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NORTH CAROLINA

HOME CARE MARKET ASSESSMENT

Cooperative Development Foundation

ICA GROUP
HOME CARE

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KEY TAKEAWAYS

- **Public Program:** North Carolina is one of only 12 states that remains a fee-for-service Medicaid state, but the state released a Medicaid Managed Care Transition Plan in August 2017. There is currently a moratorium on Home Care Agency Licenses for In-Home Aide Services; the moratorium is in effect through June 30, 2019.

- **Consumer Demand:** North Carolina has the 9th fastest aging population in the nation, expected to double between 2015-2030. As of 2016, an estimated 688,970 North Carolina residents were categorized as "frail elderly", "self-care disabled", or "independent living disabled" and likely needing home care services.[1]

- **Labor Supply:** North Carolina faces a caregiver shortage with one caregiver for every 9.94 home care clients in the state. The state has one of the most comprehensive worker training programs in the nation, requiring significantly higher levels of training than the national average and offering a career ladder for home care workers.

- **Home Care Agency Market:** North Carolina has an estimated 808 home care agencies, providing both home health and non-medical home care (excluding skilled nursing, hospice, and dialysis). The five largest home care firms in the state control 46.02% of the market, meaning North Carolina is a more consolidated market than the national average, but is not yet considered "non-competitive". The median sales revenue for North Carolina home care companies is $171,511, while the *average* revenue is $1,237,422, meaning larger companies are of a significant magnitude larger.

- **Existing Home Care Cooperatives:** North Carolina has one home health cooperative operational in the state, called I Am Unique, but no personal care or home care cooperatives. Additionally, North Carolina has cooperative friendly law and several supportive organizations and institutions.

- **Cooperative Opportunity:** Regulatory barriers including the ongoing moratorium on home care agency licenses will make entry in the North Carolina market difficult for the foreseeable future. Long-term demand for home care services will continue to grow in the state, but the number of caregivers will lag demand for their services. Home care cooperatives that can reach scale and recruit and retain caregivers better than their competitors will have a sizable competitive advantage in the state.

[1] U.S. Census Bureau (2016). *Monthly Population Estimates for the United States: April 1, 2010 to December 1, 2017 2016 Population Estimates*. Retrieved from www.census.gov.

About this Report:

This report is part of the Cooperative Development Foundation's Socially Disadvantaged Group Grant. The ICA Group wrote this report to assist CDF in its efforts to bring home care worker cooperatives to scale across the country and to support the scale and sustainability efforts of the numerous home care cooperatives already operating. This state specific report is an in-depth market analysis for a number of areas where either existing home care coops operate or community groups are working to start new firms. For more information visit: www.cdf.coop or www.ica-group.org.

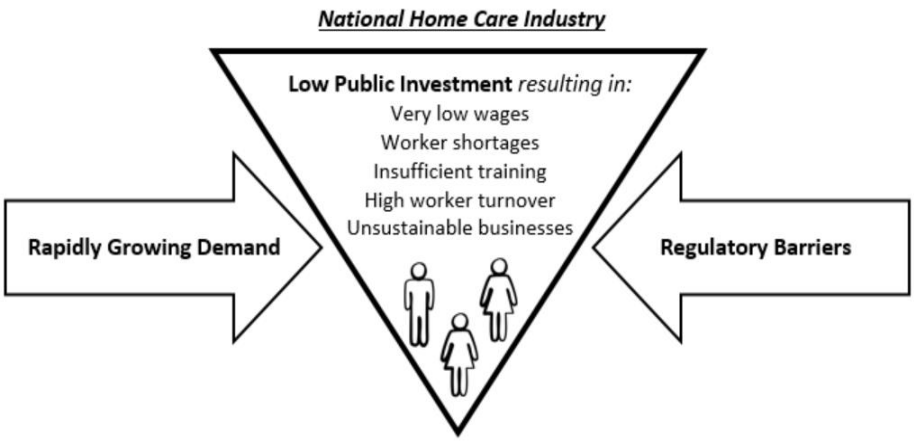
NATIONAL OVERVIEW

Unprecedented growth in the nation's elderly population, paired with a cultural shift towards aging in place, is driving historical growth in the home care sector. In the United States, the population of citizens age 65 and over will almost double by 2050. Nine in ten seniors want to "age in place" in their current home and community, and an estimated 70 percent will need help with basic daily living activities to do so. Accordingly, millions of new home care workers will need to be hired and trained over the next few decades to meet this growing demand. Today, more than two million workers are employed by the home care industry in the U.S, a workforce that has already more than doubled in the last decade.

Despite unprecedented job growth, the work is low paid, benefits are limited, hours are inconsistent, training is insufficient, career advancement is nearly non-existent, and the job is emotionally and physically taxing. Eighteen percent of home care workers are uninsured, and of those insured 40% rely on public health care coverage (primarily Medicaid). Consequently, turnover rates within the home care sector are at an all-time high of 60% nationally, and the nation struggles with a growing caregiver shortage. Nationally there are eight clients who need home care for every one caregiver in the workforce, though many states experience significantly higher shortages. The industry wide cost of caregiver turnover is over $6.5 billion per year, a number equivalent to 10 percent of the $61.8 billion in Medicaid dollars spent on home care in 2016.

Nationally, home care is a $5B+ quickly expanding, national market, expected to grow at a rate of nearly 7% year-over-year for next five years.[2] Yet, as a direct result of underinvestment and complex state regulations, the home care industry remains highly fragmented and dominated primarily by small, independent providers. The three largest companies in the industry have a market share of only 8.7%. Industry consolidation through merger and acquisition activity has, however, accelerated in recent years as a response to low reimbursement rates driving down profits. While local, independent providers can arguably be more responsive to consumer needs, small agencies lack the profit margins necessary to increase salaries or invest in internal growth generally.

Public reimbursement rates for home care services are low, driving down wages across the industry. Unlike many other sectors in healthcare, the homecare industry does not have strong political representation and thus has been an easy target for federal cuts. Across the U.S., the hourly median wage for workers in the direct care workforce is $10.49 per hour, only 25 cents more than the median wage for retail and food service workers. Even though homecare is increasingly promoted by healthcare

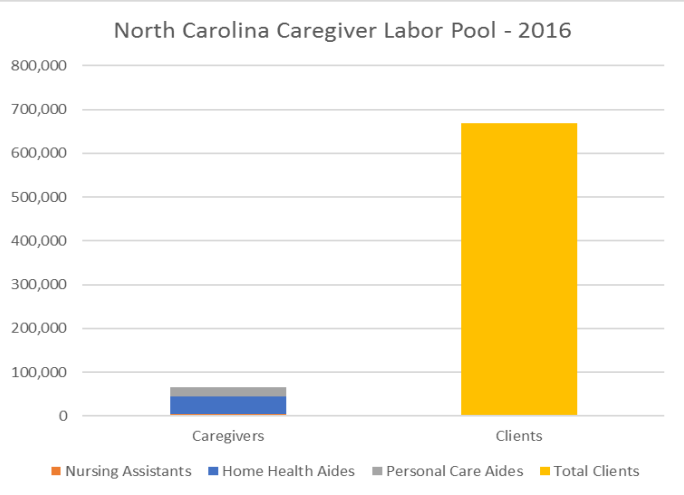


[2] *IBISWorld Industry Reports: 62161 Home Care Providers in the US*

professionals and offers a superior value for clients, this recognition has not yet resulted in increased payments for services. With deep public underinvestment in home care, small and large home care cooperatives alike struggle to remain financially sustainable, let alone carve out the financial resources necessary to invest in the worker-focused benefits that differentiate a home care cooperative job from a standard home care job. Worker cooperatives have the potential to raise wages and job quality for caregivers and provide better outcomes for patients, but the business model must be first strengthened, scaled, and unified in order to sufficiently influence and transform the industry today.

