositioning—lags somewhat behind.

A recent review of approaches to preventing back injury during ADL care identified two main types: approaches that “fit the worker to the task” and those that “fit the task to the worker.”³⁸⁸ This simple taxonomy is useful for considering the role of assistive devices in ADL care more broadly. Traditionally, the emphasis has been on fitting the worker to the task, primarily through training on body mechanics, ergonomics, and safe technique. While such training is necessary and valuable, there are limitations to this approach: training may be inadequate, may not be sustained in practice over time, and cannot account

for every configuration of setting and consumer need. A more recent technological development is to provide “movement-centered task-specific feedback” to help workers adjust their posture and help reduce injury. For example, a back-injury prevention training intervention which combined an educational video about safe handling and spine biomechanics with real-time auditory feedback was found to significantly reduce “end-of-range spine flexion” (a common over-extension that can lead to injury) among novice aides performing simulated care tasks, compared to the control group.³⁸⁹

In one focus group study, home care workers reported that they lacked adequate tools to overcome the danger and difficulty of providing care in consumers’ bathrooms.

However, even when workers have sufficient training and correct technique, risks of injury persist with certain ADL assistance tasks. Indeed, rather than setting a maximum weight limit for “manual patient handling” as it does for manual lifting tasks, the National Institute for Occupational Safety and Health (NIOSH) recommends that “the goal of safe patient handling programs should be to eliminate all manual lifting whenever possible.”³⁹⁰ This highlights the need for the second set of approaches that “fit the task to the worker,” an area that requires more research and product development. Particularly needed is translational research that addresses the specific challenges that workers and consumers face in private homes, such as narrow spaces, unreliable electricity, and lack of Internet access.³⁹¹

Consumers’ bathrooms exemplify the challenges that tailored assistive technologies may help address. Often small and restrictive, bathrooms generally cannot accommodate existing assistive devices such as sit-to-stand aids—but nonetheless are the site of essential assistance activities.³⁹² As a result, home care workers must rely on manual handling techniques, without necessarily being able to deploy optimal body mechanics

(and while trying to uphold consumers' privacy and dignity). In one focus group study, home care workers reported that they lacked adequate tools to overcome the danger and difficulty of providing care in consumers' bathrooms.³⁹³ Moreover, the workers' observations indicated that "the wide variation in home bathroom layouts requires [them] to problem-solve in each specific care encounter to find a way to provide care," underscoring the limitations of generic safety training.

There are examples of research into assistive technologies that bridge these two approaches, namely technologies that fit the worker to the task and vice versa. One leading example is the UMass Lowell Safe Home Care program of research.³⁹⁴ Funded for more than a decade by NIOSH, the Safe Home Care research team partners with home care industry stakeholders—including home care agencies, industry associations, labor unions, and government agencies—to "investigate a broad range of occupational hazards and good practices" in home care. One of the team's recent studies, for example, compared the physical impact on the worker of using transfer boards compared to manual transfer techniques in a simulated home care setting.³⁹⁵ The study concluded that, compared to manual handling, all transfer board types reduce hand force and improve workers' "posture dynamics." The researchers also identified the type of board most preferred by both home care workers and consumers and recommended specific techniques (such as proper body mechanics and positioning) for achieving the safest outcomes.

Looking to the future, the literature on assistive technologies suggests that further research on assistive technologies for ADL care must consider a broad set of outcomes, including not just the performance of the technology itself, but also: its usability in the home; workers' and consumers' experiences and preferences; the impact on caregiving relationships; and the impact on the safety of workers as well as consumers, among other outcomes.³⁹⁶ Learning from the limited literature on informal caregivers' use of assistive technology, it will also be important to consider how technological supports interact with other elements of the caregiving relationship and environment to impact home care workers' and consumers' experience and outcomes.³⁹⁷

Finally, there are two primary cost concerns regarding assistive technologies for ADL care. First, investment in developing and testing new types of assistive technologies has been inadequate thus far. The low-tech nature of many of these technologies (consider the slide boards mentioned above), the liability risks associated with

them, and the extended approval process all appear to discourage the type of short-term, high-impact venture capital investments seen in other technology domains.

The second, downstream cost concern relates to consumers' and workers' access to assistive technologies. There is broad variation in payment for assistive technology across Medicaid programs, which can lead to inequitable access by population, region, and other characteristics.³⁹⁸ Individuals who are not enrolled in Medicaid may receive funding through their private health insurance plans if assistive products are deemed "medically necessary," but that designation may not align with the individual's own preferences for support and in most cases excludes assistive technologies aimed at workers.³⁹⁹ Finally, some consumers may also receive support for accessing assistive technologies from non-profit organizations, many of which focus on specific conditions or diseases.⁴⁰⁰ Otherwise, consumers must pay out of pocket for assistive technologies; according to one estimate, over \$7 billion was spent directly by consumers on "durable medical equipment" (i.e., assistive devices) in the United States in 2017.⁴⁰¹

SUBSTITUTING FOR PERSONAL ASSISTANCE?

Increasing automation across industries, including health and social care—where research suggests that more than a third of work activities could be automated⁴⁰²—raises a question about the extent to which assistive and other technologies may actually *replace* home care workers over time.⁴⁰³

There is certainly a growing range of technologies—from wearable technologies and smart home devices to fully developed robots—which fulfill tasks that may otherwise be completed by home care workers, such as monitoring vital signs, providing medication reminders, and mitigating falls risks.⁴⁰⁴ Some robotic prototypes are also designed to provide direct physical assistance.⁴⁰⁵ Engineers in Japan, for example, have developed a robotic bear that can lift an individual from a standing position or from the floor, transfer them to a wheelchair, carry them between locations, and turn them in bed.⁴⁰⁶ Another example is Juva, in development in the United Kingdom, which is a ceiling-mounted robot that can be fitted with different extensions to accomplish different tasks, including direct assistance with ADLs and IADLs.⁴⁰⁷

Despite these developments, a vision of the future in which robots fully substitute for personal support remains distant. Instead, technology is likely to remain supplementary to paid personal assistance services for at



least two key reasons (not including cost, as mentioned above). First, the relational and reciprocal nature of home care cannot be replaced by robotics. Although technology may support independence and improve quality of life in some cases or for some consumers,⁴⁰⁸ for others the substitution of technological for human support may exacerbate social isolation, loneliness, and unmet needs.⁴⁰⁹ As the developer of Stevie, another socially assistive robot prototype, stated: “None of this will mean we won’t need human carers anymore... Instead, we’re trying to develop technology that helps and complements human care. We want to combine human empathy, compassion and decision-making with the efficiency, reliability and continuous operation of robotics.”⁴¹⁰

Second, implementation science has clearly demonstrated that the uptake and outcomes of any new technology must be understood in the service delivery context.⁴¹¹ This observation brings home care workers back into the frame, as they often serve a critical role in introducing, monitoring, and trouble-shooting new technologies. As one example, home care workers often provide in-person education and support with remote monitoring technologies.⁴¹² The Visiting Nurse Association of Rockford Area’s telehealth program relies on home health

aides to set up equipment in the home, train consumers on using the equipment, and answer any questions they may have. One program manager clearly articulated the importance of this intermediary role: “We have to get over [the consumer’s] fright at first... It’s important how it’s presented. If the home health aide or nurse doesn’t go in with a very positive attitude and sell of the technology then uptake might be worse. ... If they don’t buy in to this, then they are eventually going to fall back into their old habits.” In other words, the success of the technology relies on the personal support provided by workers—rather than replacing that support altogether.

The argument that assistive technologies are more likely to augment than replace the role of the home care worker is supported by research.⁴¹³ For example, one analysis of the 2004 National Long-Term Care Survey which focused on community-dwelling respondents receiving ADL assistance found that assistive technologies reduced informal care hours but not paid care.⁴¹⁴ Although the landscape has certainly evolved since 2004, the study’s conclusion that assistive technologies serve as “complements for formal personal assistance services rather than substitutes” still rings true.

FACILITATING INTERDISCIPLINARY COMMUNICATION

The third category of technology directly impacting paid home care services is information and communication technology (ICT). As discussed in Chapter 7, the home care workforce is systematically underutilized in two related ways. First, although home care workers are ideally positioned to “observe, record, and report” signs and symptoms that, if unaddressed, may lead to adverse outcomes, they do not generally receive adequate training and preparation to fulfill this role. Second, even when home care workers do collect relevant information about consumers, they often face barriers to communicating that information. Such barriers are both structural (due to a lack of communication mechanisms or protocols) and normative (when their knowledge is not valued enough to be heard).

Technology can supplement but not substitute for the relational and reciprocal support provided by home care workers.

This chapter has already discussed how e-learning can help address training deficits, the first aspect of this systemic problem. Enhanced use of ICT in home care can help address the second part of the problem, by facilitating communication between home care workers, family members, and other members of the interdisciplinary care team.

Although ICT remains underdeveloped in LTSS, and especially in the fragmented home care sector, as compared to acute care,⁴¹⁵ there are a number of innovative examples to consider. Two examples are the Care Connections and the Intervention in Home Care to Improve Health Outcomes programs discussed in Chapter 7, both of which have introduced new pathways for home care workers to communicate with clinical colleagues. (The first is tablet-based and the second telephonic, but both incorporate prompts for home care workers that enable them to easily transmit status updates that can be efficiently triaged and addressed, if needed.) Another example is Care At Hand, a web-based application that is designed to reduce 30-day hospital readmissions. Underlying the Care At Hand program are proprietary

algorithms intended to predict risk factors for readmission. These algorithms generate questions for home care workers and determine, from their answers, whether an alert should be sent to the nurse care manager. An evaluation of the implementation of Care At Hand by a Massachusetts Area Agency on Aging found that the program was successful in predicting risk of readmission based on the combined input of home care workers and nurse care managers.⁴¹⁶ Care At Hand’s own website suggests that the product is associated with a 40 percent decrease in hospital readmissions and a 257 percent return on investment, but the source of these claims is unclear.⁴¹⁷

Another example is eCaring, a software program that enables home care workers to record consumers’ activities and well-being using an “intuitive, icon-based interface.” Like Care At Hand, eCaring uses this information to predict which individuals might be at risk of hospitalization and generate actionable alerts for clinical staff. The company claims that eCaring provides a 300 percent return on investment, with a 40 percent reduction in emergency department visits and hospital admissions, a 50 percent reduction in physician visits, and a 12 percent reduction in nurse visits.⁴¹⁸ When the program was pilot-tested with 60 consumers receiving services from a licensed home care services agency in New York, it was found to reduce the rate of emergency department visits, while also improving job satisfaction and retention among home care workers, and boosting consumer satisfaction.⁴¹⁹

From these and other examples, several potential success factors for ICT in home care can be identified. First, as stated, the programs all build from the explicit premise that home care workers’ knowledge, if better captured and utilized, can improve consumers’ outcomes and save costs for providers and payers. Second, the programs are designed to be portable and transferable; in other words, they are accessible on most devices (computer, tablet, or smartphone) and can be used alongside existing software systems. Third, the programs are designed to facilitate two-way communication—so that as well as sending updates, workers receive follow-up information about their consumers’ status and outcomes. Given that they often feel uninformed or “out of the loop,” this feature can help home care workers feel more engaged and empowered which, in turn, can strengthen job satisfaction and retention as well as care quality. Underscoring the final point, the president and COO of Homewatch Caregivers, which uses a proprietary communication program (HomeTools) that is similar to the programs described above, stated: “When you give caregivers the tools to do the job better, to demonstrate the impact on clients, you’ve got a strong proposition for caregivers.”⁴²⁰

The costs of introducing new technologies to improve communication between home care workers and the interdisciplinary team include the costs of investing in software and hardware, maintaining the system, subscribing to data plans, providing initial and ongoing training and technical assistance for all users, and paying for staff time to input, monitor, and respond to data. These costs may be built into contracts with hospitals or managed long-term care plans, or recouped through fees from private-pay consumers. Grant funding from state and federal agencies and public or private organizations is also available to support development and pilot-testing of new ICT initiatives in home care. When workers or consumers are required to implement these technologies on their own portable devices, there is also a privacy cost involved that has not yet been well-addressed.

Of note, this discussion has not considered communication programs or portals for independent providers working in consumer-directed programs. There have been some efforts to upskill independent providers to communicate more effectively with clinical providers; see, for example, the description in Chapter 7 of the California Long-Term Care Education Center's competency-based training program, which includes "integration activities" to help independent providers practice communicating with the care team. However, we are not aware of any initiatives to translate these communication skills into codified practice using ICT—which is unsurprising, given that independent providers are not directly integrated into the health care infrastructure. If an ICT initiative were introduced into the consumer-directed space, careful consideration of consumers' preferences, users' privacy and confidentiality, costs and payment streams, and other factors would be required.

IMPROVING WORKFORCE DEVELOPMENT AND MANAGEMENT

Finally, technology can also be leveraged to automate or improve key operational functions in home care agencies, or in the wider HCBS field, to increase efficiency and reduce costs. The following section will briefly consider a number of examples, including scheduling, workforce monitoring, and outreach and recruitment.

First, scheduling workers in home care is a notoriously difficult task—this can be extrapolated from the fact that there exists an entire body of literature devoted to the "home health care routing and scheduling problem" (HHCRSP).⁴²¹ Factors that must be considered when

matching a home care worker and consumer for any given shift include: the needs and preferences of the consumer (including but not limited to the amount and type of assistance required); the worker's skills, availability, location, mode of transportation, and personal characteristics (such as gender, language, allergies, and more); workload balance and overtime considerations; the connection of each visit to other visits (such as nurses' visits); and clusterization between cases.⁴²² Despite the complexity of the task, scheduling is often completed manually or using crude computer software which, according to one literature review, results in "high organizational efforts and potentially sub-optimal solutions."⁴²³

An online recruitment strategy for a senior living community that targeted specific audiences on social media led to a 33 percent increase in new applicants, a 46 percent increase in the number of hires, and a 45 percent decrease in vacant positions.

It is difficult to find published evaluations of new scheduling software in home care, but an *ad hoc* review of existing products—some which have been designed especially for home care, others which have been adapted across several industries—provides some insight into key features. Most systems are designed to automatically consider a range of consumer and worker characteristics in order to schedule the best matches and avoid incompatibility (for example, the incompatibility between a consumer with a dog and a home care worker with an allergy). Beyond this primary functionality, many systems also integrate other features, including online or telephonic check-in capability; billing and payroll functions; and/or staff record management. Some systems also provide an interface for home care workers, enabling them to check their schedules, access driving directions, learn about their clients, and so on—which may save administrative time and decrease communication gaps. As noted above, some scheduling and workforce

management programs also integrate a reporting function for home care workers, which can facilitate better communication within the care team.

In consumer-directed services, online registries designed to match workers and consumers fulfill a parallel function. As described in the next chapter, these “matching service registries” provide a centralized online resource for workers and consumers to find one another based on compatible schedules, needs, and preferences. There are currently 15 nonprofit matching service registries for consumers and workers operating in 11 states,⁴²⁴ as well as numerous private registries. These online platforms are critically important for helping address unmet needs among consumers, improve workers’ schedules, and promote sustainable employment relationships and continuity of care.

Technology may also be specifically leveraged to monitor workers’ location and movements, with electronic visit verification (EVV) technologies the most prevalent example. EVV systems are typically designed to document, at a minimum, the following details for every home care visit: the name of the consumer and worker; the date, time, and location of the visit; and the type of service performed. EVV has been used by larger home care providers for more than a decade, but will be mandated for all Medicaid-funded providers of personal care services by January 1, 2020 under the 21st Century CURES Act.⁴²⁵ (Home health agencies will be subject to the same requirement by 2023.)

There are a number of justifications for implementing EVV. Among home care agencies, EVV can help monitor service delivery and streamline record-keeping and billing functions. It can also be used to safeguard agency-employed workers, raising an alert if they do not check in or out when expected. (One explicitly safety-focused example is AtHoc, a software program that is designed to serve as a “virtual companion” while home care workers are alone in the field.⁴²⁶ As well as enabling workers to check in and out on their phones, the mobile application incorporates a “single-touch duress capability” that workers can use to alert their supervisor of an emergency situation, and geo-tracking that they can activate if they feel threatened while in transit.) At the system level, according to the Centers for Medicare and Medicaid Services (CMS), EVV is designed to reduce “fraud, waste and abuse.”⁴²⁷

The 21st Century Cures Act requires states to engage with home care agencies to ensure that any mandated EVV system is “minimally burdensome” and aligns with existing EVV systems and best practices. The law

also requires that each state solicit input on their EVV requirements from home care consumers. However, a number of concerns about the Act’s requirements have been raised, including about the costs of researching, testing, implementing, monitoring, and improving EVV systems, and about the inadequacy of existing EVV training and support systems for home care employers, workers, consumers, and family members.⁴²⁸

The biggest concern about the Act, however, relates to the extension of EVV into consumer-directed programs, where it has not traditionally been used. Stakeholders have identified a number of potential adverse consequences, including that EVV may: undermine consumers’ authority as employers; disrupt the relationship between consumers and their workers; limit consumers’ community participation, if workers are only allowed to check in and out from consumers’ homes; and infringe on workers’ and consumers’ privacy and liberty by requiring them to use their personal devices and tracking their movements with GPS.⁴²⁹ When the EVV requirements come into force in 2020, it will be critical to closely monitor how these concerns play out in practice.

Finally, technology can be leveraged to improve outreach and recruitment methods in home care, which is critically important in the context of the growing workforce shortage. In particular, social media provides a key platform for raising the profile of home care jobs and boosting recruitment efforts. As one successful employer-level example, a digital strategy and social media firm called DAYTA Marketing recently worked with a senior living community in Minnesota to overhaul its recruitment approach, in part by advertising open positions to target audiences on social media and directing prospective candidates to apply online using their mobile devices.⁴³⁰ From 2016 to 2017, the new recruitment strategy was associated with a 33 percent increase in new applicants, a 46 percent increase in the number of hires, and a 45 percent decrease in vacant positions.

State-level actors can also use digital media to support efforts to develop the pipeline of potential workers, including by disseminating public service announcements about home care, advertising training and career development programs, and directing individuals to online registries, job fairs, and other employment opportunities.⁴³¹ Looking ahead, technology may be employed more consistently to connect workers and employers online and streamline the application, screening, and hiring process.

CONCLUSION

This chapter has discussed four categories of technology that—with caveats—offer promise for strengthening the role and impact of home care workers in HCBS. These categories encompass technologies that: support workers’ training and skills development; augment their assistance with ADLs; facilitate their communication with the interdisciplinary team; and, at the organizational and systems levels, improve workforce development and management. It is important to underscore the value of these technologies in *supporting* rather than *supplanting* the personal relationships that are critical to quality care—including the direct relationships between home care workers and consumers, but also the relationships between training instructors and trainees, workers and clinical supervisors, and others.

To strengthen the value of these technological developments in home care, and to mitigate their potential risks and harms, it is essential to involve

consumers and workers in every stage of the research and development process, to ensure their priorities and experiences are addressed; to consider a full range of individual and relational outcomes when evaluating technologies, not just technical performance; and to account for the full costs of technology, including ongoing training and support costs to ensure that technologies are being implemented as intended and achieving desired outcomes. In each of these domains, the home care sector could learn from technological developments in other sectors—such as online household job platforms, as one example—about successful efforts to engage workers and serve consumers efficiently, safely, and equitably.

In summary, as technology becomes ubiquitous in every aspect of daily life, it is imperative for HCBS stakeholders to identify and invest in the most appropriate technologies for the sector—to improve consumers’ access to and experiences of care, support home care workers and improve their job quality, and mitigate risks and harms to the greatest extent possible.

MEASURING AND MONITORING PROGRESS

VISION ► Improved and integrated data monitoring and reporting systems in home care to facilitate better understanding of the workforce shortage and the connections between workforce investments, recruitment and retention, and care quality outcomes.

This report began by asserting that formal home and community-based services (HCBS) are defined and driven by the direct relationship between each home care worker and consumer. As described in the chapters that followed, a range of factors inform the quality and sustainability of this relationship, from the individual worker’s competency to the overall supply of workers in the system.

The home care sector’s capacity to identify and address any of these factors, however, is stymied by inadequate data. Are there enough workers to meet demand? Do workers’ competencies align with consumers’ needs? Have interventions to build new workforce pipelines, improve training completion rates, or bolster compensation for home care workers achieved their intended goals? And how do investments in the workforce

impact consumers’ experiences and outcomes? To answer such essential questions, systematic data-collection and reporting efforts are required.

This chapter begins by describing the current state of knowledge on the home care workforce, before considering four ways that data on this workforce can be collected and used to improve home care; namely, to quantify the workforce shortage, evaluate training programs, inform fiscal decision-making, and improve deployment of workers. In the final section of the chapter, we discuss the importance of integrating workforce quality measures in alternative payment models to incentivize investments in the workforce as a key step toward achieving better value in HCBS.

MEASURING THE HOME CARE WORKFORCE

Home care leaders need accurate data on the size, stability, and compensation of the home care workforce over time and across settings and regions.⁴³² These data are essential to determine current resource allocation and plan for the future, particularly in the face of a growing workforce shortage. The two primary sources of workforce data are public surveys and administrative data—each of which have significant limitations, as described below.

PUBLIC SURVEYS

The Bureau of Labor Statistics (BLS) Occupational Employment Statistics (OES) program, which surveys 1.2 million establishments with a response rate of more than 70 percent,⁴³³ offers the most accurate national estimate of the home care workforce.

Historically, the OES survey only captured home care workers employed by agencies, excluding self-employed workers and private households. However, in 2013, the OES survey methodology was amended to include private households as “establishments” in the Services for the Elderly and Persons with Disabilities (SEPD) industry. Private households were designated as establishments if they reported paying a share of federal unemployment insurance as part of their participation in Medicaid-funded consumer-directed programs.⁴³⁴

Although survey revisions complicate longitudinal and interstate comparison (given that states implemented different reclassification methods), this particular change appears to have had a dramatic effect on estimates of home care workers in states with large consumer-directed programs. In California, where the bulk of HCBS services are provided through the consumer-directed model, the OES estimate of personal care aides rose by 376,000 from 2016 to 2017 (compared to 20,000 from 2015 to 2016).⁴³⁵ In Washington, which also has a large consumer-directed program, the count of personal care aides increased by 21,000 from 2016 to 2017, versus a more marginal 1,000-worker increase from 2015 to 2016. The OES survey still excludes consumer-directed workers who are classified as self-employed, however (i.e., those who do not work for a home care establishment, whether an agency or household).

Beyond the challenges with identifying independent providers, industry and occupational classification systems stand in the way of accurately quantifying the home care workforce. As discussed in previous chapters, home care services are captured by two North American

Industry Classification System (NAICS) codes. However, the definitions for these two industries, which were adopted more than two decades ago, do not adequately reflect the current configuration of the home care sector. There is now considerable overlap, for example, between medical and nonmedical home care service providers, while other types of providers have carved out a more distinct role (such as adult day services, which had grown to constitute 8 percent of establishments in the SEPD industry, according to the latest available data⁴³⁶).

It’s also unclear how fiscal management service (FMS) providers factor into OES estimates. These entities primarily provide payroll and human resources supports to consumers who direct their own services under state

Because the current SOC system does not quantify different types of personal care aides, such as direct support professionals, states are hampered in their efforts to address workforce development for particular settings and populations.

Medicaid programs. There are at least two points of ambiguity in the data on FMS providers. First, some FMS providers serve as co-employers, in which case they may report these workers on the OES survey—but FMS providers who do not serve as co-employers may not. Second, depending on the services rendered, FMS providers may be classified in one of the two home care industries or may instead be classified in a third industry, Employment Services.