INTRODUCTION

Despite its relatively small size, North Carolina boasts one of the fastest growing elderly populations in the nation. Between 2015 and 2030, North Carolina's 65+ population is expected to more than double to a total of 2,173,173 residents. Already facing a caregiver shortage, North Carolina will need to attract many new and diverse workers into the workforce to meet demand.



Unusual in today's home care market, North Carolina has relatively stringent training requirements for home care workers and offers career ladder opportunities to encourage workers to enter and remain in the field. Nevertheless, pay for home care workers remains low. In North Carolina caregivers are paid only 1.9% more than food service and retail workers, at an average hourly rate of only $9.58 per hour. This combination of higher than average training barriers paired with low wages, has resulted in a caregiver shortage and high worker turnover in the state.

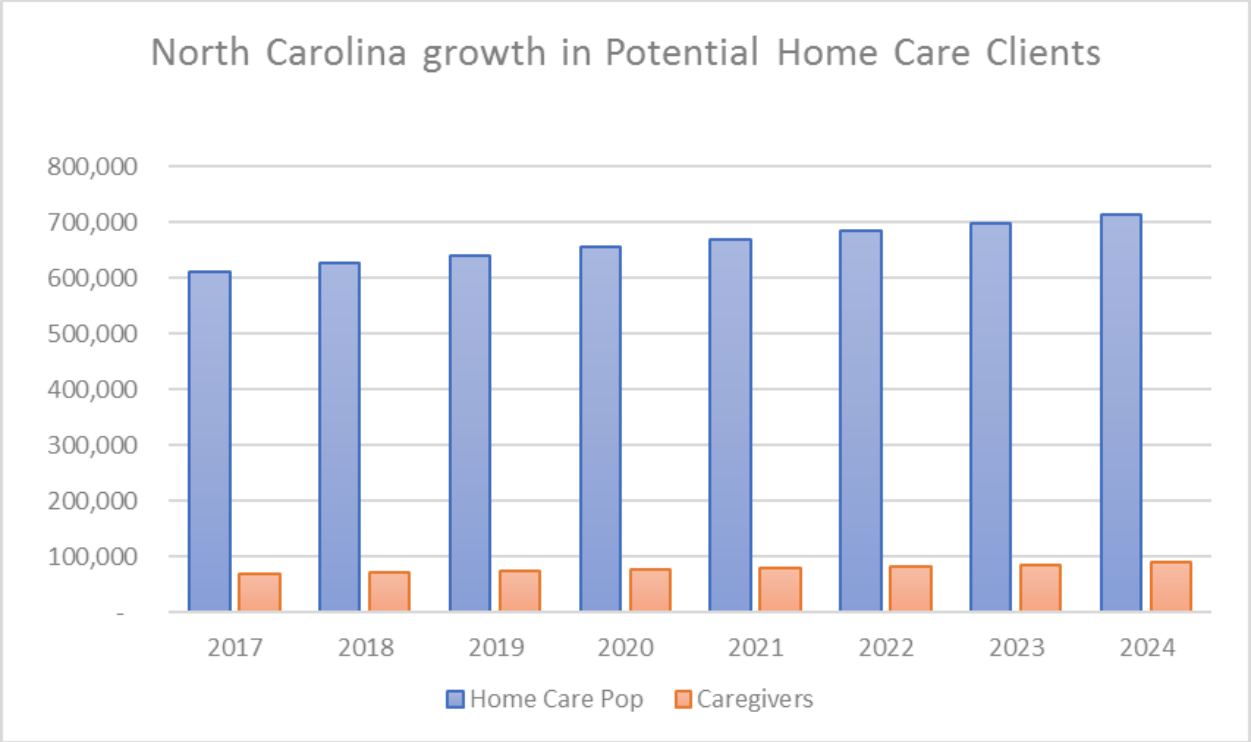
North Carolina has significant considerable regulatory barriers for home care cooperative development today. First, it is still one of only twelve states that continues to use a traditional fee-for-service Medicaid model for paying providers. It is important to note, though, that the state was beginning to plan for transition at the time of this writing. While licensing regulations in North Carolina are less complex than other states, an ongoing moratorium on licenses for home care agencies wishing to offer in-home aide services prohibits new entrants today. North Carolina does, however, boast a greater number of supportive services and organizations for new home care agencies and new cooperatives than other states, which may help in navigating some of these regulatory hurdles.

This report analyzes the North Carolina's home care market across three core dimensions including market size, labor supply, and regulatory/policy environment. We then use this analysis to drive conclusions on the industry environment, how it affects current and start-up home care cooperatives, and potential strategies for growing and nurturing home care cooperatives in the state.

MARKET OVERVIEW

To understand the market for home care services in North Carolina, we use three separate lenses of analysis: Customers, Competition, and Payers. This section provides a view into the number of potential home care customers in the North Carolina market, who is competing for these customers, and how clients pay for services. Additionally, we outline key stakeholders in the state that can provide assistance to home care cooperatives that are launching or looking to expand.

Customers



At over 12% annual growth, North Carolina's population is aging faster than the national average of 9.7%. Today, nearly 1.2 million North Carolina residents are over the age of 65. North Carolina's self-care (SC) and independent living (IL) disabled population is 9.1% or 776,900 people (2015 data). [3] The total number of individuals in these groups potentially requiring home care services, here defined as the "home care subset", is slightly higher than the national average at 6.79% (vs. 6.19%). As of 2016, an estimated 688,967 North Carolina residents were categorized as "frail elderly", "self-care disabled", or "independent living disabled" and likely needing home care services[4]. The frail-elderly population, in particular, is expected to grow at a rate of nearly 20% annually between 2017 and 2024.

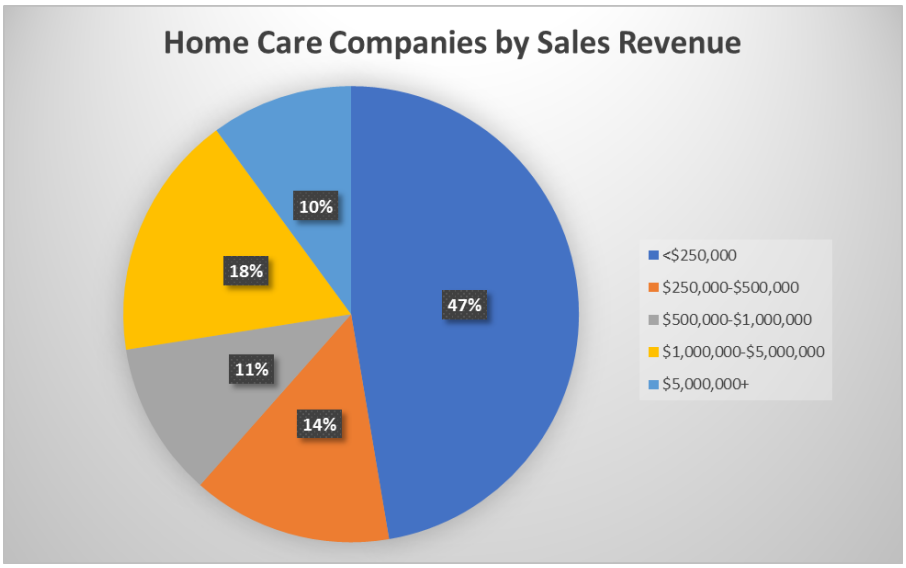
[3] 2015 Disability Status Report: North Carolina. Ithaca, NY: Cornell University Yang Tan Institute on Employment and Disability(YTI), Erickson, W., Lee, C., & Von Schrader, S. Retrieved from www.disabilitystatistics.org.

[4] U.S. Census Bureau (2016). *Monthly Population Estimates for the United States: April 1, 2010 to December 1, 2017 2016 Population Estimates*. Retrieved from www.census.gov.

Competition

North Carolina has an estimated 808 home care agencies, providing both home health and non-medical home care (excluding skilled nursing, hospice, and dialysis). The five largest home care firms in the state control 46.02% of the market, describing significant market consolidation, but not a lack of competition.[5] The top-five largest agencies are:

1. **Advanced Home Care**, a non-profit, hospital-affiliated home health care company with 19 branch locations across North Carolina, and additional branches in South Carolina, Georgia, Tennessee and Virginia. Advanced Home Care was established through a merger in 1993 and has since grown significantly through additional mergers and corporate acquisitions.
2. **The Arc of North Carolina**, which provides direct supports and services to people with intellectual and developmental disabilities.
3. **Interim Healthcare**, providing home care, senior care, respite and skilled nursing care across South East North Carolina
4. **Transitions Life Care**, a hospice care company offering home health aide services
5. **Twin Lakes Community Home Care**, a licensed home care agency providing medical and non-medical home care services to residents living in the Twin Lakes Community, a continuing care retirement community, as well as others in the broader community.



Our analysis suggests it is relatively easy to enter the home care market in North Carolina, and the actual challenge is scaling to a sustainable revenue size. ICA estimates that just over 46% of sales revenue for home care in the state goes to the top five largest firms. The median sales revenue for North Carolina home care companies is $171,511, while the *average* revenue is $1,237,422. This suggests that the larger home care companies are of an order of magnitude larger than small operators. Of the 808 home care operators (home health and non-medical) in the state, 57% have revenue of less than $250,000 per year[6].

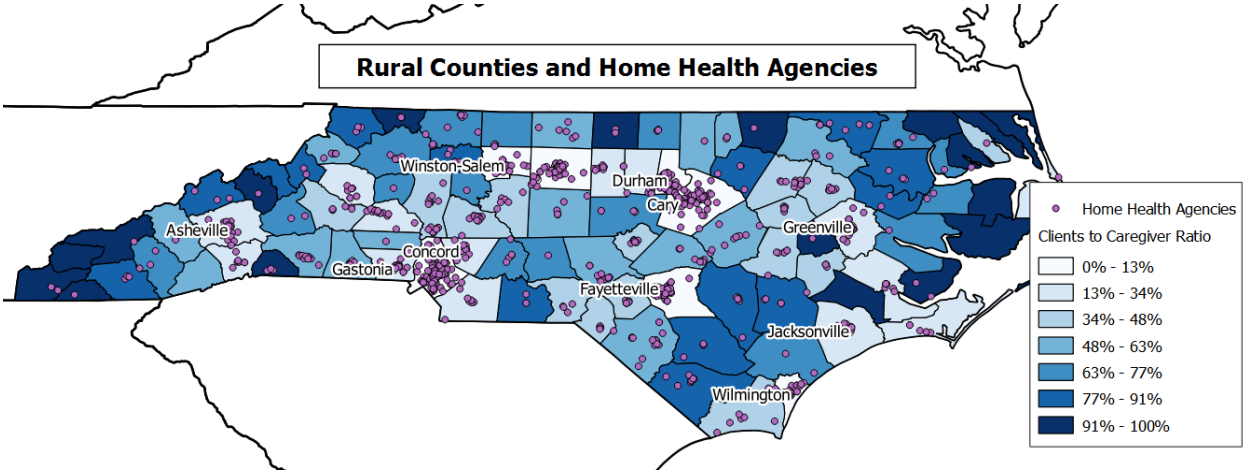
Finally, unpaid family caregivers are an important source of home care services in the state. In the last few years, it was estimated that 1,280,000 family caregivers provide 1.19 billion hours of unpaid care

[5] Industries in which the top five firms control 60% or more of the market are generally considered non-competitive.
[6] Mergent Intellect Dun and Bradstreet. (n.d.). Loblaws Inc. Retrieved from www.mergent.com

annually worth an estimated $13.4 billion dollars[7]. To support this critical component of service delivery, the state of North Carolina offers Family Caregiver Support as part of the National Family Caregiver Support Program (NFCSP). These services are coordinated by the local Area Agencies on Aging (AAA's), and include information, counseling and support groups, education and training, respite care, and supplemental services including legal assistance.[8]

Rural vs. Urban Conditions

Given North Carolina's above-average population density, the differences between operating in rural, suburban and urban areas in North Carolina are less dramatic than other states. North Carolina's population density is 48.7 and 115 people per square mile for rural and urban areas, respectively (vs. 19.17 and 57.83 nationally). Rurally located home health companies in North Carolina have median sales revenue of $591,500, compared to urban home health companies with a median of $438,572.[9] As is true in most states across the nation, there are higher variable costs to operating in rural locations, largely due to great travel distances between clients, leading to lower margins that must be overcome by generating higher sales revenue. Nationally, rural homecare companies have 15% higher sales revenue than urban companies.



Existing Home Care Cooperatives

I Am Unique based in Raleigh, North Carolina is a nurse-owned, nurse-run cooperative specializing in home-based nursing care and case management. Services offered include private duty nursing, infusion

[7] Eldercare Workforce Alliance, Issue Brief: North Carolina, 2016, Retrieved from www.eldercareworkforce.org.
[8] North Carolina Department of Health and Human Services, Family Caregiver Support. Retrieved from https://www.ncdhhs.gov/assistance/adult-services/family-caregiver-support
[9] While we were unable to gather county-based data on all home care companies including personal care and home health, we do have location based data for all home health companies in the state. Using this data, we were able to calculate the relative size difference of rural versus urban based home health companies, and we will assume that these differences are reflected in the broader home care industry.

nursing, pulmonary care, clinical respiratory, respite and nursing pool services. I Am Unique was launched in 1993 with the support of The ICA Group.