In addition to industry classification problems, accurately classifying workers is difficult according to the current Standard Occupation Classification (SOC) system. A primary problem is that the personal care aide occupational designation includes workers who support older adults, people with physical disabilities, and people with intellectual and developmental disabilities.

However, advocates argue that workers who serve the latter population—who are known as direct support professionals (DSPs)—have a unique set of training needs and on-the-job responsibilities, and should therefore be classified separately. For example, DSPs often coach their clients and assist them with employment, which are not typical duties of other personal care aides. Because the current SOC system does not allow for quantification of different segments of the personal care aide workforce, such as DSPs, states are hampered in their efforts to address workforce development for particular settings or populations.

In short, public survey data can help measure employment and wages among home care workers—but given the current industry and occupational classification systems, these data are difficult to analyze by setting, population served, employment model, and other factors.

ADMINISTRATIVE DATA

Training, certification, and employment records and other forms of administrative data can also be used to quantify the home care workforce. For example, because Wisconsin collects data on nursing assistant certifications, the state was recently able to demonstrate a downward trend in certification rates, which dropped 27 percent from 2012 to 2018.⁴³⁷ Although that study focused on nursing assistants in nursing homes, the approach is instructive for home care as well.

One way that states can track home care workers is through an online registry of trained and/or certified workers. Massachusetts, for example, recently passed legislation requiring the Department of Elder Affairs to create a registry of home care workers employed by state-contracted home care agencies.⁴³⁸ As well as streamlining training verification for employers—and therefore obviating their need to retrain new hires—the registry could be used to measure the size and competency of the workforce at the state level. Of note, however, there was considerable opposition to the proposed legislation based on concerns about workers' privacy and safety, given that the registry will include addresses and other identifying information. The debate about the Massachusetts registry underscores the need to consider workers' privacy concerns when developing registries and utilizing them to track workforce data.

In states where home care workers are not tracked in a centralized manner, payment data may help identify workers and delineate wage rates across programs, overcoming the issues raised above around industry

and occupational classifications. For example, because Pennsylvania contracts with a single FMS provider, independent providers in consumer-directed programs are easily quantifiable. Using payment data, the state could ascertain that there were 20,310 independent providers in 2017.⁴³⁹

However, in many cases payment data are fragmented across numerous managed care organizations and/or FMS providers—and in some states, there are no workforce reporting requirements for either. In such cases, states may need to create reporting rules for these providers and/or implement alternative methods for collecting workforce data, such as through periodic surveys of payers and employers.

HOW AND WHY TO IMPROVE DATA COLLECTION

A major limitation of the data sources described above is that, while they provide insights on the size and compensation of the workforce, they are generally insufficient for measuring the stability of the workforce or its capacity to meet rising demand. New data-collection systems are needed to measure turnover and vacancies and to evaluate the efficacy of workforce interventions. The following section will explore four opportunities to improve the collection and use of data in home care.

QUANTIFYING THE WORKFORCE SHORTAGE

Data on job vacancies across home care services would provide incontrovertible evidence of a workforce shortage—proof that is needed to capture media attention, inform public education, and compel policy change.

However, few states systematically track these data in home care, given the time and expense involved. As described in Chapter 2, Minnesota is a notable exception; the state measures job vacancies by industry, occupation, and region, allowing for year-over-year comparisons. When job vacancy data are combined with OES home care employment data, it is clear that job vacancies for personal care aides and home health aides have increased in the state as demand for services has grown over the past decade.⁴⁴⁰ As another example, Texas has recently begun requiring all LTSS providers to include data on workforce recruitment, retention, turnover, and benefits in their cost reporting. The new workforce-related questions in Texas are based on questions that nursing homes and intellectual and developmental disability providers are already required to answer in their cost reports in Washington State.



In some cases, worker registries (as described above) can offer insight on job turnover among home care workers, as well as helping quantify the size of the workforce. New York State, for example, uses a public online registry for home health aides and personal care aides which includes training details and employment history.⁴⁴¹ Theoretically, this resource could help researchers determine annual turnover and other home care labor market trends, as long as employers are properly incentivized to update the data.

Private companies and advocacy organizations can also play a role in collecting workforce stability and capacity data. (Many of these examples were introduced in Chapter 2, but are repeated here to highlight data-collection opportunities.) For example, the Massachusetts Home Care Aide Council recently surveyed Medicaid-reimbursed home care providers and found an average quarterly turnover rate of 35 percent among home care workers—and 90 percent of home care agencies reported that workforce challenges were their top concern.⁴⁴² Similarly, 77 percent of respondents in the 2017 national survey of private-duty home care agencies conducted by Home Care Pulse cited the workforce shortage as one of their top three concerns.⁴⁴³

States and advocacy organizations may also partner to collect point-in-time vacancy data. In 2016, the nonprofit advocacy organization Iowa CareGivers worked with Iowa Workforce Development, a government agency, to survey hospitals and long-term care providers on staff vacancies, benefits, work hours, hiring issues, and barriers to retention.⁴⁴⁴ They found a combined vacancy rate of 15 percent for personal care aides and home health aides, with “lack of applicants” the most commonly cited explanation.

Although the Iowa CareGivers survey asked providers to generate data from their records, surveys that require less legwork by respondents can also be used to measure workforce capacity. In 2015 and 2016, the Wisconsin Personal Services Association (WPSA)—which represents home care agencies in the state—surveyed its membership. Rather than asking for detailed data on turnover and retention, WPSA asked more general questions about staffing challenges. Among other findings, WPSA reported that 9 out of 10 organizations were having difficulty finding staff to fill open cases.

Consumer surveys can also help describe the workforce shortage and its impact on care quality. Looking again to Wisconsin, a coalition of organizations representing people with disabilities recently surveyed members to assess the impact of the home care workforce crisis. They found that 85 percent of respondents didn't have enough workers to cover shifts and that many respondents were experiencing gaps in services.⁴⁴⁵ The coalition also collected first-person, often harrowing reports of the day-to-day consequences of service gaps. Similarly, the Consumer Directed Personal Assistance Association of New York State surveyed its members on workforce issues in 2017, finding that half of respondents advertised open positions three or more times per year, and two-thirds of the open positions took more than one month to fill.⁴⁴⁶ The survey found that low wages drove turnover more than any other factor.

Although providing valuable insight, these third-party surveys—often conducted once, or infrequently—are not sufficient substitutes for consistent and systematic state-level data collection on workforce capacity to inform workforce development efforts.

EVALUATING TRAINING PROGRAMS

States rarely revise training standards for personal care aides or home health aides and, when they do, seldom evaluate how changes impact workers and consumers. As indicated in Chapter 5, however, Washington State is a notable exception.

In 2007 and 2008, prior to overhauling the state's home care training standards and delivery system, Washington surveyed both consumers and workers in its large consumer-directed program. According to the survey findings, just under half (44 percent) of workers were interested in additional training beyond the required 32 hours—though 94 percent felt that their skills were adequate for the job—and 77 percent reported they would enroll in advanced training in specific conditions if it was offered.⁴⁴⁷

In 2012, after extensive deliberation among stakeholders and two successful ballot initiatives, the state implemented a new training system with enhanced requirements—and the state's auditor continues to periodically review administrative data to assess the training program's success. From 2014 to 2016, the audit found that almost half of those who started training did not earn their certification.⁴⁴⁸ To learn more about certification barriers, the auditor's office directly surveyed training participants who did not earn certification.⁴⁴⁹

One-quarter of respondents cited unspecified personal reasons for leaving the training program, while two-thirds reported training-related barriers. Many could not find a training that fit their schedule or a training site that was close enough to home, for example, while others had trouble with the certification exam. Thanks to this evidence, the state has partnered with providers to expand translation services and to increase the number of trainings and testing sites.

INFORMING AND EVALUATING FISCAL DECISIONS

Without doubt, data collection is essential for making fiscal decisions that directly or indirectly impact the home care workforce, such as Medicaid reimbursement rates.

In Wyoming, survey data are used to set Medicaid reimbursement rates in HCBS.⁴⁵⁰ In the past, the state struggled to get robust cost data from providers, including data on labor costs—until working with a consulting group in 2016 to improve the survey methodology, in part by creating an abbreviated version for smaller providers (with revenues under \$1 million). These changes significantly boosted the cost survey response rate: the next year, 56 percent of providers completed the survey—and intellectual and developmental disability providers saw a 3.3 percent rate increase as a result.

As another example, New York surveyed home care providers to inform rate adjustments related to implementation of the Fair Labor Standards Act (FLSA) final rule for home care, namely to cover overtime and/or travel pay.⁴⁵¹ Although the rate adjustments have been insufficient to meet the full costs of labor and maintain care continuity for consumers, given other policy changes that are simultaneously affecting home care providers in the state, this survey was nonetheless important for calculating FLSA's potential impact and adjusting policy accordingly.

Robust data are also needed (though rarely used) to help ensure that fiscal policies, such as wage pass-throughs for workers, are implemented as intended. An example from Massachusetts helps illustrate this point. In 2017, the state allocated \$35.5 million to boost wages for nursing assistants.⁴⁵² In 2018, however, the state found that 12 nursing homes had not distributed those funds to workers as expected. This demonstrates the importance of collecting data to evaluate the impact of specific interventions, such as targeted rate increases.

IMPROVING DEPLOYMENT OF THE WORKFORCE

Data can also be useful at a micro-level to improve deployment of the home care workforce, for instance through matching service registries that connect workers directly with consumers, or in some cases agency employers, on the basis of information provided by each party. Matching may be done in one of two ways: either consumers search the worker database directly using one or more searchable criteria, or registry staff conduct the search on their behalf. Some registries also connect with training resources; Minnesota's statewide Direct Support Connect registry interfaces with the College of Direct Support, for example, so that workers can display their verified training credentials.

Robust data are also needed (though rarely used) to help ensure that fiscal policies, such as wage pass-throughs for workers, are implemented as intended.

There are currently 15 nonprofit matching service registries for consumers and workers operating in 11 states.⁴⁵³ Of these, 10 are statewide and five are regional. Nearly all these registries are publicly funded, whether directly through state agency funding or indirectly through state and federal funding to local organizations. Seven of these registries share the same online platform, including four in California which use QuickMatch and three in other states which share the Rewarding Work platform.

Private registries may fulfill a similar role. MySupport is a private registry operating in California, New York, and Virginia. Beyond collecting basic needs and availability data, MySupport also includes values-based questions to strengthen the match between workers and consumers.⁴⁵⁴ For example, users are prompted to answer the following item: "You and your client sit down at a restaurant. The server comes by and asks you what your clients wants to order. How are you most likely to respond?" Workers can choose one of three options: "Correct the server and tell them to talk to your client instead;" "Pretend you didn't hear them;" or "Order for your client." Consumers can view these types of responses before deciding which prospective workers to contact.

Aside from registries that operate in the consumer-directed space, there are other platforms designed to connect workers and agency employers. ReciproCare, for example, is a new online jobs platform that borrows some elements of matching service registries.⁴⁵⁵ Employers can list positions based on location, required skills and experience, scheduling, and other factors. In addition to listing open positions, employers can search for prospective employees on the site (and likewise, workers can search for open positions that meet their needs and preferences). The system also includes tools to streamline the application, screening, and hiring process.

In summary, robust data on the home care workforce is important for informing decision-making by all stakeholders, from policymakers to consumers, and on every front, from rate-setting to workforce interventions to individual hiring decisions.

QUALITY MEASUREMENT AND THE HOME CARE WORKFORCE

The foregoing discussion on collecting workforce data in home care overlaps with a broader conversation about how to define and measure quality in home care. The introduction of value-based payment models in HCBS offers a particular opportunity to strengthen the home care workforce and elevate the role of home care workers—if the right measures, methods, and monitoring systems are in place to demonstrate the value of workforce investments (i.e., the positive impact of those investments on workforce stability, care quality, and/or cost).⁴⁵⁶

Defining and measuring quality in HCBS is complicated by a number of factors, as noted in Chapter 6. First is the multi-faceted nature of HCBS, which makes it difficult to define quality with a single metric or manageable set of metrics. Related is the heterogeneity across HCBS programs, service delivery models, providers, and consumers,⁴⁵⁷ which renders prioritization and standardization of quality measures nearly impossible. (The National Balancing Indicators Contract team—funded by CMS from 2007 to 2010 to develop a framework for measuring "balanced, person-driven LTSS"—identified nearly 600 indicators in use at the time.⁴⁵⁸) Part of the challenge is to identify subjective as well as objective measures of quality in HCBS; in other words, quality measurement efforts must adequately capture consumers' self-reported outcomes, which are often given less credence than clinical outcomes.

Second, even where there appears to be consensus around a quality domain, there is limited consistency in measurement. For example, 48 states measure quality of life in at least one waiver program, but using a range of different tools, including the National Core Indicators Aging and Disability (NCI-AD) survey, the Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey, the Money Follows the Person Quality of Life Survey, or the PACE Health Outcomes Survey, among other instruments.⁴⁵⁹

Third, HCBS programs and providers are limited in their capacity to implement new data-collection, management, and reporting systems to fulfill quality measurement goals.⁴⁶⁰ Because of these challenges, states tend to borrow quality measures from other settings, namely primary or acute care; opt for measures that reflect compliance with regulations rather than outcomes for consumers; and/or identify measures that can easily be derived from existing administrative or survey data.⁴⁶¹

Nonetheless, there has been progress toward developing quality measures and methods in home care, most notably by the National Quality Forum (NQF). Under a contract with the U.S. Department of Health and Human Services, the NQF recently led a multi-stakeholder project that aimed to develop a shared understanding of quality in HCBS, identify gaps in current HCBS quality measurement, and recommend priorities for measure development.⁴⁶² The final report, published in 2016, identified the following 11 domains of quality in HCBS:

- Service delivery and effectiveness;
- Person-centered planning and coordination;
- Choice and control;
- Community inclusion;
- Caregiver support;
- Workforce;
- Human and legal rights;
- Equity;
- Holistic health and functioning;
- System performance and accountability; and
- Consumer leadership in system development.

These 11 domains comprise 40 subdomains, or measurement topics. For example, the workforce domain comprises seven subdomains related to the “adequacy, availability, and appropriateness” of the paid HCBS workforce. Addressing quality at various levels (from the point of care to the systems level), these subdomains are:

- A person-centered approach to services;
- Demonstrated competencies, when appropriate;
- Safety of and respect for the worker;
- Sufficient workforce numbers, dispersion, and availability;
- Adequate compensation, with benefits;
- Cultural competence; and
- Workforce engagement and participation.

For each domain, the NQF report includes recommendations for short-term, intermediate, and long-term action on measure development. With regard to the workforce, these recommendations reflect the points raised earlier in this chapter and throughout this report by calling for standard measures of workforce size, stability, and compensation; standard measures of worker outcomes (such as preparedness, satisfaction, support, and opportunities for advancement); and systems for collecting these data.

The NQF report therefore represents progress toward improving quality measurement in HCBS, though with considerable research, prioritization, and implementation still required. A key point to underscore is that linking value-based payments to clinical or service utilization outcomes is necessary but insufficient. Improving quality in HCBS also requires attention to structural measures (e.g., related to workforce supply and job quality) and process measures (e.g., related to the provision of competent and person-centered care). Only by rewarding progress on all three fronts can value-based payments incentivize the paradigmatic change that is required in HCBS.

OPPORTUNITIES TO LEVERAGE DATA THROUGH MANAGED CARE

The move to managed care complicates data collection in HCBS to some extent, as data are distributed across managed care plans and reported back to states in different ways. As a result, states no longer necessarily have direct access to complete data on enrollment, billing, consumer health, or other domains on which to base future planning and decision-making.

On the other hand, managed care offers potential new opportunities to improve data collection and utilization in HCBS. First, the final rule on Medicaid managed care issued by CMS in 2016 sets a number of monitoring and reporting expectations for all managed care plans, including managed long-term services and supports (MLTSS) plans.⁴⁶³ As a key example, the rule requires

states to develop a written quality strategy for managed care, specifying performance measures, and report on service utilization and care quality.⁴⁶⁴ The rules do not specify that direct care workers should be included in states' quality strategies (or network adequacy strategies, which are also required). However, states are required to develop a stakeholder input process, during which workforce issues may be raised.

Of note, the National MLTSS Health Plan Association reports that 13 states with MLTSS programs have currently implemented HCBS quality measures, but national standards and guidance are needed to help address validity and reliability concerns.⁴⁶⁵

National standards and guidance on implementing quality measures in MLTSS programs are needed to help address validity and reliability concerns.

Beyond the federal regulations, states can implement their own requirements for MLTSS plans regarding data collection and reporting. Tennessee, for example, requires MLTSS plans and FMS providers to regularly submit data on 11 performance measures for consumer direction, including enrollment, disenrollment, and the maximum and average time from referral to initiation of services.⁴⁶⁶ Specific to the workforce, Arizona's MLTSS plans are contractually required to collect data on workforce capacity, and to use those data to plan workforce development interventions.⁴⁶⁷

On a related note, MLTSS plans may be in a better position than either state governments or individual providers—at least theoretically—to implement new data-collection systems and use those data to drive innovation and quality improvement. For example, by analyzing aggregate data on members, an MLTSS plan may identify care transition as a key target for quality improvement. The plan may then choose to invest in a senior aide role to support members who have been hospitalized, to help promote care continuity between settings and reduce the risk of rehospitalization. Finally, the plan can evaluate

the impact of the new advanced role on rehospitalization rates and related costs. By contrast, in a traditionally siloed system, the lack of communication between providers (and/or lack of interoperability between health information systems) hampers such data-driven innovation.

CONCLUSION

Home care providers, consumers, and family members know about the workforce shortage in home care. They see service gaps and experience unmet needs. But their firsthand reports are not enough; better point-in-time and trend data on the home care workforce is needed to compel appropriate action.

National public data sources shed some light on the size and earnings of the home care workforce over time, but these data have limitations. Most critically, current industry and occupational classification systems conflate various types of home care workers across settings and populations served, making the data sets too general to inform targeted workforce development activities. Alternative data sources, including administrative data and stakeholder surveys, can help fill in the gaps in public data by generating evidence on turnover, retention, and other indicators of job quality and workforce stability. But because these data are rarely longitudinal, they cannot typically be used to measure the impact of targeted workforce policies and programs.

This chapter has argued that better data-collection systems—systems that successfully balance concerns about validity, usability, and administrative burden—are essential for achieving goals related to strengthening the workforce and thereby improving care quality and access. At the macro level, better data can help policymakers quantify and address the workforce shortage, monitor the pipeline of new workers, and plan and evaluate policy decisions that impact the workforce. At a micro level, data can be used to facilitate more efficient and successful matches between workers and consumers or agency employers.

Further, broader trends in health care and HCBS, namely the introduction of value-based payment and managed care, have opened up new opportunities to use data to demonstrate the links between workforce investments and care quality outcomes. Consensus about how to define and measure quality in home care is still needed, however, to realize the potential positive impact on workers' jobs and consumers' experiences of care.



Conclusion and Recommendations

Approximately 15 million individuals living at home in the United States experience some degree of difficulty with daily activities, due to physical, cognitive, developmental, behavioral, and/or chronic health conditions. Without reliable assistance, many of these individuals would struggle to live independently in their homes and engage in their communities. Although the majority of personal assistance is provided by unpaid family members and friends, paid home care workers fill a critical role, especially for individuals with limited informal caregiving networks or with more complex needs. As the U.S. population lives longer and grows older, an ever-larger home care workforce will be needed—and yet the home care sector is already struggling to recruit and retain enough workers to meet current demand.

This report has explored these current realities with a view to identifying opportunities for strengthening the home care workforce and improving home care access and quality in the years ahead. The inquiry was guided by three broad questions, namely:

- 1. What are the main factors impacting the home care delivery system and workforce in the United States, now and looking ahead?**
- 2. What are the most promising opportunities for strengthening the home care workforce and maximizing its role within the changing LTSS system?**
- 3. How do these factors and opportunities vary between states and across different service delivery models?**

To address these questions, we drew on a range of sources, from public data sets to published research to written and anecdotal reports on promising practices. The report began by examining in detail the growing and changing home care sector in terms of consumer demand and demographics, workforce supply, and the configuration of services. Part II of the report focused on home care jobs, highlighting wages, benefits, scheduling, job supports, supervision, and training standards as key drivers of job quality and care quality. Finally, Part III considered broader trends and opportunities in home care, including health care payment reform, upskilled and advanced roles for the home care workforce, new technologies, and improved data collection and reporting. Across each of these topics, we identified key factors that impact recruitment and retention of home care workers and the value (i.e., quality and cost-efficiency) of home care services.

We conclude with recommendations for achieving the multi-faceted vision of home care that was developed in this report.

RECOMMENDATIONS

OVERALL RECOMMENDATIONS

1. Develop, scale-up, and sustain successful home care interventions at the state, regional, and/or national levels. As highlighted throughout this report, the HCBS sector has seen considerable innovation within recent decades. However, many efforts have necessarily been undertaken on a small scale and for limited duration, and often without robust evaluation or lasting impact. The time has come to develop and test solutions on a larger scale—whether in localities, states, regions, or nationally—that build on and extend existing knowledge and lessons learned.
2. Promulgate evidence-informed best practices for recruiting and retaining a home care workforce that is well-prepared to provide quality services for consumers. While systemic solutions are being developed, the challenge of finding and keeping workers (in the face of a looming workforce crisis) falls to individual employers, including agency providers and self-directing consumers. Just as action is needed to implement collective knowledge at the local, state, and national policy levels, dissemination of lessons learned to the employer level will also help move the field forward. The range of topics should include outreach and recruitment, screening and hiring, orientation and onboarding, training, supervision and support, compensation, engagement and recognition, and strategies for supporting career advancement.

JOB QUALITY RECOMMENDATIONS

3. Through a multi-stakeholder process, develop a national strategy for improving compensation for direct care workers, including home care workers. Albeit with considerable variations between states, programs, settings, employers, and even individual workers, wages and benefits for direct care jobs remain consistently and egregiously inadequate. If the HCBS sector is to attract and retain enough workers to meet demand—and reduce costly churn within the workforce—nothing short of a national commitment to raising the floor for these jobs will suffice.

4. Monitor and evaluate the impact of wage pass-throughs and other public investments to make sure that they achieve their intended impacts on job quality. At the state level, policymakers have a number of options for improving compensation for home care jobs funded by public dollars. However, these efforts do not always achieve their intended impacts—and in some cases even reduce total compensation for workers, such as when incremental wage increases are offset by loss of eligibility for public benefits. Follow-through is required to ensure accountability from payers and providers, and to allow for course corrections when unintended negative consequences are identified.

5. Consider the impact on low-wage workers, including home care workers, when designing new employment protections. Policies that benefit workers across sectors, such as paid family and medical leave policies, provide another mechanism for improving job quality for home care workers. However, if they are to be relevant and accessible, such policies must be carefully designed to reflect home care workers' employment realities, which include inconsistent hours and multiple employers.

6. Create public authorities or other entities at the state or regional level that can help improve job quality for independent providers, while promoting the principles of consumer direction. Although the wage ceiling for independent providers may be marginally higher, in most cases these workers lack systematic access to the full range of employment benefits and protections that are required for agency employees. To strengthen and safeguard the independent provider workforce, every state should ensure that mechanisms are in place for supporting these workers and facilitating their access to group benefits such as health insurance, retirement accounts, and ongoing training.