Payers

The primary public payer for home care nationally and in North Carolina is Medicaid. Of note, North Carolina is one of nineteen states that did not expand Medicaid under the Affordable Care Act[10]. In North Carolina, 20.3% of the state's residents, over 2 million, receive Medicaid benefits – slightly above the national average of 18%[11]. The percentage of "aged" Medicaid enrollees is 10%, while the percentage of "disabled" enrollees is 18%[12]. Medicaid spending in North Carolina in 2016 totaled $12.4 billion.

In 2015, North Carolina allocated 26% of Medicaid funding to Long Term Services and Supports (LTSS) programming—six percentage points lower than the national average LTSS allocation—and 56% of LTSS spending to Home and Community Based Services (HCBS)[13]. This is slightly higher than the national average of 53%. Per enrollee Medicaid spending for seniors and people with disabilities is $12,060, significantly higher than the national average of $8,820[14].

North Carolina also allocates public funding to home care through the Division of Aging and Adult Services (DAAS), under the as part of the Older Americans Act. North Carolina Home and Community Care Block Grant (HCCBG).

While there is a significant amount of data available on the size of the public pay market, it is much more difficult to estimate the size of the private pay market.[15] ICA estimates that the size of the North Carolina private pay home care potential client pool to be 115,750. Given that home care costs in North Carolina are high relative to the state's median income of $35,696 for the state's 65+ population[16] this is likely an *over*-estimate of the potential market as many private pay customers may not be able to afford out of pocket home care costs. Research by Genworth finds that non-medical home care/homemaker services average $3,384 per month (assuming 44 hours per week) and home health aide services average $3,432 per month in North Carolina, or over $40,000 annually. These averages are expected to rise well above $4,000 per month by 2026[17].

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[10] The State of Texas, Legislature Budget Board, Medicaid Overview, April 2016. Retrieved from www.lbb.state.tx.us.
[11] Medicaid, Medicaid & CHIP Enrollment, North Carolina. Retrieved from www.medicaid.gov.
[12] Distribution of Medicaid Enrollees by Enrollment. The Henry J. Kaiser Family Foundation. Retrieved from www.kff.org.
[13] Medicaid State Factsheet: North Carolina, The Henry J. Kaiser Family Foundation, 2017. Retrieved from www.kff.org.
[14] Medicaid State Factsheet: North Carolina, The Henry J. Kaiser Family Foundation, 2017. Retrieved from www.kff.org.

[15] ICA used data available from the November 2016 IBIS world report on the national home care industry, and our estimate of the size of the home care client population we can approximate the number of potential private pay home clients. First, our estimate of the combined frail elderly, independent disabled, and self-care disabled population in North Carolina is 688,970. This number is then multiplied by the private pay market's (out-of-pocket and private insurance) percent of the national home care industry estimated to be 16.8% by IBIS World. Using this method, we estimate that the size of the North Carolina private pay home care potential client pool to be 115,750.
[16] S1902 Mean Income in the past 12 Months (2015 Inflation-Adjusted Dollars) 2011-2015 American Community Survey 5-Year Estimates, U. S. Census Bureau. Retrieved from www.factfinder.census.gov.
[17] Genworth. Long Term Care Costs 2016. Retrieved from www.genworth.com/about-us/industry-expertise/cost-of-care.html.

Key Stakeholders

Area Agencies on Aging: As mandated by the Older American's Act of 1965, North Carolina operates 13 area agencies on aging (AAA), which provide a suite of services to promote independence for persons 60+ with a primary focus on frail, rural and low-income minority individuals. AAA's contract with other agencies to provide services including homemaker services. AAA's are important referral sources for home care companies.

Association for Home & Hospice Care of North Carolina (AHHC): AHHC is a non-profit trade association, which represents providers of home health, hospice, palliative care, personal care, private-duty nursing, and companion/sitter services. The Association has a membership of over 750 provider agencies and related vendors. AHHC provides resources, education, advocacy and leadership support to member agencies.

NC Eldercare Workforce Coalition: The North Carolina Workforce Coalition is a network of eldercare providers, caregivers, individuals and agency partners committed to strengthening the eldercare workforce in North Carolina. The coalition aims to change provider practices and behaviors, improve education and training for all caregivers and advocate for policy interventions. The NC Workforce Coalition is an affiliate of the national Eldercare Workforce Alliance in Washington, D.C.

Carolina Common Enterprise: Carolina Common Enterprise is a cooperative development center providing education, technical assistance, organizational consulting, financing and other support to emerging or expanding cooperatives and other social enterprises. Carolina Common Enterprise also works to raise awareness about the cooperative model among local governments and the public at large.

Center for Participatory Change (CPC): CPC works to strengthen grassroots capacity, build collective power, and create equity in western North Carolina. The CPC's worker-owned business project provides intensive technical assistance and training for worker-owned businesses that create living wage jobs for low income immigrants.

Fund for Democratic Communities (F4DC): F4DC describes itself as a "Greensboro-based private foundation that supports community-based initiatives and institutions that foster authentic democracy to make communities better places to live. F4DC makes grants to groups that engage in participatory democracy to further their social change objectives; convenes groups and individuals committed to social and economic justice through deepening democratic practice; conducts research; and produces materials to nurture the growth of authentic democracy".[18]

[18] Fund for Democratic Communities. Mission Statement. Retrieved from https://f4dc.org/about/

REGULATORY & PUBLIC POLICY OVERVIEW

Whether private pay or public pay, agencies wishing to operate in North Carolina must have a basic understanding of the regulatory and policy environment in the state. This section provides an overview of cooperative law in the state, Medicaid generally, as well as North Carolina specifically, discusses North Carolina's commitment to home and community based services for long term services and supports needs, provides an overview of specific programs available to aged and disabled individuals in the state, and finally, discusses licensing requirements that need to be met by private pay and public pay agencies that wish to operate a home care agency in the state.

Medicaid Overview

Dually funded by the federal government and individual states, Medicaid provides financial support for health care services for low-income individuals, including elderly and disabled individuals requiring long term care (accounting for over 60% of Medicaid spending). Under Medicaid, the federal government provides a base match of 50% for approved Medicaid provided services, with low income states eligible for higher reimbursement rates. To be eligible for Medicaid benefits, individuals must meet federally mandated financial and asset criteria.

Beginning in 2014, the Affordable Care Act allowed states the option to expand Medicaid eligibility to all non-elderly adults with income below 138% of the federal poverty line. Under "Medicaid Expansion", the federal government absorbs a larger share of Medicaid costs for new enrollees, covering 100% of costs from 2014 to2017 and gradually reducing that percentage to 90% from 2017 to 2020. To date, 32 states and DC have expanded Medicaid[19].

Medicaid requires that states provide specific services at a minimum, to participate in the program. Required programs include inpatient and outpatient hospital services, physician and laboratory services, nursing home care and more recently, home health care. Above the minimum required programs, states may elect to cover additional services and/or expand services to individuals outside of the standard eligibility limits set by the Center for Medicaid and Medicare Services (CMS), the federal governing body. Typically, these additional services are provided under approved "waivers". [20] The number and type of waivers in each state varies widely, however common waivers include 1915 waivers, Aged and Disabled Waivers (ADW), and Intellectual Disability Waivers (ID). Home care relevant 1915 waivers include (*see Appendix B for detailed waiver descriptions*): [21]

- 1915(c) Home and Community-Based Waivers (offered in 47 states and DC)
- 1915(i) State Plan Home and Community Based Waivers
- 1915(j) Self-Directed Personal Assistance Services Under State Plan Waivers
- 1915(k) Community First Choice Waivers

[19] A 50-State Look at Medicaid Expansion, Families USA. Retrieved from www.familiesusa.org.
[20]Congressional Budget Office, Overview of Medicaid. Retrieved from www.cbo.gov.
[21]Medicaid, Authorities. Retrieved from www.medicaid.gov.

1915 (c) HCBS waivers were first introduced in 1983 as a way for states to transition beneficiaries out of costly institutional care settings, and in 2005, became formal Medicaid State plan options.[22] States can offer as many 1915(c) Home and Community-Based Waivers as they elect, provided they meet the requirements set forth by CMS, and can elect what services to cover under the waivers, however home health aide, personal care aide, and homemaker services are almost always covered under these programs.[23] Understanding where states fall on the spectrum of HCBS spending for their long term services and supports (LTSS) programs is an important metric for states overall preference for institutional versus home based care.

From Medicaid's founding in 1965 until the early 1990's, Medicaid operated under a system of "fee-for-service", where providers were directly reimbursed for services provided, based on rates set by individual states. In the early 1990's however, Medicaid began a transition towards a system known as "managed care" to better manage costs, utilization, and quality. Under Medicaid managed care, state Medicaid agencies contract with independent for profit or non-profit Managed Care Organizations (MCOs) that accept per member per month payments for health care services, known as "capitated payments". Because payments are "capitated" MCO's are driven to balance the needs of high-need/high-cost beneficiaries with low-need/low-cost beneficiaries and provide care in the most cost effective manner possible to avoid cost overruns. Early on, managed care was implemented under 1115 Waivers, but in 1997 the Balanced Budget Act gave states more authority to implement managed care programs without waivers[24]. As of March 2017, only 12 states did not have Managed Care programs in place[25]. States that have begun transitions to managed care programs are in varying states of transition. Several states including Tennessee, Hawaii, New Hampshire, New Jersey, Rhode Island, Kentucky, Iowa, Delaware, Florida and Arizona operate almost exclusively under managed care programs (over 90% transitioned)[26], including home and community based services, while others are just beginning this transition. Understanding where specific states fall on this transition is important, as it is directly correlated to how service rates are set, how money flows, and the importance of strategic partnerships, scale and other factors to home care agency success in a state.

In addition to the transition to managed care, states are increasingly transitioning Medicaid to "value-based" care models by implementing Accountable Care Organizations (ACO's). To date, ten states (MA, VT, NY, OR, UT, CO, MN, NJ, and RI) have implemented ACO programs[27]. The goal of ACO's is to "(1) enhance the patient experience of care; (2) improve the health of the population; and (3) reduce the per capita cost of health care". What differentiates an ACO from an MCO is innovative values-based payment structures and carefully defined and tracked data and quality metrics to assess and confirm established value outcomes. The transition to value based care via the ACO model is an important one for cooperative

[22] Medicaid, Authorities. Retrieved from www.medicaid.gov.
[23] Medicaid, Home and Community Based Services, 1915c Waiver. Retrieved from www.medicaid.gov.
[24] Kaiser Family Foundation, Five Key Questions and Answers about Section 1115 Medicaid Demonstration Waivers, 2011. Retrieved from www.kaiserfamilyfoundation.files.wordpress.com/2013/01/8196.pdf.
[25] Kaiser Family Foundation, Total MCO's, March 2017. Retrieved from www.kff.org.
[26] Kaiser Family Foundation, Share of Medicaid Population Covered Under Different Delivery Models, July 2016. Retrieved from www.kff.org.
[27] Center for Health Care Strategy, Inc. Medicaid Accountable Care Organization Programs: State Profiles. Brief: October 2015. Retrieved from www.chcs.org.

home care agencies and developers to watch, as higher quality care is a hallmark of cooperative homecare agencies, and could be an important market differentiator.[28]

North Carolina Medicaid Overview

The North Carolina Department of Health and Human Services (NCDHHS), Division of Medical Assistance (DMA), is the regulatory body responsible for Medicaid management in the state. North Carolina is one of only twelve remaining states that remain under a system of 100% fee-for-service Medicaid. However, on August 8, 2017 NCDHHS released a Medicaid Managed Care Proposed Program Design, proposing a shift to managed care for the first time.[29] Public comment was accepted through September 8, 2017 and the final plan is currently being designed. At this time, it is unclear whether home based services will transition to managed care or remain under the fee-for-service system.

Under the existing fee-for-service system, provider agencies bill the state directly for Medicaid services provided. At current, the maximum allowable rate for in-home, non-medical personal care services is $3.47 per 15 minutes, or $13.84 per hour. The maximum allowable rate for in-home private duty nursing is $9 per 15 minute or $36 per hour, home health aide services is $47.28 per visit, and skilled nursing $103.33 per visit. Rates have not been adjusted in several years.[30]

Home and Community Based Services (HCBS)

Home and Community Based Service (HCBS) programs are Long Term Services and Supports (LTSS) programs that allow Medicaid recipients who are age 65+ and those living with physical disabilities to receive support with activities of daily living (ADL's) and instrumental activities of daily living (IADL's) at home or in their community, rather than in institutional settings. In 2014, North Carolina spent $1,753,873,579 on Medicaid HCBS programs, slightly higher than the national average of 53%.

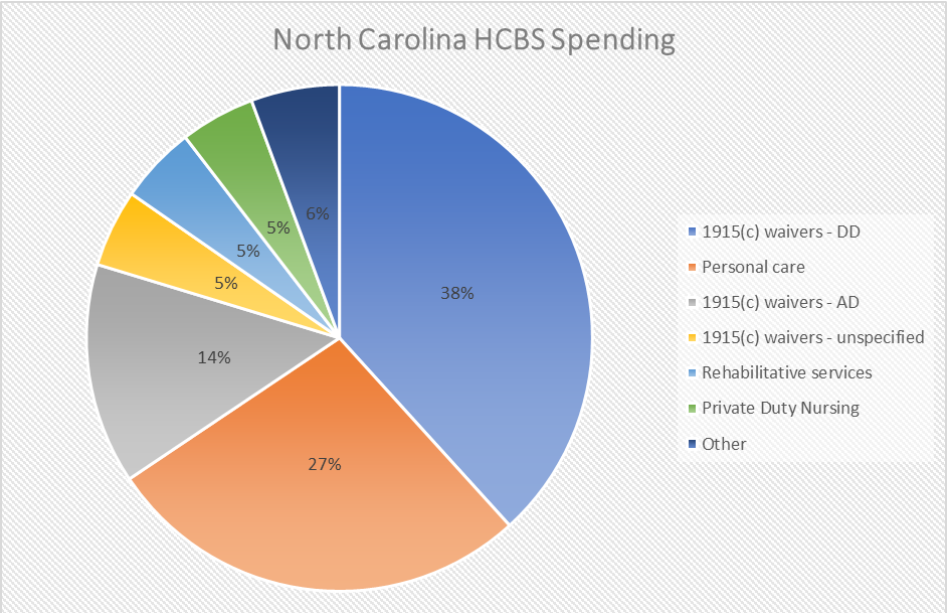
[28] Center for Health Care Strategy, Inc. Medicaid Accountable Care Organization Programs: State Profiles. Brief: October 2015. Retrieved from www.chcs.org.