TRAINING RECOMMENDATIONS

7. Build partnerships between workforce development organizations, educational institutions, home care employers, labor organizations, and industry associations to create worker pipelines, improve training, and design new career pathways. Although home care is adding more new jobs than any other single occupation in the American economy, these jobs are not often the target of broad-based workforce development efforts. As already stated, this leaves individual employers struggling to recruit and train enough workers to meet demand. A more deliberate, coordinated, well-funded workforce development approach is needed, ideally

using a competency-based credentialing framework to facilitate both individual workers' career advancement and sectoral workforce deployment efforts. Medicaid and other funding sources should be leveraged to finance this approach, ensuring that training costs are not devolved to individual job seekers and employers.

8. Develop and strengthen national training standards for all home care workers. National competency-based training standards for all home care workers are critically needed to ensure that workers are prepared to meet consumers' complex needs in the community setting. With appropriate provisions for each segment of the workforce, these standards must encompass personal care aides as well as home health aides, and independent providers in consumer-directed programs as well as agency workers. Consumers and workers must play a guiding role in defining core competencies for home care workers and developing training standards and curricula.

Policies that benefit all workers, such as paid family and medical leave ... must be designed to reflect home care workers' employment realities, including inconsistent hours and multiple employers.

9. Ensure adequate training and support for consumers who hire their own workers, including on team-building, communication, and problem-solving as well as hiring, scheduling, and other employment responsibilities. Depending on the program, consumers who direct their own care may have considerable employment-related responsibilities—including not just legal responsibilities, but also managerial and supervisory responsibilities—with implications for their workers' job satisfaction, commitment, and performance. Just like agency employers, consumers need training and ongoing support to fulfill these responsibilities effectively and to manage the stress that they might engender.

PAYMENT RECOMMENDATIONS

10. Through a multi-stakeholder process at the state and national levels, rigorously explore new models for funding home care as a component of an affordable and sustainable LTSS system. Alongside efforts to improve home care within the current LTSS system, it is critical to continue striving to create a public insurance system to replace it, building on the groundwork laid by the CLASS Act. Although a national solution to the fragmented, inadequate, and unsustainable current system is needed, state-level efforts are helping build knowledge and momentum toward this goal.

11. Fund large-scale evaluations of new models of service delivery in home care, including models that integrate personal assistance with other services—such as housing supports—and that explicitly leverage the role of the home care worker in new ways.

The current emphasis on care coordination and integration offers an unprecedented opportunity to implement innovative home care service models that leverage home care workers to achieve quality improvements and generate cost savings across the larger health care system. To achieve lasting impact, these new models must be funded, tested, and evaluated on a large scale. One promising service delivery model is the agency with choice (AWC) model, which promotes more autonomy than the traditional agency model, while also providing supports for consumers and workers that may be lacking in consumer-directed programs.

12. Build minimum standards for home care jobs into public contracts and/or promote investment in the workforce through value-based payment arrangements. Because labor is the primary expense in home care, efforts to contain costs often target workers' wages and/or service hours. To offset this tendency, contracts with managed long-term care plans and with providers, as well as value-based payment arrangements, should set minimum standards for home care workers' total compensation (taking wages, benefits, and hours into account) and explicitly incentivize investments in the home care workforce—based on robust workforce quality measures, as recommended below. Innovative thinking about how to reward workforce investment in the consumer-directed space is also critically needed.

MAXIMIZING HOME CARE RECOMMENDATIONS

13. Formalize home care workers' role in observing, recording, and reporting key information about consumers' health and wellbeing. Although home

care workers often work in relative isolation, there is growing evidence that better communication links between home care workers and clinical supervisors can improve consumers' outcomes while also boosting workers' job satisfaction and retention. Efforts to better connect home care workers with the interdisciplinary team (with consumers' permission) must be supported by training for all team members (including, for home care workers, training to strengthen their "observe, record, report" skills); well-defined structures and processes for reciprocal information exchange; and adequate compensation for any additional interdisciplinary teamwork responsibilities.

14. Remove barriers that prevent home care workers from working to their fullest capacity, with appropriate training and supervision. An increasing proportion of home care consumers require assistance with routine health-related tasks at home. When home care workers are not authorized to provide such assistance due to regulations, liability concerns, or norms of practice, consumers may experience missed or delayed care—or may even be forced to move into an institutional setting. This inefficient situation should be addressed first and foremost through evidence-informed national regulations outlining the minimum set of tasks that all personal care aides and home health aides may perform, regardless of state or program. These national minimum standards may then be expanded at the state level through nurse practice acts and related statutes.

15. Scale-up and test advanced roles for home care workers to demonstrate the impact on care quality, costs, and workforce recruitment and retention. Building new rungs into the career ladder for home care workers helps improve recruitment and retention as well as improving care delivery and outcomes. Numerous advanced roles have been implemented across the country, primarily by individual providers or provider groups. The critical next step is to implement the most promising examples on a larger scale in order to make an evidence-based case for sustained investment.

TECHNOLOGY RECOMMENDATIONS

16. Invest in the development and dissemination of e-learning training curricula for home care workers and consumers. Encompassing a range of technology-driven teaching modalities, effective e-learning can augment classroom-based training for home care workers while also filling critical gaps, including for independent providers and consumers in rural and other underserved

areas. However, the full potential impact of e-learning in home care will not be realized without parallel efforts to address disparities in Internet access and computer literacy across populations.

17. Expand research on technologies that directly support efficiency and effectiveness in home care. With the exception of investment in robotics, technological development in home care remains relatively limited. In particular, there is a clear need for research and development of assistive technologies, information and communication technologies, and workforce development and management technologies in home care. In each of these areas, attention to consumers' and workers' experiences, and the ethical and workflow implications of the new technologies—as well as their impacts on care outcomes and costs—is essential.

The current emphasis on breaking down siloes provides a new opportunity to gather evidence on the links between investments in the home care workforce and outcomes for both consumers and workers.

18. Designate specific funding for home care providers to introduce tested technologies into practice, accounting for upfront and ongoing costs. Operating on very narrow margins and with minimal existing technological infrastructure, most home care providers do not have the capacity to introduce and sustain new technologies without additional funding, regardless of the potential downstream cost savings. As well as designated funding, guidance for both providers and payers, including managed care plans, about how to effectively leverage technology in home care is critically needed.

DATA RECOMMENDATIONS

19. Update industry and occupational classification systems to facilitate robust analyses of the workforce across roles and settings. Efforts to describe the

direct care workforce, identify trends over time, and plan for the future are limited by current data classification systems. A multi-stakeholder initiative to revise these classifications to reflect the current realities of the industry and the workforce could reduce ambiguity and confusion in the sector and strengthen evidence-informed planning and policymaking efforts.

20. Develop a core set of quality measures to be used across the HCBS system, including workforce quality measures. The multi-faceted nature of HCBS, including home care, and the heterogeneity across programs, service delivery models, providers, and beneficiaries makes it exceedingly difficult to measure quality with a single set of metrics. Nonetheless, agreement on a minimum set of quality measures in home care—including in consumer-directed programs—is essential for setting standards, incentivizing quality improvement in home care, and holding providers and payers accountable. Workforce quality measures could address compensation, training, turnover, and job vacancies, among others.

21. Capitalize on the data-sharing capabilities within coordinated care and integrated payment models to demonstrate the links between workforce investments and consumer outcomes. The home care sector has been historically stymied by a lack of robust evidence on the associations between investments in the home care workforce and outcomes for both consumers and workers, due to the range of factors already identified. However, the current emphasis on breaking down siloes to provide more coordinated, effective, and cost-efficient services provides a new impetus and opportunity to demonstrate these associations. Large-scale evaluations of training, career advancement, and other workforce interventions as described above should make optimal use of these combined clinical and operational data sources.

As the U.S. population lives longer and grows older, an ever-larger home care workforce will be needed to ensure that individuals with personal support needs can live independently in their homes and engage in their communities. This report has laid out 21 evidence-based recommendations for improving home care jobs, boosting workforce recruitment and retention, and strengthening the home care sector. Although these recommendations address specific topics, such as job quality or financing, they are not designed to stand alone; coordinated action across the recommendations is required to effect meaningful and lasting systems change.

NOTES

1. Nicolini, Davide. 2009. "Zooming In and Out: Studying Practices by Switching Theoretical Lenses and Trailing Connections." *Organization Studies* 30(12):1391-1418. doi:10.1177/0170840609349875.
2. U.S. Census Bureau. 2017a. *American Community Survey (ACS), 2012-2016 5-year Public Use Microdata Sample (PUMS)*. <https://www.census.gov/programs-surveys/acs/data/pums.html>; analysis by PHI (August 15, 2018). Difficulty with ADLs, or "self care," is measured in the ACS by asking if respondents have "difficulty dressing or bathing." Difficulty with IADLs, or "independent living," is measured by asking if respondents have difficulty "doing errands alone such as visiting a doctor's office or shopping."
3. U.S. Census Bureau, 2017b.
4. U.S. Census Bureau. 2017b. *National Population Projections Tables, Table 2. Projected Age and Sex Composition of the Population*. <https://census.gov/data/tables/2017/demo/popproj/2017-summary-tables.html>; analysis by PHI (July 10, 2019).
5. Favreault, Melissa and Judith Dey. 2016. *Long-Term Services and Supports for Older Americans: Risks and Financing Research Brief*. Washington, DC: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation (ASPE). <https://aspe.hhs.gov/basic-report/long-term-services-and-supports-older-americans-risks-and-financing-research-brief>. Disability was defined according to the Health Insurance Portability and Accountability Act (HIPAA) criteria, namely a need for assistance with at least two ADLs that is expected to last at least 90 days or the need for substantial supervision for health and safety due to severe cognitive impairment.
6. Favreault and Dey, 2016.
7. Edwards, Ashley, Adam Bee, and Liana Fox. 2017. "Outlying Older Americans: The Puzzle of Increasing Poverty Among those 65 and Older." *Census Blogs*, September 12. https://www.census.gov/newsroom/blogs/random-samplings/2017/09/outlying_older_ameri.html.
8. Kaye, H. Stephen. 2013. "Disability Rates for Working-Age Adults and for the Elderly Have Stabilized, But Trends for Each Mean Different Results for Costs." *Health Affairs* 32(1):127-134. doi:10.1377/hlthaff.2012.0533; Schoeni, Robert F., Vicki A Freedman, and Linda G Martin, 2008. "Why Is Late-Life Disability Declining?" *The Millbank Quarterly* 86(1):47-89.; Freedman, Vicki A., Linda G. Martin, Robert F. Schoeni, and Jennifer C. Cornman. 2008. "Declines in Late-Life Disability: The Role of Early- and Mid-Life Factors." *Social Science & Medicine* 66(7):1588-1602. doi:10.1016/j.socscimed.2007.11.037.
9. Freedman, Vicki A., Linda G. Martin, Robert F. Schoeni, and Jennifer C. Cornman. 2008. "Declines in Late-Life Disability: The Role of Early- and Mid-Life Factors." *Social Science & Medicine* 66(7):1588-1602. doi:10.1016/j.socscimed.2007.11.037.
10. Kaye, 2013.
11. Schoeni et al. 2008.; King, Dana E., Eric Matheson, Svetlana Chirina, Anoop Shankar, and Jordan Broman-Fulks. 2013. "The Status of Baby Boomers' Health in the United States: The Healthiest Generation?" *JAMA Internal Medicine* 173(5):385-386. doi:10.1001/jamainternmed.2013.2006.
12. Ward, Brian W., Jeannine S. Schiller, and Richard A. Goodman. 2014. "Multiple Chronic Conditions Among US Adults: A 2012 Update." *Preventing Chronic Disease* 11. doi:10.5888/pcd11.130389.
13. Alzheimer's Association. 2019. "2019 Alzheimer's Disease Facts and Figures." Chicago, IL: Alzheimer's Association. <https://www.alz.org/media/Documents/alzheimers-facts-and-figures-2019-r.pdf>; Kasper, Judith D., Vicki A. Freedman, and Brenda C. Spillman. 2014. *Disability and Care Needs of Older Americans By Dementia Status: An Analysis of the 2011 National Health and Aging Trends Study*. Washington, DC: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation (ASPE). <https://aspe.hhs.gov/system/files/pdf/77141/NHATS-DS.pdf>.
14. Kaye, 2013.
15. Thomas, Raji and Michael Barnes. 2010. "Life Expectancy for People with Disabilities." *NeuroRehabilitation* 27(2):201-209. doi:10.3233/NRE-2010-0597.
16. Crimmins, Eileen M., Yuan Zhang and Yasuhiko Saito. 2016. "Trends Over 4 Decades in Disability-Free Life Expectancy in the United States." *American Journal of Public Health* 106(7):1287-1293. doi:10.2105/AJPH.2016.303120.
17. Unless indicated otherwise, the following figures are from the American Community Survey: U.S. Census Bureau, 2017a.
18. Crimmins et al., 2016.
19. Alzheimer's Association, 2019.
20. U.S. Census Bureau, 2017a.
21. LaPlante, Mitchell P., H. Stephen Kaye, Taewoon Kang, and Charlene Harrington. 2004. "Unmet Need for Personal Assistance Services: Estimating The Shortfall in Hours of Help and Adverse Consequences." *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences* 59(2):S98-S108. doi:10.1093/geronb/59.2.S98.
22. Livingston, Gretchen, Kim Parker, and Molly Rohal. 2014. *Four-in-Ten Couples are Saying 'I Do,' Again*. Washington, DC: Pew Research Center. http://assets.pewresearch.org/wp-content/uploads/sites/3/2014/11/2014-11-14_remarriage-final.pdf.
23. Spetz, Joanne, Laura Trupin, Timothy Bates, and Janet M. Coffman. 2015. "Future Demand for Long-Term Care Workers Will Be Influenced by Demographic and Utilization Changes." *Health Affairs* 34(6):936-945. doi:10.1377/hlthaff.2015.0005.
24. U.S. Census Bureau, 2017a.
25. Freedman, Vicki A., and Brenda C. Spillman. 2014. "Disability and Care Needs Among Older Americans." *The Milbank Quarterly* 92(3):509-541. doi:10.1111/1468-0009.12076.
26. Freedman, Vicki A. and Brenda C. Spillman. 2016. "Active Life Expectancy in the Older US Population, 1982-2011: Differences Between Blacks and Whites Persisted." *Health Affairs* 35(8):1351-1358. doi:10.1377/hlthaff.2015.1247.
27. Freedman, Vicki A., Linda G. Martin, Robert F. Schoeni, and Jennifer C. Cornman. 2008. "Declines in Late-Life Disability: The Role of Early- and Mid-Life Factors." *Social Science & Medicine* 66(7):1588-1602. doi:10.1016/j.socscimed.2007.11.037.
28. Alzheimer's Association, 2019.
29. Silverstein, Merrill and Rebecca Wang. 2015. "Does Familism Inhibit Demand for Long-Term Care? Public Policy Implications of Growing Ethnic Diversity in the United States." *Public Policy & Aging Report* 25(3):83-87. doi: 10.1093/ppar/prv016.
30. U.S. Census Bureau. 2014. *Projected Population by Age, Sex, Race, Hispanic Origin, and Nativity: 2014 to 2060*. <https://www.census.gov/data/tables/2014/demo/popproj/2014-summary-tables.html>; analysis by PHI (August 22, 2018).
31. U.S. Census Bureau, 2014.
32. U.S. Census Bureau, 2017a.
33. Coburn, Andrew F. and Lundblad, Jennifer P. 2017. *Rural Long-Term Services and Supports: A Primer*. Iowa City, IA: Rural Policy Research Institute. <http://www.rupri.org/wp-content/uploads/LTSS-RUPRI-Health-Panel-2017.pdf>.

34. Coburn, Andrew F., Eileen Griffin, Deborah Thayer, Zachariah Croll, and Erika C. Ziller. 2016. *Are Rural Older Adults Benefiting from Increased State Spending on Medicaid Home and Community-Based Services?* Portland, ME: Maine Rural Health Research Center. <https://muskie.usm.maine.edu/Publications/rural/Medicaid-Home-Community-Based-Services-Rural.pdf>.
35. Musumeci, MaryBeth. 2017. *Medicaid's Role for Medicare Beneficiaries*. Washington, DC: Henry J. Kaiser Family Foundation. <https://www.kff.org/medicaid/issue-brief/medicaids-role-for-medicare-beneficiaries/>.
36. National Advisory Committee on Rural Health and Human Services. 2015. *Mortality and Life Expectancy in Rural America: Connecting the Health and Human Service Safety Nets to Improve Health Outcomes over the Life Course*. Rockville, MD: Health Resources & Services Administration. <https://www.hrsa.gov/advisorycommittees/rural/publications/mortality.pdf>.
37. Dwyer-Lindgren, Laura, Amelia Bertozzi-Villa, Rebecca W. Stubbs, Chloe Morozoff, Johan P. Mackenbach, Frank J. van Lenthe, Ali H. Mokdad, and Christopher J.L. Murray. 2017. "Inequalities in Life Expectancy among US Counties, 1980 to 2014: Temporal Trends and Key Drivers." *JAMA Internal Medicine* 177(7):1003-1011. doi:10.1001/jamainternmed.2017.0918.
38. Pendall, Rolf, Laurie Goodman, Jun Zhu, and Amanda Gold. 2016. *The Future of Rural Housing*. Washington, DC: The Urban Institute. https://www.urban.org/sites/default/files/publication/85101/2000972-the-future-of-rural-housing_6.pdf.
39. U.S. Census Bureau, 2017a.
40. Coburn, Andrew F., Eileen Griffin, Deborah Thayer, Zachariah Croll, and Erika C. Ziller. 2016. *Are Rural Older Adults Benefiting from Increased State Spending on Medicaid Home and Community-Based Services?* Portland, ME: Maine Rural Health Research Center. <https://muskie.usm.maine.edu/Publications/rural/Medicaid-Home-Community-Based-Services-Rural.pdf>.
41. Binette, Joanne. 2018. 2018 *Home and Community Preferences Survey: A National Survey of Adults Age 18-Plus*. Washington, DC: AARP Research Center. <https://www.aarp.org/research/topics/community/info-2018/2018-home-community-preference.html>.
42. Jefferson, Robin Seaton. 2017. "New Survey Finds Adult Children Want Their Parents to Age at Home." *Forbes*, April 30. <https://www.forbes.com/sites/robinseatonjefferson/2017/04/30/new-survey-finds-adult-children-want-their-parents-to-age-at-home/#30bc18c7b44>.
43. O'Malley Watts, Molly and MaryBeth Musumeci. 2018. *Medicaid Home and Community-Based Services: Results from a 50-State Survey of Enrollment, Spending, and Program Policies*. Washington, DC: The Henry J. Kaiser Family Foundation. <http://files.kff.org/attachment/Report-Medicaid-Home-and-Community-Based-Services>.
44. Centers for Disease Control and Prevention (CDC), National Center for Health Statistics. 2015. *Health, United States, 2015 - Individual Charts and Tables: Table 92: Nursing Homes, Beds, Residents, and Occupancy Rates, By State: United States, Selected Years 1995-2014*. <http://www.cdc.gov/nchs/hus/contents2015.htm#092>.
45. Crimmins, Eileen M., Yuan Zhang and Yasuhiko Saito. 2016. "Trends Over 4 Decades in Disability-Free Life Expectancy in the United States." *American Journal of Public Health* 106(7):1287-1293. doi:10.2105/AJPH.2016.303120.
46. Kaye, H. Stephen, Charlene Harrington, and Mitchell P. LaPlante. 2010. "Long-Term Care: Who Gets It, Who Provides It, Who Pays, And How Much?" *Health Affairs* 29(1):11-1. doi:10.1377/hlthaff.2009.053.
47. Freedman, Vicki A. and Brenda C. Spillman. 2014. *Disability and Care Needs of Older Americans: An Analysis of the 2011 National Health and Aging Trends Study*. Washington, DC: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation (ASPE). <https://aspe.hhs.gov/system/files/pdf/77136/NHATS-DCN.pdf>.
48. U.S. Census Bureau, 2017a.
49. Kaye et al., 2010.
50. Feinberg, Lynn Friss and Brenda C. Spillman. 2019. "Shifts in Family Caregiving—and a Growing Care Gap." *Generations: Journal of the American Society on Aging* 43(1): 71-75.
51. Redfoot, Donald, Lynn Friss Feinberg, and Ari Houser. 2013. *The Aging of the Baby Boom and the Growing Care Gap: A Look at Future Declines in the Availability of Family Caregivers*. Washington, DC: AARP Public Policy Institute. <https://www.aarp.org/home-family/caregiving/info-08-2013/the-aging-of-the-baby-boom-and-the-growing-care-gap-AARP-ppi-ltc.html>.
52. Ryan, Lindsay H., Jacqui Smith, Toni C. Antonucci, and James S. Jackson. 2012. "Cohort Differences in the Availability of Informal Caregivers: Are the Boomers at Risk?" *The Gerontologist* 52(2):177-188. doi:10.1093/geront/gnr142.
53. AARP Public Policy Institute. 2015. *Caregiving in the U.S.* Washington, DC: AARP. <https://www.aarp.org/content/dam/aarp/ppi/2015/caregiving-in-the-united-states-2015-report-revised.pdf>.
54. Reinhard, Susan C., Lynn Friss Feinberg, Rita Choula, and Ari Houser. 2015. *Valuing the Invaluable: 2015 Update—Undeniable Progress, But Big Gaps Remain*. Washington, DC: AARP Public Policy Institute. <https://www.aarp.org/content/dam/aarp/ppi/2015/valuing-the-invaluable-2015-update-new.pdf>.
55. AARP Public Policy Institute, 2015.
56. U.S. Census Bureau. 2017c. *American Community Survey (ACS), 2012-2016 5-year Estimates: Hispanic or Latino Origin By Race: Total Population*. https://factfinder.census.gov/bkmk/table/1.0/en/ACS/16_5YR/B03002.
57. e.g. Adelman, Ronald D., Lyubov L. Tmanova, Diana Delgado, Sarah Dion, and Mark S. Lachs. 2014. "Caregiver Burden: A Clinical Review." *JAMA* 10:1052-1060. doi:10.1001/jama.2014.304.; Chiao, C-Y., H-S. Wu, and C-Y. Hsiao. 2015. "Caregiver Burden for Informal Caregivers of Patients with Dementia: A Systematic Review." *International Nursing Review* 62(3):340-350. doi:10.1111/inr.12194.; Robison, Julie, Richard Fortinsky, Alison Kleppinger, Noreen Shugrue, and Martha Porter. 2009. "A Broader View of Family Caregiving: Effects of Caregiving and Caregiver Conditions on Depressive Symptoms, Health, Work, and Social Isolation." *Journal of Gerontology Series B: Psychological Sciences and Social Sciences* 64(6):788-98. doi:10.1093/geronb/gbp015.; Wolff, Jennifer L., Brenda C. Spillman, Vicki A. Freedman, and Judith D. Kasper. 2016. "A National Profile of Family and Unpaid Caregivers Who Assist Older Adults with Health Care Activities." *JAMA Internal Medicine* 176(3):372-379. doi:10.1001/jamainternmed.2015.7664.
58. Reinhard, Susan C., Carol Levine and Sarah Samis. 2012. *Home Alone: Family Caregivers Providing Complex Chronic Care*. Washington, DC: AARP Public Policy Institute and United Hospital Fund. https://www.aarp.org/content/dam/aarp/research/public_policy_institute/health/home-alone-family-caregivers-providing-complex-chronic-care-rev-AARP-ppi-health.pdf; Gilhooly, K. J., M. L. M. Gilhooly, M. P. Sullivan, A. McIntyre, L. Wilson, E. Harding, R. Woodbridge and S. Crutch. 2016. "A Meta-Review of Stress, Coping and Interventions in Dementia and Dementia Caregiving." *BMC Geriatrics* 16:106. doi:10.1186/s12877-016-0280-8.
59. Centers for Medicare and Medicaid Services (CMS). 2014. *Medicaid Program; State Plan Home and Community-Based Services, 5-Year Period for Waivers, Provider Payment Reassignment, and Home and Community-Based Setting Requirements for Community First Choice and Home and Community-Based Services (HCBS) Waivers*. 79 FR 2947; CMS. 2016. *Medicaid and Children's Health Insurance Program (CHIP) Programs; Medicaid Managed Care, CHIP Delivered in Managed Care, and Revisions Related to Third Party Liability*. 81 FR 27497.
60. National Academies of Sciences, Engineering, and Medicine. 2016. *Families Caring for an Aging America*. Washington, DC: The National Academies Press. doi:10.17226/23606.
61. Reinhard et al., 2015; Reinhard, Susan, Wendy Fox-Grage, and Lynn Friss Feinberg. 2016. *Family Caregivers and Managed Long-Term Services and Supports*. Washington, DC: AARP. https://www.aarp.org/content/dam/aarp/ppi/2016-08/AARP1080_FSandMLTSS_REPORT_WEB.pdf.