[29] NC Medicaid Transformation, North Carolina Department of Health and Human Services. Retrieved from https://www.ncdhhs.gov/nc-medicaid-transformation

[30] NC Division of Medical Assistance, Fee Schedules, North Carolina Department of Health and Human Services. Retrieved from https://www2.ncdhhs.gov/dmA/fee/index.htm.

North Carolina operates three state plan home and community based programs: Personal Care Services, Home Health and PACE (Program of All-Inclusive Care for the Elderly), and three 1915c waivers:

- The Community Alternatives Program for Disabled Adults (CAP/DA)
- The Community Alternatives Program for Children (CAP/C)
- NC Innovations



Private duty nursing, case management, rehabilitative and Money Follows the Person (MFP) demonstration services are offered under other overarching programs. All programs require individuals to be Medicaid-eligible, and at-risk of nursing home level care, or interested and able to transition out of institutionalized care.

Non-Medicaid State Programs

Funded by the North Carolina Home and Community Care Block Grant (HCCBG), issued by the Division of Aging and Adult Services (DAAS), Home Care Independence (HCI) is the state's consumer directed services program for in-home care. Under HCI, individuals eligible for state-supported in-home care can elect to directly hire family, friends or others as caregiver or personal assistants. Like most consumer directed service programs, individuals that choose to direct their own services must engage outside agencies to provide guidance and fiscal management services. Home Care Independence is available in six counties: Alleghany, Cumberland, Martin, Mecklenburg, Person, and Wayne.[31]

Licensing Requirements

On May 25, 2011, The General Assembly of North Carolina issued a moratorium on the issuance of new Home Care Agency Licenses for In-Home Aide Services, prohibiting new startup entrants. The moratorium was set to expire on June 30, 2017, but was extended through June 30, 2019. The prohibition does not apply to companion and sitter services, or to home health agencies wishing to offer in-home aide services as part of a larger suite of services. Further, the moratorium does not impact license transfers under cases of acquisition and change of ownership or to areas where "increased access to care is [deemed] necessary" by DHHS.[32] Agencies that fall outside of the scope of the ongoing moratorium, including in-

[31] Home Care Independence Operations Manual, NC Health and Human Services. Retrieved from www.ncdhhs.gov.
[32] General Assembly of North Carolina, Session 2016, Division of Health Service Regulation - DHHS House Appropriations, Health and Human Services, May 12, 2016. Retrieved from www.ncleg.net.

home companion, sitter, homemaker or respite services, must acquire a home care agency license from the North Carolina Division of Health Service Regulation DHSR to operate in the state. To receive a license to operate, applicants must develop written policies and procedures, completed in accordance with DHSR rules, screen all initial employees and present personnel records for each, document that the agency director meets required qualifications, complete and submit the application along with a $560 non-refundable licensing fee. Once reviewed, the department schedules an appointment for an "in-person survey," a review of all submitted documents in DHSR's Raleigh office. Once licensed, additional sites can be added under an expedited licensing process, however the $560 fee applies to all new sites.

New agencies entering the North Carolina home care market can attend unique training programs offered by outside agencies, but approved by DHSR, providing comprehensive overviews of the regulatory environment, as well as practical clinical and fiscal business models and tools necessary to run home care business.[33] For acquired agencies seeking change of ownership (CHOW), the buyer must either prove that they previously owned or operated a home care agency, or must attend home care training approved by the division that is provided by the Association for Home and Hospice Care of N.C. Directors must meet the required qualifications and an application and $560 fee must also be submitted. Home health agencies wishing to operate in the state must also apply for a Certificate of Need (CON) from DHHS to operate in the state before beginning development. The goal of the CON requirement is to limit the development of unnecessary facilities and/or services as determined by geographic, demographic and economic considerations.

Training Requirements

Training requirements in North Carolina are complex and significantly more demanding than other states. Training is organized around progressive levels of training and corresponding responsibilities, beginning with non-listed aides and then advancing to Nursing Assistant I, II and special skills.

Unlike the majority of states, North Carolina requires that most home care work be performed by certified nurse aides. At the lowest level, basic, in-home, non-medical supports can be provided by "non-listed aides" in North Carolina, based on an assessment and determination by a registered nurse. Non-listed aides are hired and trained by agencies to provide "In-Home Aide" care Level 1 and Level II. While the work they perform is similar to that of Personal Care Aides in other states, North Carolina's Department of Health Service Regulation (DHSR) does not officially recognize a personal care aide role for in-home care. Unofficially, however, many agencies use the Personal Care Aide term. Non-listed aides that are hired by *adult care homes* must complete between 25 and 80 hours of training, depending on the level of care they will provide.

Nurse Aide I (NA-I) training requirements are on par with national standards for certified nurse aides—requiring a minimum of 75 hours of didactic coursework plus a minimum of 16 hours of clinical training—however, most programs offered by state approved training institutions are significantly longer. To become a NA-I in the state, candidates who have successfully completed training must take an exam

[33] North Carolina Department of Health and Human Services, North Carolina Division of Health Service Regulation, Acute and Home Care Licensure and Certification Section, Home Care Provider Training. Retrieved from www.ncdhhs.gov.

and be listed on the NC Nurse Aide Registry managed by DHSR. NA-I's can seek employment at home care agencies, home health agencies, nursing homes, hospitals, adult care or individual homes. Registered NA-I's can then pursue higher levels of certification including NA Level II, Geriatric Aide and Medication Aide. With the exception of Medication Aide training, which requires 24 hours of additional training, each advanced level requires significant additional time and financial investments. Training is provided primarily at Community Colleges, but also at licensed and approved training centers. There is no official minimum training requirement or exam for NA-II designation, but NA-II's must be listed with the North Carolina Board of Nursing as well as maintaining their NA-I certification. Home Care agencies can also apply to the North Carolina Board of Nursing to train and certify their NA-I staff in up to four specialized NA-II skills, but this additional certification cannot be carried to another agency.

Additionally, North Carolina is one of six states that received federal dollars, as part of the 2010 Affordable Care Act, to develop and demonstrate a Personal and Home Care Aide State Training (PHCAST) program, receiving $5 million in annual budget appropriations from 2011 to 2013. Drawing on PHI's recommended 77-hour personal care services curriculum, North Carolina implemented a "Career Ladder" program offering four levels of comprehensive and progressive training that adequately prepares workers for the job and provides career advancement opportunities.[34] North Carolina's PHCAST program has been implemented through high schools at the introductory level, in community colleges, and in agencies and other training programs. There is significant overlap between the resulting PHCAST program and the state outlined training requirements, but the two programs remain distinct and the state does not currently have plans to officially adopt the PCHAST program.

[34] Paraprofessional Healthcare Institute, Personal and Home Care Aide State Training Program (PHCAST). Retrieved from www.phinational.org.

LABOR OVERVIEW

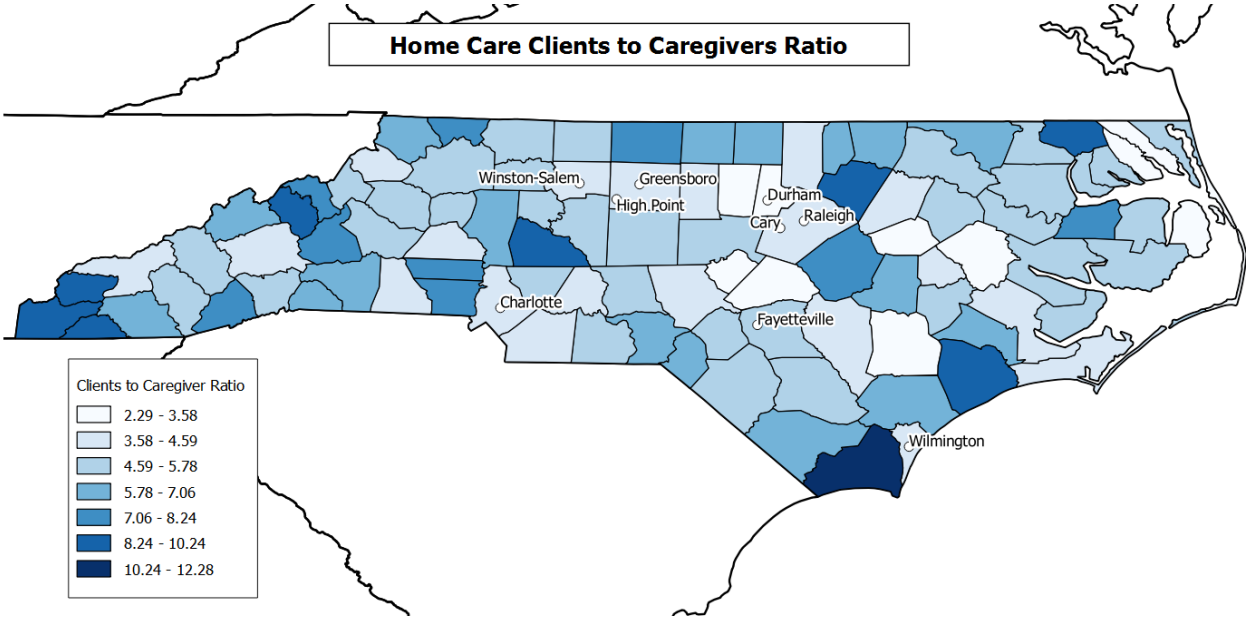
As human-centered businesses, effective recruitment and retention practices for quality home care workers are the biggest factors in the performance and sustainability of agencies. In this section, we analyze current labor conditions, as well as future trends to identify both challenges and potential opportunities to recruiting and retaining home care workers.

Current Labor Conditions

Given North Carolina's higher training requirements for in-home care, the state's home care workforce is dominated by nursing assistants. In 2015, North Carolina companies employed 55,400 nursing assistants, 47,750 home health aides and 15,640 personal care aides.

North Carolina's elderly and disabled population growth will necessitate significant growth in the direct care workforce over the coming years to meet demand. Currently, for every one caregiver in North Carolina there are 9.94 people categorized as frail elderly, independent living disabled, or self-care disabled needing care. This is a slightly higher ratio than the national caregiver dependency ratio of 8 to 1.

Distribution of caregivers across the state is uneven, with rural areas facing greater worker shortages. Competition for workers is particularly strong between nursing homes and other long-term-care institutions and home-care agencies in rural areas, often focused on the amount of pay and benefits, and the 'steadiness' of hours.



In the United States the average caregiver is paid over 10% more than the average food service or retail worker. In North Carolina caregivers are paid only 1.9% more than food service and retail workers, at an *average* hourly rate of only $9.58 per hour. The median hourly pay rate for personal care aides, home

Caregiver and Retail/Food Service Wage Comparison			
	Direct Care	**Retail/Food**	**Difference**
National Average	$ 10.70	$ 10.24	$ 0.46
North Carolina	$ 9.58	$ 9.40	$ 0.18

health aides and nursing assistants in 2015 was $9.48, $9.12 and $10.84 respectively[35]. For comparison, state minimum wage is $7.25 per hour.[36] [37] Further, the hourly wage of a starting cashier at Walmart in North Carolina is $9.01, just 5% below the median rate for a personal care aide.[38] Given other challenges facing home care workers including irregular and insufficient hours, no or minimal benefits, and the emotional and physical demands of the work, there is little incentive for workers to enter or stay in the home care field, driving shortages and high turnover rates.

While the unemployment rate in North Carolina is comparable to the national average, the prime-age labor force participation rate is 5.7% below the national average, indicating the potential for a small pool of untapped labor to be recruited into the caregiver workforce. Still, with rapid growth, untapped labor pools are not enough, and the industry will need to recruit from other sectors. The home care industry's demographics must also be expanded to meet the expanding customer base. Nearly 9 in 10 home care workers are women, with a median age of 45[39]. Both younger and older workers will need to be recruited into the field, critically including men.

[35] Paraprofessionals Healthcare Institute, 2015. Retrieved from www.phinational.org.

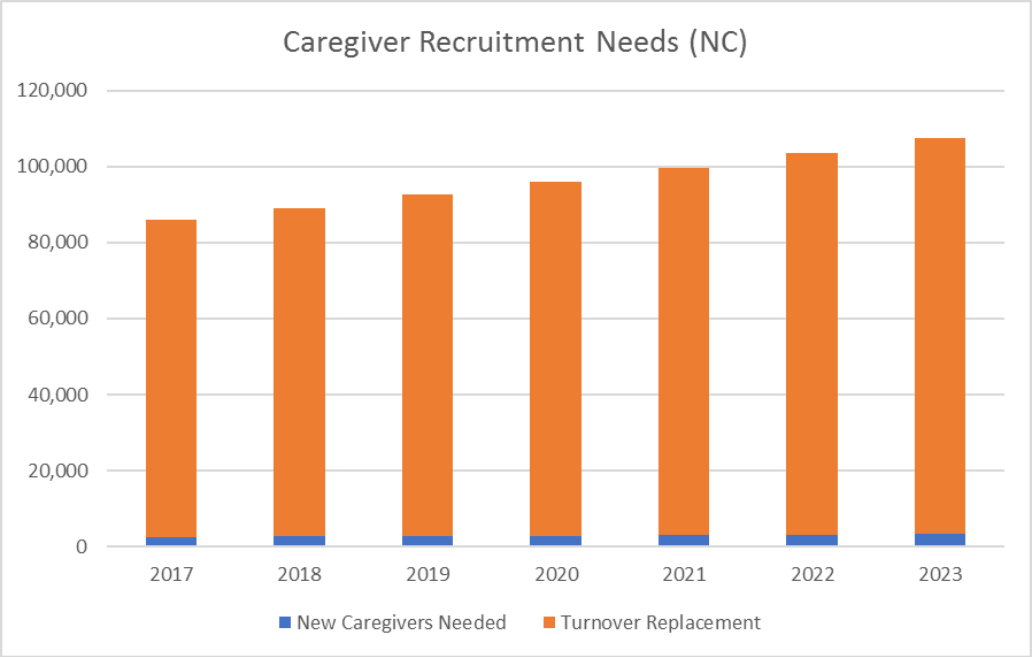
[36] North Carolina is one of only 21 states that still maintains the federal minimum wage level.