62. Washington State Department of Social and Health Services. 2018. "Unpaid Family Caregiver Supports and Services to Delay or Divert at Risk Individuals from Intensive LTSS." Presentation at the National Home and Community-Based Services Conference, Baltimore, MD, August 28, 2018.
63. U.S. Census Bureau. "Introduction to NAICS." Accessed September 21, 2018. <https://www.census.gov/eos/www/naics/>.
64. PHI. 2019. *U.S. Home Care Workers: Key Facts*. Bronx, NY: PHI. <https://phinational.org/resource/u-s-home-care-workers-key-facts-2019/>.
65. U.S. Bureau of Labor Statistics (BLS), Division of Occupational Employment Statistics (OES). 2019. *May 2008 to May 2018 National Industry-Specific Occupational Employment and Wage Estimates*. <https://www.bls.gov/oes/current/oesosci.htm>; analysis by PHI (July 2, 2019).
66. National Employment Law Project (NELP). 2015. *Independent Contractor Classification in Home Care*. Washington, DC: NELP. <https://www.nelp.org/wp-content/uploads/Home-Care-Misclassification-Fact-Sheet.pdf>.
67. Ruggles, Steven, Sarah Flood, Ronald Goeken, Josiah Grover, Erin Meyer, Jose Pacas and Matthew Sobek. 2019. IPUMS USA: Version 9.0. Minneapolis, MN: IPUMS, University of Minnesota. <https://doi.org/10.18128/D010.V9.0>; analysis by PHI (July 8, 2019); U.S. Census Bureau, 2017a; U.S. Census Bureau. 2007. *American Community Survey (ACS), 2006 1-year Public Use Microdata Sample (PUMS)*. <https://www.census.gov/programs-surveys/acs/data/pums.html>; U.S. Census Bureau. 2017d. *American Community Survey (ACS), 2016 1-year Public Use Microdata Sample (PUMS)*. <https://www.census.gov/programs-surveys/acs/data/pums.html>; analysis by PHI (August 6, 2018).
68. U.S. Bureau of Labor Statistics (BLS), Employment Projections Program (EPP). 2019. *Employment Projections: 2018–28, National Employment Matrix - Occupation*. <https://www.bls.gov/emp/>; analysis by PHI (September 17, 2019).
69. U.S. Bureau of Labor Statistics (BLS), Employment Projections Program. 2017. *Factors Affecting Occupational Utilization*. <https://www.bls.gov/emp/tables/factors-affecting-occupational-utilization.htm>.
70. BLS EPP, 2019.
71. U.S. Bureau of Labor Statistics (BLS). "Projections Methodology." Last modified March 6, 2018. <https://www.bls.gov/emp/documentation/projections-methods.htm#indfactors>.
72. U.S. Department of Health and Human Services, Health Resources and Services Administration, National Center for Health Workforce Analysis. 2018. *Long-Term Services and Supports: Direct Care Worker Demand Projections, 2015-2030*. Rockville, MD: HRSA. <https://bhwh.hrsa.gov/sites/default/files/bhwh/nchwa/projections/hrsa-ltss-direct-care-worker-report.pdf>.
73. Angel, Jacqueline L., Ronald J. Angel, Judi L. McClellan, and Kyriakos S. Markides. 1996. "Nativity, Declining Health, and Preferences in Living Arrangements Among Elderly Mexican Americans: Implications for Long-term Care." *The Gerontologist* 36(4):464-473. doi:10.1093/geront/36.4.464.
74. Hugo Lopez, Mark, Ana Gonzalez-Barrera, and Gustavo López. 2017. *Hispanic Identity Fades Across Generations as Immigrant Connections Fall Away*. Washington, DC: Pew Research Center. <http://www.pewhispanic.org/2017/12/20/hispanic-identity-fades-across-generations-as-immigrant-connections-fall-away/>.
75. Spetz, Joanne, Laura Trupin, Timothy Bates, and Janet M. Coffman. 2015. "Future Demand for Long-Term Care Workers Will Be Influenced By Demographic and Utilization Changes." *Health Affairs* 34(6):936-945. doi:10.1377/hlthaff.2015.0005.
76. Osterman, Paul. 2017. *Who Will Care for Us? Long-Term Care and the Long-Term Workforce*. New York, NY: Russell Sage Foundation.
77. PHI. 2015. *Paying the Price: How Poverty Wages Undermine Home Care in America*. Bronx, NY: PHI. <https://phinational.org/resource/paying-the-price-how-poverty-wages-undermine-home-care-in-america/>.
78. Holly, Robert. 2019. "Home Care Industry Turnover Reaches All-Time High of 82%." *Home Health Care News*, May 8, 2019. <https://homehealthcarenews.com/2019/05/home-care-industry-turnover-reaches-all-time-high-of-82/>.
79. United States Government Accountability Office (GAO). 2016. *Long-Term Care Workforce: Better Information Needed on Nursing Assistants, Home Health Aides, and Other Direct Care Workers*. Washington, DC: GAO. <https://www.gao.gov/assets/680/679100.pdf>.
80. Home Care Pulse. 2017. *2017 Home Care Benchmarking Study*. Rexburg, ID: Home Care Pulse.
81. Dyson, S. and S. Harmuth. 2007. *Results of the 2007 National Survey of State Initiatives on the Long-Term Care Direct Care Workforce*. Bronx, New York: PHI and Raleigh, NC: Direct Care Workers Association of North Carolina. <https://phinational.org/wp-content/uploads/legacy/clearinghouse/RESULTS%20OF%20THE%202005%20NATIONAL%20SURVEY%20FINAL%2092205.pdf>.
82. U.S. Government Accountability Office (GAO). 2018. *Medicaid Home and Community-Based Services: Selected States' Program Structures and Challenges Providing Services*. Washington, DC: GAO. <https://www.gao.gov/assets/700/694348.pdf>.
83. PHI. 2017a. *State of Care: Wisconsin's Home Care Landscape*. Bronx, NY: PHI. https://phinational.org/wp-content/uploads/2017/09/wisconsin_home_care_landscape_phi_2017_0.pdf.
84. Home Care Aide Council. 2018. "MA Home Care Aide Industry Study Data Released." *Press release*, May 31. <https://www.hcacouncil.org/news/403155/MA-Home-Care-Aide-Industry-Study-Data-Released.htm>.
85. Consumer Directed Personal Assistance Association of New York State (CDPAANYS). 2017. *The High Cost of Low Wages: A Decade's Worth of Neglect in Consumer Directed Personal Assistance*. Albany, NY: CDPAANYS. <https://cdpaanys.org/wp-content/uploads/2017/02/2017-Survey-Report-FINAL.pdf>.
86. PHI, 2017a.
87. U.S. Bureau of Labor Statistics (BLS), Division of Occupational Employment Statistics. 2018. *May 2007 to May 2017 State Occupational Employment and Wage Estimates*. <https://www.bls.gov/oes/current/oesosci.htm>; Minnesota Department of Employment and Economic Development. 2018. *Job Vacancy Survey*. <https://apps.deed.state.mn.us/lmi/jvs/Results.aspx>; analysis by PHI (August 10, 2018).
88. PHI. 2017b. *State of Care: Minnesota's Home Care Landscape*. Bronx, NY: PHI. https://phinational.org/wp-content/uploads/2017/07/phi_minnesota_report_web3.pdf.
89. Iowa Caregivers and Iowa Workforce Development. 2016. *Iowa Workforce Survey 2016: Direct Care, Supports & Service Workers*. Des Moines, IA: Iowa Caregivers and Iowa Workforce Development. http://www.iowacaregivers.org/uploads/pdf/workforce_report.pdf.
90. Center for Workforce Research and Information. 2016. "2016 Job Vacancy Survey." <https://www.maine.gov/labor/cwri/jvs/>.
91. PHI. 2018. *U.S. Home Care Workers: Key Facts*. Bronx, NY: PHI. <https://phinational.org/wp-content/uploads/2018/08/U.S.-Home-Care-Workers-2018-PHI.pdf>.
92. Osterman, 2017.
93. PHI. 2018. *Immigrants and the Direct Care Workforce*. Bronx, NY: PHI. https://phinational.org/wp-content/uploads/2018/09/DCW_ImmigrantWorkers_PHI_2018.pdf; Global Ageing Network and the LeadingAge LTSS Center @UMass Boston. 2018. *Filling the Care Gap: Integrating Foreign-Born Nurses and Personal Care Assistants into the Field of Long-Term Services and Supports*. Boston, MA: Global Ageing Network and the LeadingAge LTSS Center @UMass Boston. http://leadingage.org/sites/default/files/LA_SodexoReport2018_Digital_r2.pdf.
94. Campbell, Stephen. 2018. "Immigration's Effect on the Direct Care Worker Supply." *American Society Aging Today blog*, January 24. <http://asaging.org/blog/immigration%E2%80%99s-effect-direct-care-worker-supply>.

95. Span, Paula. 2018. "If Immigrants Are Pushed Out, Who Will Care for the Elderly?" *New York Times*, February 2. <https://www.nytimes.com/2018/02/02/health/illegal-immigrants-caregivers.html>.
96. Kim, Sunny. 2019. "States Push Courts to Block Trump 'Public Charge' Immigrant Rule As Groups Warn It Could Harm the US Economy." *CNBC*, August 28, 2019. <https://www.cnn.com/2019/08/28/states-push-courts-to-block-trumps-public-charge-immigrant-rule.html>.
97. Scales, Kezia. 2018. *Older Workers and the Direct Care Workforce*. Bronx, NY: PHI. <https://phinational.org/wp-content/uploads/2018/04/Older-Workers-PHI-2018.pdf>.
98. Senior Service America. "Senior Community Service Employment Program." Accessed August 9, 2019. <https://www.seniorserviceamerica.org/our-impact/our-programs/scsep/>; National Council on Aging (NCOA). 2011. *Securing Healthcare Jobs for Mature Workers: The Public/Private Sector Approach*. Washington, DC: NCOA.
99. Scales, Kezia. 2018. *Younger Workers and the Direct Care Workforce*. Bronx, NY: PHI. <https://phinational.org/wp-content/uploads/2018/03/Younger-Workers-PHI-2018.pdf>.
100. Scales, Kezia. 2018. *Men and the Direct Care Workforce*. Bronx, NY: PHI. <https://phinational.org/wp-content/uploads/2018/04/Male-Workers-PHI-2018.pdf>.
101. e.g. Mountford, H el ene. 2013. "I'll Take Care of You: The Use of Supportive Work Practices to Retain Older Workers." *Asia Pacific Journal of Human Resources* 51(3):272-291. doi:10.1111/j.1744-7941.2012.00048.x.
102. Executive Office of the President, Office of Management and Budget (OMB). 2017. *North American Industry Classification System Manual*. Washington, DC: OMB. https://www.census.gov/eos/www/naics/2017NAICS/2017_NAICS_Manual.pdf.
103. Kelly, Christopher M., Jennifer Craft Morgan and Kendra Jeanel Jason. 2013. "Home Care Workers: Interstate Differences in Training Requirements and Their Implications for Quality." *Journal of Applied Gerontology* 32:804-832. doi:10.1177/0733464812437371; Marquand, Abby and Susan A. Chapman. 2014. *The National Landscape of Personal Care Aide Training Standards*. San Francisco, CA: UCSF Health Workforce Research Center on Long-Term Care. https://healthworkforce.ucsf.edu/sites/healthworkforce.ucsf.edu/files/Report-The_National_Landscape_of_Personal_Care_Aide_Training_Standards.pdf.
104. U.S. Census Bureau. 2012. *Economic Census of the United States, Health Care and Social Assistance: Geographic Area Series: Summary Statistics for the U.S., States, Metro Areas, Counties, and Places: 2012*. https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62A2/0100000US.
105. U.S. Census Bureau. 2016a. *Economic Census of the United States, Health Care and Social Assistance: Subject Series - Estab & Firm Size: Employment Size of Establishments for the U.S.: 2012*. https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSS2/0100000US.
106. U.S. Census Bureau. 2016b. *Economic Census of the United States, Health Care and Social Assistance: Subject Series - Estab & Firm Size: Concentration by Largest Firms for the U.S.: 2012*. https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SSS26/0100000US.
107. Ellenbecker, Carol Hall. 1995. "Profit and Non-Profit Home Health Care Agency Outcomes: A Study of One State's Experience." *Home Health Care Services Quarterly* 15:47-60. doi:10.1300/J027v15n03_04.
108. Cabin, William, David U. Himmelstein, Michael L. Siman, and Steffie Woolhandler. 2014. "For-Profit Medicare Home Health Agencies' Costs Appear Higher and Quality Appears Lower Compared to Nonprofit Agencies." *Health Affairs* 33(8):1460-1465. doi:10.1377/hlthaff.2014.0307.; Comondore, Vikram R., P. J. Devereaux, Qi Zhou, Samuel B. Stone, Jason W. Busse, Nikila C. Ravindran, Karen E. Burns, Ted Haines, Bernadette Stringer, Deborah J Cook, Stephen D Walter, Terrence Sullivan, Otavio Berwanger, Mohit, Bhandari, Sarfaraz Banglawala, John N Lavis, Brad Petrisor, Holger Sch unemann, Katie Walsh, Neera Bhatnagar, Gordon H Guyatt. 2009. "Quality of Care in For-Profit and Not-For-Profit Nursing Homes: Systematic Review and Meta-Analysis." *The BMJ* 339:b2732. doi:10.1136/bmj.b2732.; Shugarman, Lisa R., Nancy Nicosia, and Cynthia R. Schuster. 2007. *Comparing For-Profit and Not-for-Profit Health Care Providers: A Review of the Literature*. Santa Monica, CA: RAND Health. https://www.rand.org/pubs/working_papers/WR476.html.
109. U.S. Census Bureau. "Community Facts." Accessed August 13, 2018. https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml.
110. Landers, Steven, Elizabeth Madigan, Bruce Leff, Robert J. Rosati, Barbara A. McCann, Rodney Hornbake, Richard MacMillan, Kate Jones, Kathryn Bowles, Dawn Dowding, Teresa Lee, Tracey Moorhead, Sally Rodriguez, Erica Breese. 2016. "The Future of Home Health Care: A Strategic Framework for Optimizing Value." *Home Health Care Management & Practice* 28(4):262-278. doi:10.1177/1084822316666368.
111. Baxter, Amy. 2018. "Top Home Care Trends for 2018." *Home Health Care News*, January 2. <https://homehealthcarenews.com/2018/01/top-home-care-trends-for-2018/>.
112. ICA Group Cooperative Development Foundation. "Policy Analysis." Accessed November 5, 2018. <https://ica-group.org/policy-analysis/>.
113. Holly, Robert. 2018. "Skeptics Raise Concerns as Private Equity Investment in Home Health Industry Rises." *Home Health Care News*, June 15. <https://homehealthcarenews.com/2018/06/skeptics-raise-concerns-as-private-equity-investment-in-home-health-industry-rises/>.
114. Tice, Carol. 2014. "Best Franchises To Own: Why Home Healthcare Is Hot." *Forbes*, May 27. <https://www.forbes.com/sites/caroltice/2014/05/27/best-franchises-home-healthcare-is-hot/#405ee9c49cd2>.
115. Entrepreneur. 2018. "2018 Franchise 500 Ranking." <https://www.entrepreneur.com/franchise500/2018>.
116. Mattson, Kaitlyn. 2018. "Assisting Hands, FirstLight Among Top Low-Cost Franchises for 2018." *Home Health Care News*, August 14. <https://homehealthcarenews.com/2018/08/assisting-hands-firstlight-among-top-low-cost-franchises-for-2018/>.
117. Cirillo, Anthony. 2017. "Now is the Time to Open a Non-Medical Home Care Franchise." *VeryWell Health*, February 26. <https://www.verywellhealth.com/non-medical-home-care-franchise-197498>.
118. Spinola, Angelo and Stephen Whitfield Brown. 2019. "Franchisers Continue to Face Joint Employment Risk." *Home Care*, April 9. <https://www.homecaremag.com/april-2018/franchise-relationships-joint-employment>.
119. Hill, Kyle. 2017. "There's No Magic in Venture-Backed Home Care." *Medium*, February 24. <https://medium.com/@kaleazy/theres-no-magic-in-venture-backed-home-care-8f5389528279#.cro8u5a03>.
120. Baxter, Amy. 2018. "New Hometeam CEO Leads Dual-Eligible Business Plan." *Home Health Care News*, May 17. <https://homehealthcarenews.com/2018/05/new-hometeam-ceo-leads-dual-eligible-business-plan/>.
121. Baxter, Amy. 2017. "HomeHero Closure Casts Shadow Over Home Care 'Disrupters'." *Home Health Care News*, February 28. <https://homehealthcarenews.com/2017/02/homehero-closure-casts-shadow-over-home-care-disrupters/>.
122. Baxter, Amy. 2018. "Honor Raises \$50 Million to Target Hundreds of New Partners." *Home Health Care News*, May 22. <https://homehealthcarenews.com/2018/05/honor-raises-50-million-to-target-hundreds-of-new-partners/>.
123. Holly, Robert. 2018. "Honor Faces Scrutiny Over Growing Partnership Model." *Home Health Care News*, December 9. <https://homehealthcarenews.com/2018/12/honor-faces-scrutiny-over-growing-partnership-model/>.
124. Robert Wood Johnson Foundation. 2015. "Cash & Counseling: Program Results Report." Princeton, NJ: RWJF. https://www.rwjf.org/content/dam/farm/reports/program_results_reports/2015/rwjf406468.
125. O'Malley Watts and Musumeci, 2018.

126. Edwards-Orr, Merle and Kathleen Ujvari. 2018. *Taking it to the Next Level: Using Innovative Strategies to Expand Options for Self-Direction*. Washington, DC: AARP Foundation, The Commonwealth Fund, and The Scan Foundation. <https://www.aarp.org/content/dam/aarp/ppi/2018/04/taking-it-to-the-next-level.pdf>.
127. Edwards-Orr and Ujvari, 2018.
128. Crisp, Suzanne, Pamela Doty, Susan Flanagan, and Gary Smith. 2010. *Developing and Implementing Self-Direction Programs and Policies: A Handbook*. The National Resource Center for Participant-Directed Services in partnership with the Robert Wood Johnson Foundation. https://www.bc.edu/content/dam/files/schools/gssw_sites/nrcpds/cc-full.pdf.
129. O'Malley Watts and Musumeci, 2018.
130. O'Malley Watts and Musumeci, 2018.
131. Foster, Leslie, Stacy B. Dale, and Randall Brow. 2007. "How Caregivers and Workers Fared in Cash and Counseling." *Health Services Research* 42(1):510-32. doi:10.1111/j.1475-6773.2006.00672.x.
132. Newcomer, Robert J., Taewoon Kang, and Pamela Doty. 2012. "Allowing Spouses to be Paid Personal Care Providers: Spouse Availability and Effects on Medicaid-Funded Service Use and Expenditures." *The Gerontologist* 52(4):517-530. doi:10.1093/geront/gnr102.
133. Medicaid.gov. "Self-Directed Services." Accessed September 22, 2018. <https://www.medicaid.gov/medicaid/ltss/self-directed/index.html>.
134. U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation (ASPE). 2010. *Understanding Medicaid Home and Community Services: Financial Management Services*. Washington, DC: ASPE. <https://aspe.hhs.gov/report/understanding-medicaid-home-and-community-services-primer-2010-edition/financial-management-services>.
135. Murphy, Mollie G., Isaac Selkow, Suzanne Crisp, and Kevin J. Mahoney. 2012. *Agency with Choice: Key Components for Practical Implementation while Maintaining Participant Choice and Control*. Boston, MA: Boston College, National Resource Center for Participant-Directed Services. http://www.nasud.org/sites/nasud/files/hcbs/files/219/10905/Agency_with_Choice.pdf.
136. Murphy et al., 2012.
137. Contra Costa County Employment & Human Resources. "IHSS Public Authority." Accessed September 22, 2018. <https://ehsd.org/elderly-disabled/public-authority/>.
138. Harris v. Quinn. Decided June 30, 2014. https://www.supremecourt.gov/opinions/13pdf/11-681_j426.pdf.
139. Semuels, Alana. 2018. "Is This the End of Public-Sector Unions in America?" *The Atlantic*, June 27. <https://www.theatlantic.com/politics/archive/2018/06/janus-afscme-public-sector-unions/563879/>.
140. CMS. 2019. *Medicaid Program; Reassignment of Medicaid Provider Claims*. 84 FR 19718: 19718-19728. <https://www.federalregister.gov/documents/2019/05/06/2019-09118/medicaid-program-reassignment-of-medicaid-provider-claims>.
141. Genworth. 2018. "Cost of Care." <https://www.genworth.com/aging-and-you/finances/cost-of-care.html>.
142. Gross, Jane. 2007. "New Options (and Risks) in Home Care for the Elderly." *The New York Times*, March 1. https://www.nytimes.com/2007/03/01/us/01aides.html?_r=1&oref=slogin.
143. Bernhardt, Annette, Siobhan McGrath, and James DeFilippis. 2007. *Unregulated Work in the Global City: Employment and Labor Law Violations in New York City*. New York, NY: Brennan Center for Justice. https://www.brennancenter.org/sites/default/files/legacy/d/download_file_49436.pdf.
144. Agency for Health Care Administration. "Nurse Registries." Accessed September 22, 2018. http://ahca.myflorida.com/MCHQ/Health_Facility_Regulation/Home_Care/Nurse_Registry.shtml.
145. Home Care Association of America. 2011. *Consumer and Worker Risks from the Use of Nurse Registries and Independent Contractor Companies*. Indianapolis, IN: Home Care Association of America. http://www.hcoa.org/assets/1/6/Risks_of_Registries___Independent_Contractors.pdf.
146. PHI. 2015. *FLSA Facts: Understanding the Revised Companionship Exemption*. Bronx, NY: PHI. <https://phinational.org/resource/flsa-facts-understanding-the-revised-companionship-exemption/>.
147. Stone, Robyn I. and Steven L. Dawson. 2008. "The Origins of Better Jobs Better Care." *The Gerontologist* 48(S1):5-13. doi:10.1093/geront/48.Supplement_1.5.
148. BLS OES, 2019.
149. U.S. Census Bureau. 2017e. *Current Population Survey (CPS), January 2015 to December 2017 Outgoing Rotation Group CPS*. https://thedataweb.rm.census.gov/ftp/cps_ftp.html; analysis by PHI (August 8, 2018); U.S. Census Bureau. 2017f. *Current Population Survey (CPS), January 2017 to December 2017 Basic Monthly CPS*. https://thedataweb.rm.census.gov/ftp/cps_ftp.html; analysis by PHI (August 8, 2018); U.S. Census Bureau, 2017a; U.S. Census Bureau, 2017d.
150. BLS OES, 2019.
151. Flood, Sarah, Miriam King, Renae Rodgers, Steven Ruggles and J. Robert Warren. 2019. *Integrated Public Use Microdata Series, Current Population Survey: Version 6.0*. Minneapolis, MN: IPUMS, University of Minnesota. <https://doi.org/10.18128/D010.V9.0>; analysis by PHI (July 8, 2019).
152. U.S. Census Bureau, 2017a.
153. U.S. Census Bureau, 2017f.
154. Christman, Anastasia and Caitlin Connolly. 2017. *Surveying the Home Care Workforce: Their Challenges and the Positive Impact of Unionization*. Washington, DC: National Employment Law Project (NELP). <https://s27147.pcdn.co/wp-content/uploads/surveying-home-care-workforce.pdf>.
155. Seavey, Dorie and Abby Marquand. 2011. *Caring in America: A Comprehensive Analysis of the Nation's Fastest-Growing Jobs – Home Health and Personal Care Aides*. Bronx, NY: PHI. <https://phinational.org/wp-content/uploads/legacy/clearinghouse/caringinamerica-20111212.pdf>.
156. Garrett, Bowen, Anuj Gangopadhyaya, and Stan Dorn. 2017. *Workers Gaining Health Insurance Coverage Under the ACA*. Princeton, NJ: Robert Wood Johnson Foundation. https://www.rwjf.org/content/dam/farm/reports/issue_briefs/2017/rwjf438817.
157. Campbell, Stephen. 2017. *The Impact of the Affordable Care Act on Health Coverage for Direct Care Workers*. Bronx, NY: PHI. <https://phinational.org/wp-content/uploads/2017/07/aca-impact-dcws-brief.pdf>.
158. Kaiser Family Foundation. 2019. "Work Requirement Waivers: Approved and Pending as of August 21, 2019." <https://www.kff.org/medicaid/issue-brief/medicaid-waiver-tracker-approved-and-pending-section-1115-waivers-by-state/#Table2>; Galewitz, Phil. 2019. "Federal Judge Again Blocks Medicaid Work Requirements." *Kaiser Health News*, March 27. <https://khn.org/news/federal-judge-again-blocks-medicaid-work-requirements/>.
159. Garfield, Rachel, Robin Rudowitz, MaryBeth Musumeci, and Anthony Damico. 2018. *Implications of Work Requirements in Medicaid: What Does the Data Say?* Washington, DC: Kaiser Family Foundation. <https://www.kff.org/medicaid/issue-brief/implications-of-work-requirements-in-medicaid-what-does-the-data-say/>.
160. Gangopadhyaya, Anuj, Genevieve Kenney, Rachel Burton, and Jeremy Marks. 2018. *Medicaid Work Requirements in Arkansas*. Washington, D.C.: Urban Institute. https://www.urban.org/sites/default/files/publication/98483/2001846_2018.05.23_arkansas_medicaid_finalized.pdf.
161. Brantley, Erin and Leighton Ku. 2018. "A First Glance At Medicaid Work Requirements In Arkansas: More Than One-Quarter Did Not Meet Requirement." *Health Affairs*, August 13. <https://www.healthaffairs.org/doi/10.1377/hblog20180812.221535/full/>; Covert, Bryce. 2019. "A Federal

Judge Strikes Down Arkansas's Medicaid Work Requirement." *The Nation*, March 28. <https://www.thenation.com/article/federal-judge-strikes-down-arkansas-medicaid-work-requirement/>.

162. Ruggles et al., 2019.

163. The Center for Women's Welfare. "The Self-Sufficiency Standard." Accessed September 15, 2018. <http://www.selfsufficiencystandard.org/the-standard>.

164. Ruggles et al., 2019.

165. U.S. Census Bureau, 2017d.

166. PHI. 2018. "New 'Public Charge' Rule Would Devastate the Caregiving Sector." *Press release*, September 23. <https://phinational.org/news/new-public-charge-rule-would-devastate-the-caregiving-sector/>.

167. Sims-Gould, Joanie, Kerry Byrne, Catherine Craven, Anne Martin-Matthews, and Janice Keefe. 2010. "Why I Became A Home Support Worker: Recruitment in the Home Health Sector." *Home Health Care Services Quarterly* 29(4):171-194. doi:10.1080/01621424.2010.534047.; Mittal, Vikas, Jules Rosen, and Carrie Leana. 2009. "A Dual-Driver Model of Retention and Turnover in the Direct Care Workforce." *The Gerontologist* 49(5):623-634. doi:10.1093/geront/gnp054.

168. Morris, Lisa. 2009. "Quits and Job Changes Among Home Care Workers in Maine: The Role of Wages, Hours, and Benefits." *The Gerontologist* 49(5):635-650. doi:10.1093/geront/gnp071.; Stacey, Clare L. 2011. *The Caring Self: The Work Experiences of Home Care Aides*. Ithaca, NY: Cornell University Press.

169. Probst, Janice C., Jong-Deuk Baek, and Sarah B. Laditka. 2010. "The Relationship Between Workplace Environment and Job Satisfaction Among Nursing Assistants: Findings from a National Survey." *Journal of the American Medical Directors Association* 11(4):246-252. doi:10.1016/j.jamda.2009.08.008.; Faul, Anna C., Tara J. Schapmire, Joseph D'Ambrosio, Dennis Feaster, C. Shawn Oak, and Amanda Farley. 2010. "Promoting Sustainability in Frontline Home Care Aides: Understanding Factors Affecting Job Retention in the Home Care Workforce." *Home Healthcare Management & Practice* 22:408-16. doi:10.1177/1084822309348896.; Stone, Robyn, Jess Wilhelm, Christine E Bishop, Natasha S Bryant, Linda Hermer, and Marie R Squillace. 2017. "Predictors of Intent to Leave the Job Among Home Health Workers: Analysis of the National Home Health Aide Survey." *The Gerontologist* 57(5):890-899. doi:10.1093/geront/gnw075; Howes, Candace. 2008. "Love, Money, or Flexibility: What Motivates People to Work in Consumer-Directed Home Care?" *The Gerontologist* 48(suppl1):46-60. doi:10.1093/geront/48.Supplement_1.46.

170. Brannon, Diane, Teta Barry, Peter Kemper, Andrea Schreiner, and Joe Vasey. 2007. "Job Perceptions and Intent to Leave Among Direct Care Workers: Evidence from the Better Jobs Better Care Demonstrations." *The Gerontologist* 47(6):820-829. doi:10.1093/geront/47.6.820.

171. Kemper, Peter, Brigitt Heier, Teta Barry, Diane Brannon, Joe Angelelli, Joe Vasey, and Mindy Anderson-Knott. 2008. "What Do Direct Care Workers Say Would Improve Their Jobs? Differences Across Settings." *The Gerontologist* 48(suppl1):17-25. doi:10.1093/geront/48.Supplement_1.17.

172. Morris, Lisa. 2009. "Quits and Job Changes Among Home Care Workers in Maine: The Role of Wages, Hours, and Benefits." *The Gerontologist* 49(5):635-650. doi:10.1093/geront/gnp071.

173. Stearns, Sally C. and Laura P. D'arcy. 2008. "Staying the Course: Facility and Profession Retention Among Nursing Assistants in Nursing Homes." *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences* 63(3): S113-S121.

174. Simon-Rusinowitz, Lori, Dawn M. Loughlin, Robert Chan, Kevin J. Mahoney, Genevieve Martinez Garcia, and Kathy Ruben. 2010. "Expanding the Consumer-Directed Workforce by Attracting and Retaining Unaffiliated Workers." *Care Management Journals* 11(2):74-82. Doi:10.1891/1521-0987.11.2.74.

175. Howes, Candace. 2005. "Living Wages and Retention of Homecare Workers in San Francisco." *Industrial Relations: A Journal of Economy and Society* 44(1):139-163. doi:10.1111/j.0019-8676.2004.00376.x.

176. Howes, Candace. 2008. "Love, Money, or Flexibility: What Motivates People to Work in Consumer-Directed Home Care?" *The Gerontologist* 48(suppl1):46-60. doi:10.1093/geront/48.Supplement_1.46.

177. Institute for Corporate Productivity. 2016. *Developing America's Frontline Workers*. Seattle, WA: Institute for Corporate Productivity in partnership with UpSkill America. https://www.nist.gov/sites/default/files/developing_america_s_frontline_workers_i4cp_upskill_america_2016.pdf.

178. Yoon, Seokwon, Janice Probst, and Christine DiStefano. 2016. "Factors affecting job satisfaction among agency-employed home health aides." *Home Health Care Management & Practice* 28(1):57-69. doi:10.1177/1084822315603195.

179. Jang, Yuri, Ahyoung A. Lee, Michelle Zadrozny, Sung-Heui Bae, Miyong T. Kim, and Nathan C. Marti. 2017. "Determinants of Job Satisfaction and Turnover Intent in Home Health Workers: The Role of Job Demands and Resources." *Journal of Applied Gerontology* 36(1):56-70. doi:10.1177/0733464815586059.

180. Department of Health and Human Services Office of Inspector General (OIG). 2016. *States' Requirements for Medicaid-Funded Personal Care Service Attendants*. Washington, DC: OIG. <https://oig.hhs.gov/oei/reports/oei-07-05-00250.pdf>.

181. Berta, Whitney, Audrey Laporte, Tyrone Perreira, Liane Ginsburg, Adrian Rohit Dass, Raisa Deber, Andrea Baumann, Lisa Cranley, Ivy Bourgeault, Janet Lum, Brenda Gamble, Kathryn Pilkington, Vinita Haroun, and Paula Neves. 2018. "Relationships Between Work Outcomes, Work Attitudes and Work Environments Of Health Support Workers in Ontario Long-Term Care and Home and Community Care Settings." *Human Resources for Health* 16(1):15. doi:10.1186/s12960-018-0277-9.

182. PHI. 2011. *PHI Coaching Approach Demonstration Yields Positive Outcomes for Employers*. Bronx, NY: PHI. <https://phinational.org/wp-content/uploads/legacy/clearinghouse/CCSLevaluation-08052011.pdf>.

183. Farrell, Chris. 2017. "Could This Idea Help Fix America's Shortage of Home Care Workers?" *Next Avenue*, August 15. <https://www.nextavenue.org/home-care-workers-shortage/>.

184. Mattson, Kaitlyn. 2018. "More Home Care Agencies May Become Employee-Owned as Aging Owners Exit." *Home Care Pulse*, October 2. <https://homehealthcarenews.com/2018/10/more-home-care-agencies-may-become-employee-owned-as-aging-owners-exit/>; Holly, 2019.

185. Campbell, Stephen. 2018. *Workplace Injuries and the Direct Care Workforce*. Bronx, NY: PHI. <https://phinational.org/wp-content/uploads/2018/04/Workplace-Injuries-and-DCW-PHI-2018.pdf>.

186. Sherman, Martin F., Robyn R.M. Gershon, Stephanie M. Samar, Julie M. Pearson, Allison N. Canton, and Marc R. Damsky. 2008. "Safety Factors Predictive of Job Satisfaction and Job Retention Among Home Healthcare Aides." *Journal of Occupational and Environmental Medicine* 50(12):1430-1441. doi:10.1097/JOM.0b013e31818a388e.; Stone et al., 2017; McCaughey, Deirdre, Gwen McGhan, Jungyoon Kim, Diane Brannon, Hannes Leroy, and Rita Jablonski. 2012. "Workforce Implications of Injury Among Home Health Workers: Evidence from the National Home Health Aide Survey." *The Gerontologist* 52(4):493-505. doi:10.1093/geront/gnr133.; Faucett, J., T Kang, and Robert Newcomer. 2013. "Personal Service Assistance: Musculoskeletal Disorders and Injuries in Consumer-Directed Home Care." *American Journal of Industrial Medicine* 56(4). doi:10.1002/ajim.22133.

187. National Employment Law Project (NELP). "Raise the Minimum Wage: Questions & Answers." Accessed September 15, 2018. <https://raisetheminimumwage.com/myths-facts/>.

188. Cook, Allison. 2017. *Benefit Cliffs and Benefit Plateaus*. Bronx, NY: PHI. <https://phinational.org/resource/benefit-cliffs-and-benefit-plateaus-do-higher-wages-result-in-higher-incomes-for-new-york-citys-home-care-aides/>.

189. Associated Press. 2017. "Minimum-wage Increases Could Deepen Shortage of Health Aides." *VOA*, March 20. <https://www.voanews.com/a/minimum-wage-increase-health-aide-shortage/3773357.html>.

190. Cook, Allison. 2018. *Paid Family and Medical Leave: How States Should Support Direct Care Workers*. Bronx, NY: PHI. <https://phinational.org/resource/paid-family-medical-leave-states-support-direct-care-workers/>.
191. National Partnership for Women & Families. 2017. *Paid Family and Medical Leave: An Overview*. Washington, DC: National Partnership for Women & Families. <http://www.nationalpartnership.org/our-work/resources/economic-justice/paid-leave/paid-family-and-medical-leave.pdf>.
192. Cook, 2018.
193. PHI. 2015. *FLSA Facts: Understanding the Revised Companionship Exemption*. Bronx, NY: PHI. <https://phinational.org/resource/flsa-facts-understanding-the-revised-companionship-exemption/>.
194. Gifford, Kathleen, Eileen Ellis, Barbara Coulter Edwards, Aimee Lashbrook, Elizabeth Hinton, Larisa Antonisse, and Robin Rudowitz. 2018. *States Focus on Quality and Outcomes Amid Waiver Changes*. Washington, DC: The Henry J. Kaiser Family Foundation and National Association of Medicaid Directors. <http://files.kff.org/attachment/Report-States-Focus-on-Quality-and-Outcomes-Amid-Waiver-Changes-Results-from-a-50-State-Medicaid-Budget-Survey-for-State-Fiscal-Years-2018-and-2019>.
195. Montana Legislature. 2017. House Bill No. 638. https://leg.mt.gov/bills/2017/hb0699/HB0638_3.pdf.
196. Medicaid.gov. "Balancing Incentive Program." Accessed May 15, 2019. <https://www.medicaid.gov/medicaid/ltss/balancing/incentive/index.html>.
197. Cook, Allison. 2017. *Improving Job Quality for the Direct Care Workforce: A Review of State Policy Strategies*. Chevy Chase, MD: Working Poor Families Project. <http://www.workingpoorfamilies.org/wp-content/uploads/2017/12/Winter-2017-WFPF-Policy-Brief.pdf>.
198. Texas Health and Human Services Commission (HHSC). 2018. *Community Attendant Recruitment and Retention Strategies*. Austin, TX: HHSC. <https://hhs.texas.gov/sites/default/files/documents/laws-regulations/reports-presentations/2018/207-rider-207-community-recruitment-retention-strategies-aug-2018.pdf>.
199. Baughman, Reagan A. and Kristin Smith. 2010. "The Effect of Medicaid Wage Pass-Through Programs on the Wages of Direct Care Workers." *Medical Care* 48(5):426-432. doi:10.1097/MLR.0b013e3181d6888a.
200. Arizona Health Care Cost Containment System (AHCCCS). 2018. *AHCCCS Contractor Operations Manual: 407 Workforce Development*. Phoenix, AZ: AHCCCS. https://www.azahcccs.gov/shared/Downloads/ACOM/PolicyFiles/400/407_Workforce_Development.pdf.
201. Pennsylvania Department of Human Services. "Community HealthChoices Agreement." Accessed November 5, 2018. http://www.healthchoices.pa.gov/cs/groups/webcontent/documents/document/c_272140.pdf.
202. Christman and Connolly, 2017.
203. National Employment Law Project (NELP). 2015. *Independent Contractor Classification in Home Care*. Washington, DC: NELP. <https://www.nelp.org/wp-content/uploads/Home-Care-Misclassification-Fact-Sheet.pdf>.
204. Hewitt, Amy, Sheryl Larson, Steve Edelstein, Dorie Seavey, Michael A. Hoge, and John Morris. 2008. *A Synthesis of Direct Service Workforce Demographics and Challenges Across Intellectual/Developmental Disabilities, Aging, Physical Disabilities, and Behavioral Health*. Washington, DC: National Direct Service Workforce Resource Center. <https://rtc.umn.edu/docs/Cross-DisabilitySynthesisWhitePaperFINAL.pdf>.
205. Hewitt et al., 2008.
206. Janes, Nadine, Souraya Sidani, Cheryl Cott, and Susan Rappolt. 2008. "Figuring it Out in the Moment: A Theory of Unregulated Care Providers' Knowledge Utilization in Dementia Care Settings." *Worldviews on Evidence-Based Nursing* 5:13-24. doi:10.1111/j.1741-6787.2008.00114.x; Swedberg, Lena, Eva Hammar Chiriack, Lena Törnkvist and Ingrid Hylander. 2013. "From Risky to Safer Home Care: Health Care Assistants Striving to Overcome a Lack of Training, Supervision, and Support." *International Journal of Qualitative Studies on Health and Well-being*, 8(1). doi:10.3402/qhw.v8i0.20758; Stacey, Clare L. 2011. *The Caring Self: The Work Experiences of Home Care Aides*. Ithaca, NY: Cornell University Press.
207. Swedberg, Lena, Hans Michelsen, Eva Hammar Chiriack and Ingrid Hylander, 2015. "On-The-Job Training Makes the Difference: Healthcare Assistants Perceived Competence and Responsibility in the Care of Patients with Home Mechanical Ventilation." *Scandinavian Journal of Caring Sciences* 29(2):369-378. doi:10.1111/scs.12173.
208. Frogner, Bianca and Joanne Spetz. 2015. *Entry and Exit of Workers in Long-Term Care*. San Francisco, CA: University of California-San Francisco, Health Workforce Research Center on Long-Term Care. https://healthworkforce.ucsf.edu/sites/healthworkforce.ucsf.edu/files/Report-Entry_and_Exit_of_Workers_in_Long-Term_Care.pdf.
209. PHI. "Home Health Aide Training Requirements by State." Accessed September 24, 2018. <https://phinational.org/advocacy/home-health-aide-training-requirements-state-2016/>.
210. Institute of Medicine (IOM). 2008. *Retooling for an Aging America: Building the Health Care Workforce*. Washington, DC: The National Academies Press. <https://www.ncbi.nlm.nih.gov/books/NBK215401/>.
211. PHI. "Nursing Assistant Training Requirements by State." Accessed September 24, 2018. <https://phinational.org/advocacy/nurse-aide-training-requirements-state-2016/>.
212. PHI. "Personal Care Aide Training Requirements by State." Accessed August 15, 2019. <https://phinational.org/advocacy/personal-care-aide-training-requirements/>.
213. District of Columbia Department of Health. 2017. "Notice of Final Rulemaking." https://dchealth.dc.gov/sites/default/files/dc/sites/doh/publication/attachments/Home%20Health%20Aide%20Regulations%20-%20Final%2029-29-2017_0.pdf.
214. Applied Self-Direction. "Self-Direction." Accessed May 15, 2019. <http://www.appliedselfdirection.com/self-direction>.
215. Brown, Randall, Barbara Lepidus Carlson, Stacy Dale, Leslie Foster, Barbara Phillips, and Jennifer Schore. 2007. "Cash and Counseling: Improving the Lives of Medicaid Beneficiaries Who Need Personal Care or Home- and Community-Based Services." *Mathematica Policy Research Reports* No.0818a138bf034a13b4eb2df8b. <https://ideas.repec.org/p/mpr/mpres/0818a138bf034a13b4eb2df8b50c211b.html>; Gray, David B., Jessica L. Dashner, Kerri A. Morgan, Melissa Lyles, Michael D. Scheller, Carrie L. Morris, and Holly H. Hollingsworth. 2009. "Influence of a Consumer-Directed Personal Assistance Services Program on the Lives of Persons with Mobility Impairments." *Disability and Health Journal* 2(4): 188-195. <https://doi.org/10.1016/j.dhjo.2009.05.002>; Harry, Melissa L., Jooyoung Kong, Lynn M. MacDonald, Althea McLuckie, Christina Battista, Ellen K. Mahoney, Haesang Jeon, and Kevin J. Mahoney. 2016. "The Long-Term Effects of Participant Direction of Supports and Services for People with Disabilities." *Care Management Journals* 17(1):2-12.
216. Carlson, Barbara Lepidus, Leslie Foster, Stacy B. Dale, and Randall Brown. 2007. "Effects of Cash and Counseling on Personal Care and Well-Being." *Health Services Research* 42(1):467-87.
217. Medicaid.gov. "Self-Directed Services." Accessed September 24, 2018. <https://www.medicaid.gov/medicaid/ltss/self-directed/index.html>.
218. Claypool, Henry and Molly O'Malley. 2008. *Consumer Direction of Personal Assistance Services in Medicaid: A Review of Four State Programs*. Washington, DC: The Kaiser Commission on Medicaid and the Uninsured. <https://kaiserfamilyfoundation.files.wordpress.com/2013/01/7757.pdf>.
219. Sciegaj, Mark, Suzanne Crisp, Casey DeLuca, and Kevin J. Mahoney. 2013. *Participant-Directed Services in Managed Long-Term Services and Supports Programs: A Five State Comparison*. Washington, DC: U.S. Department of Health and Human Services, Assistant Secretary for Planning and Evaluation. <https://aspe.hhs.gov/system/files/pdf/76751/5LTSS.pdf>.

220. Benjamin, A. E., and Ruth E. Matthias. 2004. "Work-Life Differences and Outcomes for Agency and Consumer-Directed Home-Care Workers." *The Gerontologist* 44(4):479-488. <https://doi.org/10.1093/geront/44.4.479>.
221. Swaine, Jamie G., Susan L. Parish, Leah Igdalsky, and Robyn M. Powell. 2016. "Consumers' and Workers' Perspectives about Consumer-Directed Services in the United States." *Disability and Health Journal* 9(3):464-471. doi:10.1016/j.dhjo.2016.01.002.
222. Benjamin and Matthias, 2004.
223. Reinhard et al., 2012.
224. Moorman, Sara M., and Cameron Macdonald. 2012. "Medically Complex Home Care and Caregiver Strain." *The Gerontologist* 53(3):407-417. doi: 10.1093/geront/gns067.
225. Benjamin, A. E., Ruth E. Matthias, Kathryn Kietzman, and Walter Furman. 2008. "Retention of Paid Related Caregivers: Who Stays and Who Leaves Home Care Careers?" *The Gerontologist* 48(Supplement 1):104-113. doi:10.1093/geront/48.Supplement_1.104.
226. Kafka, Bob, Tom Nerney, Kevin Mahoney, Erin McGaffigan, Mary Kay Henry, Kirk Adams, Leslie Frane, and Mike Oxford. 2011. "Guiding Principles for Partnerships with Unions and Emerging Worker Organizations When Individuals Direct Their Own Services and Supports." <http://www.appliedselfdirection.com/sites/default/files/Guiding%20Principles%20with%20Signatures.pdf>.
227. Campbell, Stephen. 2017. *Training Standards for Personal Care Aides: Spotlight on Washington*. Bronx, NY: PHI. https://phinational.org/wp-content/uploads/2017/11/wa_case_study_pca_training_standards_2017.pdf.; Kiboneka, Grace. 2018. "Supporting Washington State's Long-term Services and Supports Workforce." Presentation at the annual conference of the National Academy of State Health Policy (NASHP), Jacksonville, FL, August 16, 2018.
228. Choitz, Victoria, Helmer, Matthew, and Conway, Maureen. 2015. *Improving Jobs to Improve Care, the SEIU Healthcare NW Training Partnership*. New York, NY: Aspen Institute. <http://www.aspenwsi.org/wordpress/wp-content/uploads/SEIUCaseStudy.pdf>.
229. Campbell, Stephen. 2017. *Training Standards for Personal Care Aides: Spotlight on Washington*. Bronx, NY: PHI. https://phinational.org/wp-content/uploads/2017/11/wa_case_study_pca_training_standards_2017.pdf.
230. California Long-Term Care Education Center (CLTCEC). 2018. *IHSS+ Home Care Integration Training Year One Report*. Los Angeles, CA: CLTCEC. <https://cltcec.org/l-a-care-ihss-year-one-report-coming-soon/>.
231. PHI. "Personal Care Aide Training Requirements by State." Accessed August 15, 2019. <https://phinational.org/advocacy/home-health-aide-training-requirements-state-2016/>.
232. Arkansas Department of Health. 2014. *Rules and Regulations for Home Caregiver Training in Arkansas*. Little Rock, AR: Arkansas Department of Health: Agency # 007.05. <https://www.sos.arkansas.gov/uploads/rulesRegs/Arkansas%20Register/2014/may14Reg/007.05.13-008.pdf>.
233. DirectCourse. "College of Direct Support." Accessed May 15, 2019. <https://www.directcourseonline.com/direct-support/>.
234. New York State Department of Health. "Home Health Aide Training Program Frequently Asked Questions and Answers." Accessed October 12, 2018. https://www.health.ny.gov/professionals/home_care/hhtap_training_program_fa_q.htm.
235. Ruggles et al., 2019.
236. Kuehn, Daniel, Robert Lerman, Lauren Eyster, Wayne Anderson, Galina Khatutsky, and Joshua Wiener. 2011. *Characteristics of Long-Term Care Registered Apprenticeship Programs: Implications for Evaluation Design*. Washington, DC: U.S. Department of Health and Human Services, Assistant Secretary for Planning and Evaluation. <https://aspe.hhs.gov/report/characteristics-long-term-care-registered-apprenticeship-programs-implications-evaluation-design>.
237. Anderson, Wayne, Galina Khatutsky, Joshua M. Wiener, Robert Lerman, and Daniel Kuehn. 2010. *A Descriptive Analysis of the U.S. Department of Labor's Long-Term Care Registered Apprenticeship Programs*. Washington, DC: U.S. Department of Health and Human Services, Assistant Secretary for Planning and Evaluation. <https://aspe.hhs.gov/system/files/pdf/76476/LTCAppre.pdf>.
238. New York State Department of Health. "Workforce Investment Program." Last modified April 2018. https://www.health.ny.gov/health_care/medicaid/redesign/2017/mltc_invest.htm.
239. U.S. Department of Labor. "WIO Overview." Accessed October 25, 2018. <https://www.doleta.gov/WIOA/Overview.cfm>.
240. National Skills Coalition. 2014. "An Untapped Resource: Understanding SNAP E&T." Webinar presented on July 8, 2014. <https://www.nationalskillscoalition.org/resources/webinars/sign-up-now>.
241. National Direct Service Workforce Resource Center. 2013. *Coverage of Direct Service Workforce Continuing Education and Training within Medicaid Policy and Rate Setting: A Toolkit for State Medicaid Agencies*. Washington, DC: CMS. <https://www.medicaid.gov/medicaid/ltss/downloads/workforce/dsw-training-rates-toolkit.pdf>.
242. National Institutes of Health (NIH). 2015. *Workforce Planning Toolkit: Competencies Overview*. Bethesda, MD: NIH. <https://hr.nih.gov/sites/default/files/public/documents/working-nih/workforce-planning/pdf/07-nihcompetenciesoverview.pdf>.
243. Center for Medicare and Medicaid Services. 2011. *Road Map of Core Competencies for the Direct Service Workforce Phase I: Competency Inventory*. Washington, DC: CMS. <https://www.medicaid.gov/medicaid/ltss/downloads/workforce/dsw-competency-road-map-phases-i-and-ii.pdf>.
244. DirectCourse Online Curricula for Life in Community. "College of Direct Support." Accessed September 16, 2018. <http://directcourseonline.com/direct-support>.
245. National Alliance for Direct Support Professionals, Inc. (NADSP). "15 NADSP Competency Areas." Accessed September 16, 2018. <https://www.nadsp.org/15-competency-areas/>; NADSP. 2017. *Direct Support Professional Certification Program Guidebook*. Albany, NY: NADSP. <https://nadsp.org/wp-content/uploads/2017/06/NADSP-2017-Certification-Guidebook-Final-2017.pdf>.
246. U.S. Department of Labor, Employment and Training Administration Competency Model Clearinghouse. 2010. "Long-term Care, Supports, and Services Competency Model." <https://www.careeronestop.org/competencymodel/competency-models/long-term-care.aspx>.
247. National Resource Center for Participant-Directed Services. 2012. *Administration for Community Living's Long-Term Services and Supports (LTSS) Workforce Competency Model Webinette*. Chestnut Hill, MA: National Resource Center for Participant-Directed Services. <http://www.appliedselfdirection.com/sites/default/files/Long-Term%20Services%20%26%20Supports%20Workforce%20Competency%20Model%20Webinette%20-%20Presentation.pdf>.
248. National Direct Service Workforce Resource Center. 2014. *Final Competency Set*. Washington, DC: CMS. <https://www.medicaid.gov/medicaid/ltss/downloads/workforce/dsw-core-competencies-final-set-2014.pdf>.
249. LeadingAge Center for Applied Research. 2015. *Personal Care Attendant Competency Development Guide*. Washington, DC: LeadingAge Center for Applied Research. http://www.leadingage.org/sites/default/files/Personal%20Care%20Attendant%20Competency%20Development%20Guide_Final_0.pdf.
250. Wilson, Daniel and Anne Montgomery. 2016. "PHCAST: Final Evaluation Underscores Urgency of Building Out Comprehensive, Competency-Based Training for Direct Care Workers." *PHI Blog*, July 14, 2016. <https://phinational.org/phcast-final-evaluation-underscores-urgency-of-building-out-comprehensive-competency-based-training-for-direct-care-workers/>; Morgan, Jennifer Craft, Nadine Edris, Clare C. Luz, Daniel P. Ochylski, Anita Stineman, Leanne Winchester, and Susan A. Chapman. 2019. "Testing US State-Based Training Models to Meet Health

- Workforce Needs in Long-Term Care." *Ageing International* 43(1): 123-140. doi:10.1007/s12126-017-9286-6; Stone, Robyn. 2014. "Competency-Based Training Models for Personal and Home Care Workers." <http://www.nationalacademies.org/hmd/~media/Files/Activity%20Files/Aging/AgingForum/2014-AUG-14/03%20-%20STONE.pdf>.
251. Wilson and Montgomery, 2016.
252. Arizona Health-Care Cost Containment System. "Direct Care Worker Training and Testing Program." Accessed September 16, 2018. <https://www.azahcccs.gov/PlansProviders/CurrentProviders/DCW/>.
253. PHI. 2008. *Adult Learner-Centered Training: An Introduction for Educators in Home and Residential Care*. Bronx, NY: PHI. [https://phinational.org/wp-content/uploads/legacy/clearinghouse/PHI-386%20ALCT%20Guide%20\(small\).pdf](https://phinational.org/wp-content/uploads/legacy/clearinghouse/PHI-386%20ALCT%20Guide%20(small).pdf).
254. Merriam, Sharan B. 2001. "Andragogy and Self-Directed Learning: Pillars of Adult Learning Theory." *New Directions for Adult and Continuing Education* 89:3-13. <https://pdfs.semanticscholar.org/348f/4ec482384d90bafad92e226fa4471ff56539.pdf>.
255. Feldman, Penny H., Miriam Ryvicker, Lauren M. Evans, and Yolanda Barrón. 2017. "The Homecare Aide Workforce Initiative: Implementation and Outcomes." *Journal of Applied Gerontology*, epub ahead of print. doi:10.1177/0733464817707298.
256. Campbell, Stephen. 2017. *Training Standards for Personal Care Aides: Spotlight on Iowa*. Bronx, NY: PHI. <https://phinational.org/resource/training-standards-for-personal-care-aides-spotlight-on-iowa/>.
257. Killingsworth, Patti. 2018. "Shore it Up: Strengthening the LTSS Workforce (Tennessee)." Presentation at the annual conference of the National Academy of State Health Policy (NASHP), Jacksonville, FL, August 16, 2018.
258. Long, Charla. "QuILTSS Workforce Development Forum," YouTube video, May 12, 2016. <https://www.youtube.com/watch?v=BjVFRwWM36E&feature=youtu.be>.
259. Tennessee Division of TennCare. "Value Based Purchasing." Accessed October 12, 2018. <https://www.tn.gov/tenncare/long-term-services-supports/value-based-purchasing.html#collapse5f6ba7bd22e34f7890a1eeb9e348d9f0-3>.
260. California Future Health Workforce Commission. 2019. "Meeting the Demand for Health: Final Report of the California Future Health Workforce Commission." <https://futurehealthworkforce.org/wp-content/uploads/2019/03/MeetingDemandForHealthFinalReportCFHWC.pdf>.
261. Reinhard et al., 2015.
262. Anthony, Stephanie, Arielle Traub, Sarah Lewis, and Cindy Mann. 2017. *Strengthening Medicaid Long-Term Services and Supports in an Evolving Policy Environment: A Toolkit for States*. Hamilton, NJ: Center for Health Care Strategies. https://www.milbank.org/wp-content/uploads/2017/12/Strengthening-LTSS-Toolkit_120717.pdf; Wolff, Jennifer L., Judith D. Kasper, and Andrew D. Shore. 2008. "Long-term Care Preferences Among Older Adults: A Moving Target?" *Journal of Aging & Social Policy* 20(2):182-200; Guo, Jing, R. Tamara Konezka, Elizabeth Magett, and William Dale. 2015. "Quantifying Long-Term Care Preferences." *Medical Decision Making* 35(1):106-113. doi: 10.1177/0272989X1455164.
263. Genworth, 2018.
264. Gleckman, Howard. 2016. "Who Owns Long-Term Care Insurance?" *Forbes*, August 18. <https://www.forbes.com/sites/howardgleckman/2016/08/18/who-owns-long-term-care-insurance/#4b1eef352f05>.
265. Gleckman, Howard. 2014. "What Does Genworth's Bad News Mean for the Future of Long-Term Care Insurance?" *Howard Gleckman's Blog*, November 19. <https://howardgleckman.com/2014/11/19/genworths-terrible-news-mean-future-long-term-care-insurance/>.
266. AARP. 2016. "Understanding Long-Term Care Insurance." Accessed August 9, 2018. <https://www.aarp.org/health/health-insurance/info-06-2012/understanding-long-term-care-insurance.html>.
267. Stark, Ellen. 2018. "5 Things You SHOULD Know About Long-Term Care Insurance." *AARP Bulletin*, March. <https://www.aarp.org/caregiving/financial-legal/info-2018/long-term-care-insurance-fd.html>.
268. Reaves, Erica and MaryBeth Musumeci. 2015. *Medicaid and Long-Term Services and Supports: A Primer*. Menlo Park, CA: Kaiser Family Foundation. <https://www.kff.org/medicaid/report/medicaid-and-long-term-services-and-supports-a-primer/>.
269. U.S. Department of Health and Human Services. "Medicaid Long-term Care Services." Accessed August 9, 2018. <https://longtermcare.acl.gov/medicare-medicaid-more/medicaid/index.html>.
270. ADA.gov. "Olmstead: Community Integration for Everyone." Accessed October 14, 2018. https://www.ada.gov/olmstead/olmstead_about.htm.
271. Eiken, Steve, Kate Sredl, Brian Burwell, and Angie Amos. 2018. *Medicaid Expenditures for Long-Term Services and Supports in FY 2016*. Baltimore, MD: IBM Watson Health. <https://www.medicaid.gov/medicaid/lts/downloads/reports-and-evaluations/ltssexpenditures2016.pdf>. California is not included in this data.
272. Center for Medicare and Medicaid Services. "State Medicaid Plans and Waivers." Accessed August 14, 2018. <https://www.cms.gov/Outreach-and-Education/American-Indian-Alaska-Native/AIAN/LTSS-TA-Center/info/state-medicaid-policies.html>.
273. Eiken et al., 2018.
274. O'Malley Watts and Musumeci, 2018.
275. Anthony et al., 2017.
276. Diament, Michelle. 2019. "Trump Extends Program Helping People Leave Institutions." *Disability Scoop*, August 20, 2019. <https://www.disabilityscoop.com/2019/08/20/trump-extends-program-helping-people-leave-institutions/27038/>.
277. Medicaid.gov. "Money Follows the Person." Accessed October 1, 2018. <https://www.medicaid.gov/medicaid/lts/money-follows-the-person/index.html>; National Association of States United for Aging and Disabilities (NASUAD). "State Medicaid Integration Tracker®." Last modified May 7, 2019. <http://www.nasuad.org/sites/nasuad/files/May%207%20Integration%20Tracker.pdf>. A bill to reauthorize the Money Follows the Person program—HR 5306, the Ensuring Medicaid Provides Opportunities for Widespread Equity, Resources, and Care Act (EMPOWER Care Act)—was passed in September 2018 by the House Energy & Commerce Committee.
278. O'Malley Watts and Musumeci, 2018.
279. Saucier, Paul, Jessica Kasten, and Angie Amos. 2017. *Do Managed Care Programs Covering Long-Term Services and Supports Reduce Waiting Lists for Home and Community-Based Services?* Washington, DC: CMS. <https://www.medicaid.gov/medicaid/section-1115-demo/downloads/evaluation-reports/1115-ib6-508-mltss-hcbs-waiting-lists.pdf>.
280. Medicare Interactive. "Introduction to Medicare." Accessed August 9, 2018. <https://www.medicareinteractive.org/get-answers/medicare-basics/medicare-overview/introduction-to-medicare>.
281. Jaffe, Susan. 2018. "Home Care Agencies Often Wrongly Deny Medicare Help to the Chronically Ill." NPR, January 17. https://www.npr.org/sections/health-shots/2018/01/17/578423012/home-care-agencies-often-wrongly-deny-medicare-help-to-the-chronically-ill?utm_source=twitter.com&utm_medium=social&utm_campaign=npr&utm_term=nprnews&utm_content=20180117.
282. Cubanski, Juliette, Christina Swoope, Cristina Boccuti, Gretchen Jacobson, Giselle Casillas, Shannon Griffin, and Tricia Neuman. 2015. *A Primer on Medicare: Key Facts About the Medicare Program and the People it Covers*. Menlo Park, CA: Kaiser Family Foundation. <https://www.kff.org/report-section/a-primer-on-medicare-how-much-does-medicare-spend/>.
283. Mullaney, Tim. 2018. "CMS Officially Adds Non-Skilled In-Home Care as Medicare Advantage Benefit." *Home Health Care News*, April 2. <https://homehealthcarenews.com/2018/04/cms-officially-adds-non-skilled-in-home-care-as-medicare-advantage-benefit/>.

284. Mullaney, Tim. 2018. "Few Medicare Advantage Plans Will Offer New Home Care Benefits in 2019." *Home Health Care News*, November 4. <https://homehealthcarenews.com/2018/11/few-medicare-advantage-plans-will-offer-new-home-care-benefits-in-2019/>.
285. Anthony et al., 2017.
286. Center for Medicare and Medicaid Services. 2008. "Quick Facts about Programs of All-inclusive Care for the Elderly (PACE)." Accessed August 9, 2018. <http://www.npaonline.org/sites/default/files/uploads/PACE%20Quick%20Facts.pdf>.
287. Center for Health Care Strategies, Inc (CHCS). 2017. *Update on Medicare-Medicaid Integration*. Trenton, NJ: CHCS. <https://www.chcs.org/media/Medicare-Medicaid-Integration-Fact-Sheet-030117.pdf>.
288. US Department of Veterans Affairs. "Health Benefits: Home Healthcare." Accessed August 9, 2018. https://www.va.gov/healthbenefits/access/home_health_care.asp.
289. Administration for Community Living (ACL). "Veteran-Directed Home & Community Based Services (VD-HCBS) Program." Accessed May 24, 2019. <https://www.acl.gov/programs/veteran-directed-home-and-community-based-services/veteran-directed-home-community-based>.
290. National Committee to Protect Social Security and Medicare. 2016. "Older Americans Act." <https://www.ncpssm.org/documents/older-americans-policy-papers/older-americans-act/>.
291. Administration for Community Living (ACL). "Title III - Grants for State and Community Programs on Aging FY 2018 Final Allocation (Before Any B/C1/C2 Transfers and Reallotments)." Accessed October 1, 2018. <https://www.acl.gov/sites/default/files/about-acl/2018-09/TitleIII-2018.pdf>.
292. Khatutsky, Galina and Angela M. Green. 2019. "How Many Long-Term Care Surveys Do We Need?" *Generations* 43(1): 23-30.
293. The Henry J. Kaiser Family Foundation. 2010. *Health Care Reform and the Class Act*. Washington, DC: Kaiser Family Foundation. <https://kaiserfamilyfoundation.files.wordpress.com/2013/01/8069.pdf>.
294. Gleckman, Howard. 2013. "Fiscal Cliff Deal Repeals CLASS Act, Creates Long-Term Care Commission." *Forbes*, January 1. <https://www.forbes.com/sites/howardgleckman/2013/01/01/fiscal-cliff-deal-repeals-class-act-creates-long-term-care-commission/>.
295. Dawson, Walter D. and John Cutler. 2019. "Addressing Long-Term Services and Supports Reform via Medicare. Yes, Medicare, That Post-Acute Care Program." *Journal of Aging & Social Policy*: 1-17. doi.org/10.1080/08959420.2018.1563469.
296. Aging and Disability Resource Center Hawaii. "Kupuna Caregivers Program." Accessed August 14, 2018. https://hawaiiadrc.org/Portals/_AgencySite/KCG%20Info%20sheet%20071117_FINAL.pdf.
297. Meyer, Harris. 2018. "Maine voters reject universal home care referendum." *Modern Healthcare*, November 7. <https://www.modernhealthcare.com/article/20181107/NEWS/181109945/maine-voters-reject-universal-home-care-referendum>.
298. Lieber, Ron. 2019. "New Tax Will Help Washington Residents Pay for Long-Term Care." *The New York Times*, May 13. <https://www.nytimes.com/2019/05/13/business/washington-long-term-care.html?login=email&auth=login-email>.
299. NASUAD, 2019; Lewis, Elizabeth, Steve Eiken, Angela Amos, and Paul Saucier. 2018. *The Growth of Managed Long-Term Services and Supports Programs: 2017 Update*. Ann Arbor, MI: Truven Health Analytics. <https://www.medicare.gov/medicaid/managed-care/downloads/lts/mtssp-inventory-update-2017.pdf>.
300. Lewis et al., 2018.
301. United States Government Accountability Office (GAO). 2017. *Medicaid Managed Care: Improved Oversight Needed of Payment Rates for Long-Term Services and Supports*. Washington, DC: GAO. <https://www.gao.gov/assets/690/681946.pdf>.
302. U.S. Senate Commission on Long-Term Care. 2013. *Report to Congress*. Washington, DC: Commission on Long-Term Care. <http://ltccommission.org/ltccommission/wp-content/uploads/2013/12/Commission-on-Long-Term-Care-Final-Report-9-26-13.pdf>.
303. Greene, Angela, William D. Clark, and Daniel Lehman. 2017. *Early Findings on Care Coordination in Capitated Medicare-Medicaid Plans Under the Financial Alignment Initiative*. Washington, DC: RTI International. <https://innovation.cms.gov/Files/reports/fai-carecoordination-issuebrief.pdf>.
304. NASUAD, 2019.
305. Greene et al., 2017.
306. Greene et al., 2017.
307. Sciegaj, Mark, Suzanne Crisp, Merle Edwards-Orr, and Casey DeLuca. 2016. "Three Emerging Themes From Implementing Self-Directed Long-Term Service and Support Programs Under Managed Care." *Public Policy & Aging Report* 26(4): 134-137. doi:10.1093/ppar/prw019.
308. Sciegaj et al. 2016.
309. Osterman, 2017, p.126-7.
310. Deloitte Center for Health Solutions, 2016.
311. Cook, Allison. 2019. *Value-Based Payment and the Home Care Workforce: What New York Can Teach Other States*. Bronx, NY: PHI. <https://phinational.org/resource/value-based-payment-and-the-home-care-workforce-what-new-york-can-teach-other-states/>.
312. Chee, Tingyin T., Andrew M. Ryan, Jason H. Wasfy, and William B. Borden. 2016. "Current State of Value-Based Purchasing Programs." *Circulation* 133(22): 2197-2205. doi: 10.1161/CIRCULATIONAHA.115.010268.
313. New York State Department of Health. Last modified September 28, 2017. "Value Based Payment for Managed Long Term Care Plans." https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/vbp_library/2017-07-12_mltc_le1v1_contracting.htm.
314. O'Malley Watts and Musumeci, 2018.
315. Center for Disease Control and Prevention. "Meaningful Use." Accessed August 14, 2018. <https://www.cdc.gov/ehrmmeaningfuluse/introduction.html>. The largest investment in health information technology infrastructure was through the American Recovery and Reinvestment Act of 2009 (ARRA), but was limited to hospitals and medical practices.
316. Cook, Allison. 2017. *New York Home Care: Leaders Reflect on the Changing Landscape*. Bronx, NY: PHI. https://phinational.org/wp-content/uploads/2017/07/home_care_in_new_york_final.pdf.
317. Ensslin, Brianna and Alexandra Kruse. 2016. *State Trends in the Delivery of Medicaid Long-Term Services and Supports*. Trenton, NJ: Center for Health Care Strategies. <https://www.chcs.org/media/CHCS-MLTSS-Scan-7-20-16.pdf>; Soper, Michelle Herman, Debra Lipson, Maria Dominiak, and James Lloyd. 2018. *Achieving Value in Medicaid Home- and Community-Based Care: Considerations for Managed Long-Term Services and Supports Programs*. Trenton, NJ: Center for Health Care Strategies. https://www.chcs.org/media/Achieving-Value-in-Medicaid-Home-and-Community-Based-Care_091818.pdf.
318. CMS, 2016.
319. Medicaid Innovation Accelerator Program. "Value-Based Payment for Home and Community-Based Services Technical Support for Medicaid Agencies Program Overview." Accessed October 2, 2018. <https://www.medicare.gov/state-resource-center/innovation-accelerator-program/iap-downloads/program-areas/vbp-hcbs-program-overview.pdf>.
320. Texas HHSC, 2018.
321. Center for Medicare and Medicaid Services (CMS). "Home Health Value-Based Purchasing Model." Accessed August 14, 2018. <https://innovation.cms.gov/initiatives/home-health-value-based-purchasing-model>; CellTrak. 2017. "10 Myths Surrounding the Home Health Value-Based Purchasing Model." <https://www.celltrak.com/blog/10-myths-home-health-value-based-purchasing>.

322. Federal Register. 2017. *Medicare and Medicaid Programs; CY 2018 Home Health Prospective Payment System Rate Update and CY 2019 Case-Mix Adjustment Methodology Refinements; Home Health Value-Based Purchasing Model; and Home Health Quality Reporting Requirements*. 82 FR 51676.
323. Agency for Healthcare Research and Quality. 2014. *Chapter 2: What is Care Coordination?* Rockville, MD: Agency for Healthcare Research and Quality. <http://www.ahrq.gov/professionals/prevention-chronic-care/improve/coordination/atlas2014/chapter2.html>
324. McWilliams, Michael. 2017. "Cost Containment and the Convenient Tale of Care Coordination." *New England Journal of Medicine* 375(23): 2218-2220. doi: 10.1056/NEJMp1610821.
325. Center for Health Care Strategies, Inc (CHCS). 2017. *Medicaid Accountable Care Organizations: State Update*. Trenton, NJ: CHCS. <https://www.chcs.org/media/ACO-Fact-Sheet-02-27-2018-1.pdf>.
326. McGinnis, Tricia, Michelle Herman Soper, and Stephen A. Somers. 2016. "State Conundrum: Addressing Long-Term Care Needs within Medicaid Accountable Care Organizations." *CHCS Blog*, September 13, 2016. <https://www.chcs.org/state-conundrum-addressing-long-term-care-needs-within-medicaid-acos/>.
327. Executive Office of Health and Human Services, MassHealth. 2017. "MassHealth Partners with 18 Health Care Organizations to Improve Health Care Outcomes for Members." *Press Release*, June 8, 2017. <https://www.mass.gov/news/masshealth-partners-with-18-health-care-organizations-to-improve-health-care-outcomes-for>.
328. Rhode Island Executive Office of Health and Human Services (EOHHS). "Accountable Entities." Accessed October 3, 2018. <http://www.eohhs.ri.gov/Initiatives/AccountableEntities.aspx>.
329. Center for Medicare and Medicaid Services (CMS). "Health Home Information Research Center." Accessed October 3, 2018. <https://www.medicaid.gov/state-resource-center/medicaid-state-technical-assistance/health-home-information-resource-center/downloads/targeted-conditions-matrix.pdf>.
330. Wiener, Joshua M., Melissa Romaire, Nga (Trini) Thach, Aubrey Collins, Konny Kim, Huiling Pan, Giuseppina Chiri, Anna Sommers, Susan Haber, MaryBeth Musumeci, and Julia Paradise. 2017. *Strategies to Reduce Medicaid Spending: Findings from a Literature Review*. Washington, DC: The Henry J. Kaiser Family Foundation. <https://www.kff.org/medicaid/issue-brief/strategies-to-reduce-medicaid-spending-findings-from-a-literature-review/>; Spillman, Brenda C. and Eva H. Allen. 2017. *Evaluation of the Medicaid Health Home Option for Beneficiaries with Chronic Conditions: Evaluation of Outcomes of Selected Health Home Programs, Annual Report - Year Five*. Washington, DC: U.S. Department of Health and Human Services, Assistant Secretary for Planning and Evaluation. <https://aspe.hhs.gov/basic-report/evaluation-medicaid-health-home-option-beneficiaries-chronic-conditions-evaluation-outcomes-selected-health-home-programs-annual-report-year-five#execsum>.
331. Holly, Robert. 2018. "Poor Communication Between Home Health, Doctors Leaves Patients 'Lost in the Wilderness.'" *Home Health Care News*, June 20. <https://homehealthcarenews.com/2018/06/poor-communication-between-home-health-doctors-leaves-patients-lost-in-the-wilderness/?platform=hootsuite>.
332. World Health Organization. "Social Determinants of Health." Accessed August 7, 2018. http://www.who.int/social_determinants/sdh_definition/en/.
333. Taylor, Lauren A. "Session 1: Framing the Issues of Integrating Health Care and Social Services for People with Serious Illness: Gaps, Challenges, and Opportunities." 2018. Presentation at the Integrating Health Care and Social Services for People with Serious Illness Workshop, Washington, DC, July 19, 2018.
334. Machledt, David. 2017. *Addressing the Social Determinants of Health Through Medicaid Managed Care*. New York, NY: The Commonwealth Fund. https://www.commonwealthfund.org/sites/default/files/documents/___media_files_publications_issue_brief_2017_nov_machledt_social_determinants_medicaid_managed_care_ib_v2.pdf
335. Spencer, Anna, James Lloyd, and Tricia McGinnis. 2015. *Using Medicaid Resources to Pay for Health-Related Supportive Services: Early Lessons*. Trenton, NJ: CHCS. <http://www.chcs.org/media/Supportive-Services-Brief-Final-120315-1.pdf>.
336. Romm, Iyah and Toyin Ajayi. 2017. "Weaving Whole-Person Health Throughout An Accountable Care Framework: The Social ACO." *Health Affairs Blog*, January 25, 2017. <https://www.healthaffairs.org/doi/10.1377/hblog20170125.058419/full/>.
337. Taylor, Lauren A., Caitlin E. Coyle, Chima Ndumele, Erika Rogan, Maureen Canavan Leslie Currie, and Elizabeht H. Bradley. 2015. *Leveraging the Social Determinants of Health: What Works?* New Haven, CT: Yale Global Health Leadership Institute. https://bluecrossmafoundation.org/sites/default/files/download/publication/Social_Equity_Report_Final.pdf.
338. Gifford et al, 2018.
339. LeadingAge Center for Housing Plus Services. "Why Housing Plus Services." Accessed October 3, 2018. <http://www.leadingage.org/resources/why-housing-plus-services>.
340. Henderson, Jennifer. 2019. "Hebrew Home to Co-Develop Low-Income Senior Housing." *Crain's New York Business*, March 4. <https://www.crainsnewyork.com/real-estate/hebrew-home-co-develop-low-income-senior-housing>.
341. Kandilov, Amy, Vincent Keyes, Noëlle Siegfried, Kevin Smith, Patrick Edwards, Jenna Brophy, Ann Larsen, Martijn Van Hasselt, Alisha Sanders, and Robyn Stone. 2017. *Support and Services at Home (SASH) Evaluation: Evaluation of the First Four Years*. Washington, DC: RTI International and LeadingAge. <https://aspe.hhs.gov/system/files/pdf/257936/SASH4.pdf>.
342. Kandilov et al., 2017.
343. Sanders, Alisha. 2018. "Taking Steps Toward Financing Housing Plus Services." *LeadingAge LTSS Center @UMass Boston LTSS Blog*, April 24, 2018. <https://www.ltsscenter.org/taking-steps-toward-financing-housing-plus-services/>.
344. Medicaid.gov. "Promoting Community Integration Through Long-Term Services and Supports." Accessed October 14, 2018. <https://www.medicaid.gov/state-resource-center/innovation-accelerator-program/program-areas/community-integration-ltss/index.html>.
345. Feldman, Penny H., Eric Latimer, and Harriet Davidson. 1996. "Medicaid-Funded Home Care for the Frail Elderly and Disabled: Evaluating the Cost Savings and Outcomes of a Service Delivery Reform." *Health Services Research* 31(4): 489-508.
346. Johnson, Shanthi and Juanita Bacsu. 2018. "Understanding Complex Care for Older Adults Within Canadian Home Care: A Systematic Literature Review." *Home Health Care Services Quarterly* 37(3): 232-246. doi: 10.1080/01621424.2018.1456996.
347. Schüssler, Fiorenza Rose, Sophia Miryam, Margaret G. Stineman, Qiang Pan, Hillary Bogner, Jibby E. Kurichi, Joel E. Streim, and Dawei Xie. 2017. "Potentially Avoidable Hospitalizations Among People at Different Activity of Daily Living Limitation Stages." *Health Services Research* 52(1): 132-155. doi: 10.1111/1475-6773.12484.
348. Ahn, Roy. 2017. *HCIA Complex/High-Risk Patient Targeting: Third Annual Report*. Chicago, IL: NORC at the University of Chicago. <https://downloads.cms.gov/files/cmimi/hcia-chspt-thirdannualrpt.pdf>.
349. Dean, Katie M., Laura A. Hatfield, Anupam B. Jena, David Cristman, Michael Flair, Kylie Kator, Geoffrey Nudd, and David C. Grabowski. 2016. "Preliminary Data on a Care Coordination Program for Home Care Recipients." *Journal of the American Geriatrics Society* 64(9): 1900-1903. doi: 10.1111/jgs.1435.
350. Coffman, Janet M. and Susan A. Chapman. 2012. *Envisioning Enhanced Roles for In-Home Supportive Services Workers in Care Coordination for Consumers with Chronic Conditions: A Concept Paper*. San Francisco, CA: Philip R. Lee Institute for Health Policy Studies and the Center for Personal Assistance Services, University of California at San Francisco; and Berkeley, CA: Center for Labor Research and Education,

University of California at Berkeley. https://healthforce.ucsf.edu/sites/healthforce.ucsf.edu/files/publication-pdf/ihs_12.pdf.

351. California Long-Term Care Education Center (CLTCEC). 2016. *Care Team Integration and Training of Home Care Workers – Impact Study*. Los Angeles, CA: CLTCEC.

352. Austin-Oser, Kimberly, Andrea Edmiston, and Rebecca Sussman. No date. *St. John's Enhanced Home Care Pilot Program*. Los Angeles, CA: SEIU Local 2015. <https://www.finance.senate.gov/imo/media/doc/Service%20Employees%20International%20Union%20SEIU%20%20Innovations%20in%20Home%20Care%203.pdf>.

353. Austin-Oser, Kimberly, Regina Estela, Corinne Eldridge, Lois Simon, and Rebecca Sussman. 2014. "Coordination, Education, and Integration: Enhanced Roles for Home Care Workers in Theory and Practice." Presented at the Home and Community Based Services Conference, Arlington, VA, September 18, 2014. <http://www.nasud.org/sites/nasud/files/Coordination%2C%20Education%2C%20and%20Integration.pdf>.

354. Working Nation. 2017. "One Company's Solution for Filling the Coming Demand for Home Care Providers." Los Angeles, CA: Working Nation. <https://workingnation.com/one-companys-solution-filling-coming-demand-home-care-providers/>.

355. David, Guy, and Kunhee Lucy Kim. 2018. "The Effect of Workforce Assignment on Performance: Evidence from Home Health Care." *Journal of Health Economics* 59: 26-45. doi: 10.1016/j.jhealeco.2018.03.003.

356. Russell, David, Ana Mola, Nicole Onorato, Sheniqua Johnson, Jessica Williams, Mark Andaya, and Marki Flannery. 2017. "Preparing Home Health Aides to Serve as Health Coaches for Home Care Patients with Chronic Illness: Findings and Lessons Learned from A Mixed-Method Evaluation of Two Pilot Programs." *Home Health Care Management & Practice* 29(3): 191-198. doi: 10.1177/1084822317706080.

357. Substance Abuse and Mental Health Services Administration (SAMHSA). "Behavioral Health Treatments and Services." Accessed September 29, 2018. <https://www.samhsa.gov/treatment>.

358. Benson, William F. and Nancy Aldrich. 2017. *Raising Awareness and Seeking Solutions to the Opioid Epidemic's Impact on Rural Older Adults*. Arlington, VA: Grantmakers In Aging. https://www.giaging.org/documents/170818_Benson-Aldrich_paper_for_GIA_web_FINAL.pdf.

359. Home Care Aide Council. 2016. *Mental Health Supportive Home Care Aide Training*. Watertown, MA: Home Care Aide Council. https://cdn.ymaws.com/mchcas.site-ym.com/resource/resmgr/Grants/Fact_Sheet_Mental_Health_SH.pdf.

360. SEIU Benefits Group. "National Apprenticeship Certification: A New Career Path for Advanced Caregivers." Accessed September 29, 2018. <https://www.myseiubenefits.org/national-apprenticeship-certification/>.

361. Kiboneka, Grace. 2018. "Supporting Washington State's Long-term Services and Supports Workforce." Presentation at the annual conference of the National Academy of State Health Policy (NASHP), Jacksonville, FL, August 16, 2018.

362. *Improving Care for Vulnerable Older Citizens through Workforce Advancement Act*. 2017. H.R.3461.

363. Reinhard, Susan. 2010. "A Case for Nurse Delegation Explores a New Frontier in Consumer-Directed Patient Care." *Generations* 4: 75-81.

364. Reinhard, Susan. 2001. *Consumer Directed Care and Nurse Practice Acts*. Washington, DC: U.S. Department of Health and Human Services, Assistant Secretary for Planning and Evaluation. <https://aspe.hhs.gov/basic-report/consumer-directed-care-and-nurse-practice-acts>.

365. Young, Heather M., Jennifer Farnham, and Susan C. Reinhard. 2016. "Nurse Delegation in Home Care: Research Guiding Policy Change." *Journal of Gerontological Nursing* 42(9): 7-15. <https://doi.org/10.3928/00989134-20160811-04>.

366. Spetz, Joanne, Jackie Miller, Mary Lou Breslin, and Nancy Dudley. 2018. "Impact of Nurse Delegation Regulations and Home Care Agency Policies on Community Living of Disabled People." PowerPoint presentation shared by first author.

367. AARP Foundation, The Commonwealth Fund, The Scan Foundation, and AARP Public Policy Institute. 2017. "Long-Term Services & Supports State Scorecard." <http://www.longtermscorecard.org/>.

368. Young et al., 2016. <https://doi.org/10.3928/00989134-20160811-04>.

369. Farnham, Jennifer, Heather M. Young, Susan Reinhard, Nirvana Petlick, Thomas F. Reinhard, and Vanessa Santillan. 2011. *New Jersey Nurse Delegation Pilot Evaluation Report*. Brunswick, NJ: Rutgers Center for State Health Policy. <https://www.state.nj.us/humanservices/dds/documents/Report%20Formatted%2010may11%20with%20covers.pdf>.

370. Allison Cook. 2016. "New York Legislature Passes Advanced Home Health Aide Legislation." *PHI Newsroom*, June 21. <https://phinational.org/new-york-legislature-passes-advanced-home-health-aide-legislation/>.

371. Advanced Home Health Aides Advisory Workgroup. 2015. *Guidance*. Albany, NY: New York State Department of Health. https://www.health.ny.gov/facilities/home_care/advanced_home_health_aides/docs/workgroup_guidance.pdf.

372. Breslin, Mary Lou. 2018. *Improving Support for Health Maintenance in Home and Community-Based Services: How States Adapt Nursing Rules for the Community First Choice Program*. San Francisco, CA: Community Living Policy Center, University of California San Francisco. <https://clpc.ucsf.edu/publications/improving-support-health-maintenance-home-and-community-based-services-how-states-adapt>.

373. Miller, Christopher J., Bo Kim, Allie Silverman, and Mark S. Bauer. 2018. "A Systematic Review of Team-Building Interventions in Non-Acute Healthcare Settings." *BMC Health Services Research* 18(1): 146. <https://doi.org/10.1186/s12913-018-2961-9>.

374. Telehealth is defined broadly as "the use of electronic information and telecommunications technologies to support long-distance clinical health care, patient and professional health-related education, public health and health administration." As well as direct contact between individuals and providers (i.e., telemedicine), telehealth encompasses a range of remote communication, monitoring, training, supervision, recording, and reporting activities. (HealthIT.gov. 2017. "What is telehealth?" <https://www.healthit.gov/faq/what-telehealth-how-telehealth-different-telemedicine>.) Smart home technologies enable users to manage a range of household functions—from lighting to home security—using smartphone apps and/or smart home "hubs." (Saltzman, Marc. 2018. *Caregiving Tools Get Smarter*. Washington, DC: AARP. <https://www.aarp.org/caregiving/home-care/info-2018/wearable-technology-is-changing-wellness.html>.) Finally, wearable technology refers to items of clothing or accessories that track a range of health and wellness data (for individuals' own consumption or for communication to a caregiver or health care provider). Taken together, these technological trends support the capacity of individuals to live in the community and age in place with functional limitations and as their health needs change. (Patel, Vinay. 2017. "7 Most Useful Smart Home Devices for People with Disabilities". *Rolling Without Limits*, September 3, 2017. <https://www.transfermaster.com/blog/view-post/7-Most-Useful-Smart-Home-Device-for-Individuals-with-Disabilities>.)

375. Food and Agriculture Organization of the United Nations (FAO). 2011. *E-learning Methodologies: A Guide for Designing and Developing E-learning Courses*. Rome, Italy: FAO. <http://www.fao.org/docrep/015/i2516e/i2516e.pdf>.

376. Digital Promise. 2017. "Can Workers Learn Basic Skills on Their Phones?" Digital Promise, March 6. <http://digitalpromise.org/2017/03/06/can-workers-learn-basic-skills-phones/>

377. Upskill America and Jaime S. Fall. 2017. "Program Profile: MOBILE UP." <https://www.aspeninstitute.org/publications/upskill-playbook-program-profile-mobile/>.

- 378.** Bryant, Bailey. 2019. "Virtual Reality Helps In-Home Caregivers Experience Dementia, Dying." *Home Health Care News*, January 23. <https://homehealthcarenews.com/2019/01/virtual-reality-helps-in-home-caregivers-experience-dementia-dying/>.
- 379.** Rohwer, Anke, Nkengafac Villyen Motaze, Eva Rehfues, and Taryn Young. 2017. "E-learning of Evidence-Based Healthcare (EBHC) to Increase EBHC Competencies in Healthcare Professionals." *Campbell Collaboration* 4. <https://campbellcollaboration.org/library/e-learning-evidence-based-competencies-healthcare-professionals.html>.
- 380.** Feng, Jui-Ying Feng, Yi-Ting Chang, Hsin-Yi Chang, William Scott Erdley, Chyi-Her Lin, and Ying-Ju Chang. 2013. "Systematic Review of Effectiveness of Situated E-Learning on Medical and Nursing Education." *Worldviews on Evidence-Based Learning* 10(3): 174-183. doi.org/10.1111/wvn.12005.
- 381.** Lahti, Mari, Heli Hätönen, and Maritta Välimäki. 2014. "Impact of E-Learning on Nurses' and Student Nurses Knowledge, Skills, and Satisfaction: A Systematic Review and Meta-Analysis." *International Journal of Nursing Studies* 51(1): 136-149. doi.org/10.1016/j.ijnurstu.2012.12.017; McCutcheon, Karen, Maria Lohan, Marian Traynor, and Daphne Martin. 2015. "A Systematic Review Evaluating the Impact of Online or Blended Learning vs. Face-to-Face Learning of Clinical Skills in Undergraduate Nurse Education." *Journal of Advanced Nursing* 71(2): 255-270. doi/full/10.1111/jan.12509.
- 382.** Bloomfield, Jacqueline, Julia Roberts, and Alison While. 2010. "The Effect of Computer-Assisted Learning Versus Conventional Teaching Methods on the Acquisition and Retention of Handwashing Theory and Skills in Pre-Qualification Nursing Students: A Randomised Controlled Trial." *International Journal of Nursing Studies* 47(3): 287-294. doi.org/10.1016/j.ijnurstu.2009.08.003.
- 383.** Alperin, Melissa, Tanya Uden-Holman, Kirsten Rodgers, Nor Abd-Hamid, and Laurie Walkner. 2017. "Evidence-Based Best Practices in Designing and Developing Quality eLearning for the Public Health and Health Care Workforce." *Pedagogy in Health Promotion* 3(1): 35s-39s. doi/pdf/10.1177/2373379917692818.
- 384.** Federal Communications Commission. 2018. *2018 Broadband Deployment Report*. Washington, DC: FCC. <https://www.fcc.gov/reports-research/reports/broadband-progress-reports/2018-broadband-deployment-report>.
- 385.** Desmond, Deirdre, Natasha Layton, Jacob Bentley, Fleur Heleen Boot, Johan Borg, Bishnu Maya Dhungana, Pamela Gallagher, Lynn Gitlow, Rosemary Joan Gowran, Nora Groce, Katerina Mavrou, Trish Mackeogh, Rachael McDonald, Cecilia Petterson, and Marcia J. Scherer. 2018. "Assistive Technology and People: A Position Paper from the First Global Research, Innovation and Education on Assistive Technology (GREAT) Summit." *Disability and Rehabilitation: Assistive Technology* 13(5): 437-444. doi/full/10.1080/17483107.2018.1471169.
- 386.** Assistive Technology Industry Associate (ATiA). 2019. "What is AT?" <https://www.atia.org/at-resources/what-is-at/>.
- 387.** AbleData. 2019. "Search AbleData." <https://abledata.acl.gov/>.
- 388.** Owlia, Mohammadhasan. 2018. "Preventing Back Pain Among Caregivers Using Real-time Movement-Centered Feedback." University of Toronto PhD dissertation. <http://hdl.handle.net/1807/91659>.
- 389.** Mohammadhasa, 2018.
- 390.** Centers for Disease Control and Prevention (CDC). 2013. "Safe Patient Handling and Mobility (SPHM)." <https://www.cdc.gov/niosh/topics/safepatient/default.html>.
- 391.** National Research Council of the National Academies. 2011. *Health Care Comes Home: The Human Factors*. Washington, DC: The National Academies Press. doi: 10.17226/13149.
- 392.** King, Emily C., Pamela J. Holliday, and Gavin J. Andrews. 2018. "Care Challenges in the Bathroom: The Views of Professional Care Providers Working in Clients' Homes." *Journal of Applied Gerontology* 37(4): 493-515. doi.org/10.1177/0733464816649278.
- 393.** King, Emily C., Veronique M. Boscart, Brett M. Weiss, Tilak Dutta, Jack P. Callaghan, and Geoff R. Fernie. 2017. "Assisting Frail Seniors with Toileting in a Home Bathroom: Approaches Used by Home Care Providers." *Journal of Applied Gerontology*. Advance online publication. doi:10.1177/0733464816649278.
- 394.** UMass Lowell Safe Home Care Program. 2019. "Safe Home Care." <https://www.uml.edu/Research/SHCH/Safe-Home-Care/>.
- 395.** Sun, Chuan, Bryan Buchholz, Margaret Quinn, Laura Punnett, Catherine Galligan, and Rebecca Gore. "Ergonomic Evaluation of Slide Boards Used by Home Care Aides to Assist Client Transfers." *Ergonomics* 61(7): 913-922. doi.org/10.1080/00140139.2017.1420826.
- 396.** Desmond et al., 2018; Lenker, James A., Frances Harris, Mary Taugher, and Roger O. Smith. 2013. "Consumer Perspectives on Assistive Technology Outcomes." *Disability and Rehabilitation: Assistive Technology* 8(5): 373-380. doi.org/10.3109/17483107.2012.749429.
- 397.** Mortenson, W. Ben, Louise Demers, Marcus J. Fuhrer, Jeffrey W. Jutai, Jessica Bilkey, Michelle Plante, and Frank DeRuyter. 2018. "Effects of a Caregiver-Inclusive Assistive Technology Intervention: A Randomized Controlled Trial." *BMC Geriatrics* 18(1): 97. doi.org/10.1186/s12877-018-0783-6; Demers, Louise, Marcus J. Fuhrer, Jeffrey Jutai, James Lenker, Malgorzata Depa, and Frank De Ruyter. 2009. "A Conceptual Framework of Outcomes for Caregivers of Assistive Technology Users." *American Journal of Physical Medicine & Rehabilitation* 88(8): 645-655. doi: 10.1097/PHM.0b013e3181ae0e70; Mortenson, W. Ben, Louise Demers, Marcus J. Fuhrer, Jeffrey W. Jutai, James Lenker, and Frank DeRuyter. "How Assistive Technology Use by Individuals with Disabilities Impacts Their Caregivers: A Systematic Review of the Research Evidence." *American Journal of Physical Medicine & Rehabilitation* 91(11): 984-998. doi: 10.1097/PHM.0b013e318269eceb; Mortenson, W. Ben, Alex Pysklywec, Marcus J. Fuhrer, Jeffrey W. Jutai, Michelle Plante, and Louise Demers. 2018. "Caregivers' Experiences with the Selection and Use of Assistive Technology." *Disability and Rehabilitation: Assistive Technology* 13(6): 562-567. doi.org/10.1080/17483107.2017.1353652; Madara Marasinghe, Keshini. 2016. "Assistive Technologies in Reducing Caregiver Burden Among Informal Caregivers of Older Adults: A Systematic Review." *Disability and Rehabilitation: Assistive Technology* 11(5): 353-360. doi.org/10.3109/17483107.2015.1087061.
- 398.** Kitchener, Martin, Terence Ng, Hyang Yuol Lee, and Charlene Harrington. 2008. "Assistive Technology in Medicaid Home- and Community-Based Waiver Programs." *The Gerontologist* 48(2): 181-189. doi.org/10.1093/geront/48.2.181.
- 399.** National Academies of Sciences, Engineering, and Medicine. 2017. *The Promise of Assistive Technology to Enhance Activity and Work Participation*. Washington, DC: The National Academies Press. <https://www.nap.edu/read/24740/chapter/1>.
- 400.** Center for Assistive Technology Act Data Assistance (CATADA). 2019. "State AT Program Information." <https://catada.info/state.html>. CATADA provides technical assistance and supports to State Assistive Technology (AT) Programs funded under Section 4 of the Assistive Technology Act of 1998 (the "Tech Act"), as amended (P.L. 108-364). The Tech Act, which covers people with disabilities of all ages, all disabilities, in all settings, is intended to promote awareness of, and access to, assistive technology (AT) devices and services.
- 401.** Paying for Senior Care. 2018. "How to Pay for Home and Durable Medical Equipment: A Comprehensive Guide." <https://www.payingforseniorcare.com/durable-medical-equipment/how-to-pay-home.html#title2>.
- 402.** Manyika, James, Michael Chui, Mehdi Miremadi, Jacques Bughin, Katy George, Paul Willmott, and Martin Dewhurst. 2017. *Harnessing Automation for a Future That Works*. New York, NY: McKinsey Global Institute. <https://www.mckinsey.com/featured-insights/digital-disruption/harnessing-automation-for-a-future-that-works>.

- 403.** Olson, Sarah. 2018. "Will Robots Replace Caregivers?" *Ayuda Care*, August 15, 2018. <https://medium.com/ayuda-care/will-robots-replace-caregivers-146b630848c6>.
- 404.** Redford, Gabi. 2018. "New Technologies Help Seniors Age in Place — and Not Feel Alone." *Chicago Tribune*, March 19, 2018. <https://www.chicagotribune.com/lifestyles/health/ct-home-monitoring-seniors-20180319-story.html>.
- 405.** Petrecca, Laura. 2018. *The New Wave of Caregiving: Technology is Transforming Caregiving*. Washington, DC: AARP. <https://www.aarp.org/caregiving/home-care/info-2018/new-wave-of-caregiving-technology.html>; National Research Council of the National Academies. 2010. *The Role of Human Factors in Home Health Care*. Washington, DC: The National Academies Press. <https://www.nap.edu/read/12927/chapter/1#ii>.
- 406.** Hamstra, Brittany. 2018. "Will These Nurse Robots Take Your Job? Don't Freak Out Just Yet." *Nurse.org*, February 27, 2018. <https://nurse.org/articles/nurse-robots-friend-or-foe/>.
- 407.** CHIRON. 2017. "Juva – Here to Help." <https://chiron.org.uk/>.
- 408.** Agree, Emily M. 2014. "The Potential for Technology to Enhance Independence for Those Aging with a Disability." *Disability and Health Journal* 7(1): S33-S39. doi:10.1016/j.dhjo.2013.09.004.
- 409.** Zwijsen, Sandra A., Alistair R. Niemeijer, and Cees MPM Hertogh. 2011. "Ethics of Using Assistive Technology in the Care for Community-Dwelling Elderly People: An Overview of the Literature." *Aging & Mental Health* 15(4): 419-427. doi.org/10.1080/13607863.2010.543662; Dahler, Anne Marie, Dorte Malig Rasmussen, and Pernille Tanggaard Andersen. 2016. "Meanings and Experiences of Assistive Technologies in Everyday Lives of Older Citizens: A Meta-Interpretive Review." *Disability and Rehabilitation: Assistive Technology* 11(8): 619-629. doi.org/10.3109/17483107.2016.1151950.
- 410.** McGinn, Conor. 2017. "The Robot That Could Revolutionise Home Care for Elderly People." *Independent* November 22, 2017. <https://www.independent.co.uk/life-style/health-and-families/health-news/the-robot-that-could-revolutionise-home-care-for-elderly-people-stevie-us-a8068931.html>.
- 411.** Larsson Ranada, Åsa and Helene Lidström. 2017. "Satisfaction with Assistive Technology Device in Relation to the Service Delivery Process—A Systematic Review." *Assistive Technology* 2: 82-97. doi.org/10.1080/10400435.2017.136773716.
- 412.** Aubri Kottek, Zoey Stafford, and Joanne Spetz. 2017. *Remote Monitoring Technologies in Long-Term Care: Implications for Care Team Organization and Training*. San Francisco, CA: UCSF Health Workforce Research Center on Long-Term Care. https://healthworkforce.ucsf.edu/sites/healthworkforce.ucsf.edu/files/REPORT_FINAL_RemoteMonitoring.pdf.
- 413.** Agree, Emily M., Vicki A. Freedman, Jennifer C. Cornman, Douglas A. Wolf, and John E. Marcotte. 2005. "Reconsidering Substitution in Long-Term Care: When Does Assistive Technology Take the Place of Personal Care?" *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences* 60(5): S272-S280. doi.org/10.1093/geronb/60.5.S272; Spillman, Brenda. 2013. *Updated Analysis of Trends in Use of Assistive Devices*. Washington, DC: Office of the Assistant Secretary for Planning and Evaluation (ASPE). <https://aspe.hhs.gov/execsum/updated-analyses-trends-use-assistive-devices>.
- 414.** Anderson, Wayne L. and Joshua M. Wiener. 2013. "The Impact of Assistive Technologies on Formal and Informal Home Care." *The Gerontologist* 55(3): 422-433. doi.org/10.1093/geront/gnt165.
- 415.** For example, while the American Recovery and Reinvestment Act of 2009 invested billions of dollars through Meaningful Use policies for electronic health records (EHRs) in hospitals, there has not been the same type of investment in home health agencies or other LTSS settings. Andrews, John. 2017. "EHRs: The Struggle to Keep Up Continues." *McKnight's Long-Term Care News* 38(6): 14. http://media.mcknights.com/documents/304/it_2017_final_optimized_75936.pdf.
- 416.** Ostrovsky, Andrey, Lori O'Connor, Olivia Marshall, Amanda Angelo, Kelsy Barrett, Emily Majeski, Maxwell Handrus, and Jeffrey Levy. 2016. "Predicting 30 -to 120-Day Readmission Risk among Medicare Fee-for-Service Patients Using Nonmedical Workers and Mobile Technology." *Perspectives in Health Information Management* 13(Winter): 1e.
- 417.** Care at Hand. 2017. "Predictive Insights by Non-Medical Staff." <http://careathand.com/assets/attachments/Avalere-18Nov2015.pdf>.
- 418.** eCaring. 2019. "Home." <https://ecaring.com/>.
- 419.** eCaring. 2016. "eCaring Home Health Care Management Solution Generates Average Annual Savings of \$4,000 Per Patient with a 4x ROI." Accessed 5/31/19. <https://ecaring.com/ecaringcms2/wp-content/uploads/2016/10/MLTC-Case-Study.pdf>.
- 420.** Baxter, Amy. 2017. "Home Care Franchisor is 'Stitching' Itself into Value-Based Care." *Home Health Care News*, June 29, 2017. <https://homehealthcarenews.com/2017/06/home-care-franchisor-is-stitching-itself-into-value-based-care/>.
- 421.** Cissé, Mohamed, Semih Yalçındağ, Yannick Kergosien, Evren Şahin, Christophe Lenté, and Andrea Matta. 2017. "OR Problems Related to Home Health Care: A Review of Relevant Routing and Scheduling Problems." *Operations Research for Health Care* 13-14: 1-22. doi.org/10.1016/j.orhc.2017.06.001.
- 422.** Erdem, Mehmet and Serol Bulkan. 2017. "A Literature Review on the Home Healthcare Routing and Scheduling Problem." *Eurasian Journal of Health Technology Assessment* 2(1): 19-32.
- 423.** Fikar, Christian, and Patrick Hirsch. 2017. "Home Health Care Routing and Scheduling: A Review." *Computers & Operations Research* 77: 86-95. doi.org/10.1016/j.cor.2016.07.019.
- 424.** PHI. "Matching Service Registries." Accessed August 15, 2019. <https://phinational.org/advocacy/matching-service-registries/>.
- 425.** 21st Century Cures Act. 2016. H.R.34. <https://www.congress.gov/bill/114th-congress/house-bill/34/text>.
- 426.** Tempesco, John. 2018. "Merging Technology for Home Care Safety." *PPS Plus Blog*, January 1, 2014. <http://ppsplus.com/blog/merging-technology-for-home-care-safety>.
- 427.** Centers for Medicare and Medicaid Services (CMS). 2018. "Section 12006 of the 21st Century CURES Act Electronic Visit Verification Systems." <https://www.medicaid.gov/medicaid/hcbs/downloads/evv-presentation-part-2.pdf>.
- 428.** Lawrence, Jane. 2017. *Electronic Visit Verification (EVV) Implementation Approaches*. Boston, MA: Applied Self-Direction. <http://www.appliedselfdirection.com/sites/default/files/EVV%20Implementation%20Approaches.pdf>.
- 429.** Disability Rights Education & Defense Fund (DREDF). 2019. "DREDF Statement on Electronic Visit Verification." <https://dredf.org/2018/03/07/dredf-statement-on-electronic-visit-verification/>.
- 430.** Espinoza, Robert. 2018. "Will Social Media Rescue Recruitment in Long-Term Care?" *PHI Newsroom*, June 14, 2019. <https://phinational.org/will-social-media-help-rescue-long-term-care/>.
- 431.** Although focused on nursing home workforce development, the WisCaregiver Career Program provides a good example of leveraging social media to spread messages about the value and rewards of direct care careers (Wisconsin Department of Health Services. 2019. "WisCaregiver Career Program." <https://www.dhs.wisconsin.gov/caregiver-career/index.htm>.)
- 432.** National Direct Service Workforce Resource Center. 2009. *The Need for Monitoring the Long-Term Care Direct Service Workforce and Recommendations for Data Collection*. Washington, DC: CMS. <https://www.medicaid.gov/medicaid/ltss/downloads/workforce/monitoring-dsw.pdf>.
- 433.** Bureau of Labor Statistics (BLS). "Technical Notes for May 2018 OES Estimates." Last modified March 29, 2019. https://www.bls.gov/oes/current/oes_tec.htm.

434. U.S. Bureau of Labor Statistics (BLS), Quarterly Census of Employment and Wages. 2018. *QCEW Special Notices – Box Notes*. <https://www.bls.gov/cew/boxnotes.htm>; analysis by PHI (8/13/18).
435. U.S. Bureau of Labor Statistics (BLS), Division of Occupational Employment Statistics. 2018. *Occupational Employment Statistics, May 2017 State Occupational Employment and Wage Estimates*. <https://www.bls.gov/oes/current/oesrscst.htm>; analysis by PHI (July 17, 2018).
436. U.S. Census Bureau. 2016. 2012 *Economic Census*. https://factfinder.census.gov/bkmk/table/1.0/en/ECN/2012_US/62SLLS1; analysis by PHI (August 27, 2018).
437. Wisconsin Health Care Association (WHCA), Wisconsin Center for Assisted Living (WiCal), Wisconsin Assisted Living Association, LeadingAge Wisconsin, and Disability Service Provider Network. 2018. *The Long-Term Care Workforce Crisis: A 2018 Report*. <http://files.constantcontact.com/10709df6001/8d407825-0d49-42af-9ae2-5f0aaddfd468.pdf?ver=1524683264000>.
438. Campbell, Stephen. 2018. "Massachusetts Established Home Care Worker Registry." *PHI Newsroom*, February 15. <https://phinational.org/news/12995/>.
439. Campbell, Stephen. 2017. "The Direct Care Workforce in Pennsylvania: Strategies to Improve Recruitment and Retention." PowerPoint presented at the Long-Term Care Council, Harrisburg, PA, December 7, 2017.
440. Campbell, Stephen. 2018. "Form a Statewide Coalition. A Unified Voice is More Powerful." Webinar presented on August 29, 2018. <https://60caregiverissues.org/innovations-issue-45.html>.
441. New York State Department of Health. 2009. "New York State Home Care Registry." https://apps.health.ny.gov/professionals/home_care/registry/home.action.
442. Home Care Aide Council. 2018. *2016-2017 Home Care Industry Assessment*. Watertown, MA: Home Care Aide Council https://cdn.ymaws.com/www.hcacouncil.org/resource/resmgr/2018_Documents/Fact_Sheet_Tufts_Sheets_Com.pdf.
443. Home Care Pulse, 2017.
444. Iowa Caregivers and Iowa Workforce Development. 2016. *Iowa Workforce Survey 2016: Direct Care, Supports & Service Workers*. Des Moines, IA: Iowa Caregivers and Iowa Workforce Development. http://www.iowacaregivers.org/uploads/pdf/workforce_report.pdf.
445. PHI, 2017a.
446. CDPAANYS, 2017.
447. Campbell, Stephen. 2017. *Training Standards for Personal Care Aides: Spotlight on Washington*. Bronx, NY: PHI. https://phinational.org/wp-content/uploads/2017/11/wa_case_study_pca_training_standards_2017.pdf.
448. Washington State Auditor's Office. 2016. I-1163: *Long-term Care Worker Certification Requirements 2016*. Olympia, WA: Washington State Auditor's Office. <https://results.wa.gov/sites/default/files/PASStatus-Barriers-to-Home-Care-Aide-Certification-2018.pdf>.
449. Washington State Auditor's Office. 2016. *Barriers to Home Care Aide Certification*. Olympia, WA: Washington State Auditor's Office. https://www.sao.wa.gov/state/Documents/PA_Barriers_to_HCA_Certification_ar1018059.pdf.
450. Grossman, Lee, Jeff Gardner, and Gwyn Volk. 2018. "HCBS Rate Development and Building Data-Driven Stakeholder Consensus: The Wyoming Experience." Presentation at the 2018 NASUAD National HCBS Conference, Baltimore, MD, April 27-30, 2018. <http://www.advancingstates.org/sites/nasuad/files/NASUAD%20Stakeholder%20Driven%20Rate%20Setting%20WY.pdf>.
451. New York State Department of Health. "Fair Labor Standards Acts (FLSA)." Accessed November 5, 2018. https://www.health.ny.gov/health_care/medicaid/redesign/fair_labor_standards_act.htm.
452. Lazar, Kay. 2018. "Despite Promises, Some Low-Paid Nursing Home Workers are Still Waiting for Wage Increases." *Boston Globe*, May 16. <https://www.bostonglobe.com/metro/2018/05/16/despite-promises-some-low-paid-nursing-home-workers-still-waiting-for-wage-increases/J4cmTmOle2soPddJh4wuyO/story.html>.
453. PHI. "Matching Service Registries." Accessed August 15, 2019. <https://phinational.org/advocacy/matching-service-registries/>.
454. My Support. 2018. "Browse Personalized Profiles." <http://www.mysupport.com/features/>.
455. Campbell, Stephen. 2018. "How Do We Support Home Care Workers Who Want Full-Time Work?" *PHI*, May 23. <https://phinational.org/support-home-care-workers-want-full-time-work/>.
456. Bennett, Andrea, Pam Curtis, and Curtis Harrod. 2018. *Bundling, Benchmarking, and Beyond: Paying for Value in Home- and Community-Based Services*. New York, NY: Milbank Memorial Fund. <https://www.milbank.org/wp-content/uploads/2018/06/MMF-HCBS-Exec-Summary-FINAL.pdf>.
457. Bennett et al., 2018.
458. Howard, Jennifer, Ilene Harris Zuckerman, Cynthia Woodcock, Sue Flanagan, Oswaldo Urdapilleta, Judith L. Poey, Sarah Ruiz, Leanne Clark, Genevieve Waterman, Sarah Sabshon, and Artemis Mahvi. 2014. *National Balancing Indicators Project Final Summary Report*. Columbia, MD: IMPA International, LLC. <https://www.medicaid.gov/medicaid/ltss/downloads/balancing/nbip-final-summary-report.pdf>.
459. O'Malley Watts and Musumeci, 2018; National Quality Forum (NQF). 2016. *Quality in Home and Community-Based Services to Support Community Living: Addressing Gaps in Performance Measurement*. Washington, DC: NQF. https://www.qualityforum.org/Publications/2016/09/Quality_in_Home_and_Community-Based_Services_to_Support_Community_Living__Addressing_Gaps_in_Performance_Measurement.aspx.
460. Soper et al., 2018.
461. NQF, 2016.
462. NQF, 2016.
463. CMS, 2016.
464. Paradise, Julia and MaryBeth Musumeci. 2016. *CMS's Final Rule on Medicaid Managed Care: A Summary of Major Provisions*. Menlo Park, CA: Kaiser Family Foundation. <http://files.kff.org/attachment/CMSs-Final-Rule-on-Medicaid-Managed-Care>.
465. National MLTSS Health Plan Association. 2018. "Response to NQF Draft Report 'Strengthening the Core Set of Healthcare Quality Measures for Adults Enrolled in Medicaid, 2018.'" *Letter*, August 1. <http://mltss.org/wp-content/uploads/2018/08/NQF-MAP-Adult-Core-Set-8-1-2018-signed.pdf>.
466. Sciegaj, Mark, Suzanne Crisp, Merle Edwards-Orr, and Casey DeLuca. 2016. "Three Emerging Themes From Implementing Self-Directed Long-Term Service and Support Programs Under Managed Care." *Public Policy & Aging Report* 26(4): 134–137. doi:10.1093/ppar/prw019.
467. AHCCCS, 2018.

APPENDIX

Summary of Public Data on the Home Care Workforce

FIGURE 1 | Home Care Workforce Employment by Occupation, 2008 to 2018

Occupation	2008	2018	Change	Percent Change
Personal Care Aides	452,460	1,548,670	1,096,210	242%
Home Health Aides and Nursing Assistants	446,140	710,900	264,760	59%
Total	898,600	2,259,570	1,360,970	151%

Source: U.S. Bureau of Labor Statistics (BLS), Division of Occupational Employment Statistics. 2019. *May 2008 to May 2018 National Industry-Specific Occupational Employment and Wage Estimates*. <https://www.bls.gov/oes/current/oesrci.htm>; analysis by PHI (July 2, 2019).

FIGURE 2 | Home Care Workforce Employment Projections, 2018 to 2028

Occupation	Change	Percent Change
Personal Care Aides	736,700	47%
Home Health Aides and Nursing Assistants	317,700	44%
Total	1,054,400	46%

Source: U.S. Bureau of Labor Statistics (BLS), Employment Projections Program (EPP). 2019. *Employment Projections: 2018–28, National Employment Matrix - Occupation*. <https://www.bls.gov/emp/>; analysis by PHI (September 17, 2019).

FIGURE 3 | Home Care Workforce Wages by Occupation, 2008 to 2018

Occupation	2008	2018	Change	Percent Change
Personal Care Aides	\$10.33	\$11.40	\$1.07	10%
Home Health Aides and Nursing Assistants	\$11.34	\$11.77	\$0.43	4%
Total	\$10.83	\$11.52	\$0.69	6%

Source: U.S. Bureau of Labor Statistics (BLS), Division of Occupational Employment Statistics. 2019. *May 2008 to May 2018 National Industry-Specific Occupational Employment and Wage Estimates*. <https://www.bls.gov/oes/current/oesrci.htm>; analysis by PHI (July 2, 2019).

Summary of Public Data on the Home Care Workforce continued

FIGURE 4 | Home Care Workforce Demographic and Job Quality Data, 2017

Gender

Male	13%
Female	87%

Age

16-24	11%
25-34	18%
35-44	19%
45-54	22%
55-64	21%
65+	9%
Median Age	46

Race and Ethnicity

White	38%
Black or African American	28%
Hispanic or Latino (Any Race)	23%
Asian or Pacific Islander	8%
Other	4%

Citizenship Status

U.S. Citizen by Birth	69%
U.S. Citizen by Naturalization	16%
Not a Citizen of the U.S.	14%

English Language Ability Among Immigrants

Speaks English Well, Very Well, or Only Speaks English	63%
Speaks English Not Well or Not at All	37%

Educational Attainment

Less than High School	19%
High School Graduate	35%
Some College, No Degree	26%
Associate's Degree or Higher	20%

Summary of Public Data on the Home Care Workforce continued

FIGURE 5 | Home Care Workforce Job Quality Data, 2017

Employment Status

Full-Time	62%
Part-Time, Non-Economic Reasons	31%
Part-Time, Economic Reasons	7%

Annual Earnings

Median Personal Earnings	\$16,200
Median Family Income	\$40,400

Federal Poverty Level

Less than 100%	18%
Less than 138%	29%
Less than 200%	48%

Public Assistance

Any Public Assistance	53%
Medicaid	33%
Food and Nutrition Assistance	30%
Cash Assistance	3%

Health Insurance Status

Any Health Insurance	84%
Health Insurance through Employer/Union	38%
Medicaid, Medicare, or Other Public Coverage	42%
Health Insurance Purchased Directly	13%

Source: Ruggles, Steven, Sarah Flood, Ronald Goeken, Josiah Grover, Erin Meyer, Jose Pacas and Matthew Sobek. 2019. *IPUMS USA: Version 9.0*. Minneapolis, MN: IPUMS, University of Minnesota. <https://doi.org/10.18128/D010.V9.0>; analysis by PHI (July 8, 2019); Flood, Sarah, Miriam King, Renae Rodgers, Steven Ruggles and J. Robert Warren. 2019. *Integrated Public Use Microdata Series, Current Population Survey: Version 6.0*. Minneapolis, MN: IPUMS, University of Minnesota. <https://doi.org/10.18128/D010.V9.0>; analysis by PHI (July 8, 2019). "Any Public Assistance" includes food and nutrition assistance, public health insurance, and cash assistance.

ABOUT PHI

PHI works to transform eldercare and disability services. We foster dignity, respect, and independence for all who receive care, and all who provide it. As the nation's leading authority on the direct care workforce, PHI promotes quality direct care jobs as the foundation for quality care.



400 East Fordham Road, 11th Floor
Bronx, NY 10458
Phone: 718.402.7766
Fax: 718.585.6852
Email: info@PHInational.org

PHInational.org
60CaregiverIssues.org