[37] On March 7, 2017, democratic lawmakers backed by Raising Wages NC, a local advocacy group, filed SB210, seeking to raise the state's minimum wage of $7.25 to $12 an hour by 2020 and to $15 per hour by 2022. At the time of this writing, the bill remained in the Senate.

[38] Indeed.com. Retrieved from www.indeed.com/cmp/Walmart/salaries.

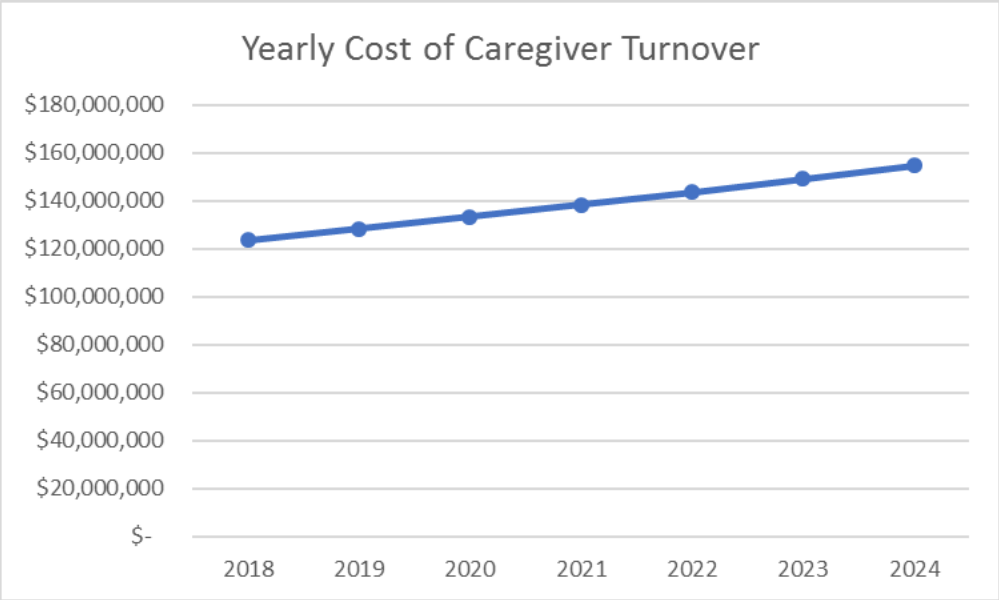
[39] Paraprofessionals Healthcare Institute, U.S. Home Care Workers: Key Facts, 2017. Retrieved from www.phinational.org.

Future Labor Trends



The caregiving workforce is expected to experience rapid growth over the next ten years. In North Carolina, the workforce of personal care aides is expected to grow by 31%; home health aides by 22%; and nursing assistants, orderlies, and attendants by 10% by 2020[40]. In total, the state of North Carolina is projected to need nearly 90,000 caregivers to meet demand by 2024. Nationally, the turnover rate for caregivers has more than tripled in the last decade. The U.S. average turnover rate is a staggering 60%, or six in ten caregivers leaving their jobs each year, affecting worker and patient lives[41]. Combining the growth in the workforce with the industry's high turnover rate we estimate that the state of North Carolina will need to recruit and train an estimated 310,000 caregivers into the workforce by 2024. Even if the turnover rate was significantly improved, hundreds of thousands of caregivers would still be needed to meet projected demand.

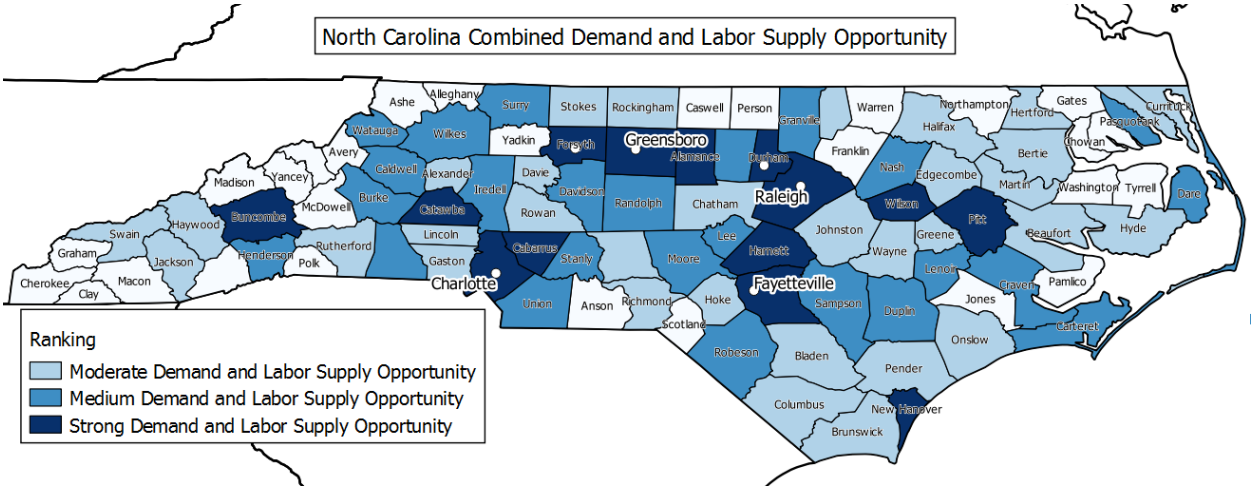
[40] U.S. Department of Labor, Bureau of Labor Statistics, Employment Projections Program, 2012-2022 National Employment Matrix. Retrieved from www.bls.gov/emp/ep_table_103.htm.
[41] The 2017 Home Care Benchmarking Study. Retrieved from www.homecarepulse.com


Yearly Cost of Caregiver Turnover
$180,000,000
$160,000,000
$140,000,000
$120,000,000
$100,000,000
$80,000,000
$60,000,000
$40,000,000
$20,000,000
$-
2018
2019
2020
2021
2022
2023
2024

COOPERATIVE OPPORTUNITY

Cooperative developers and others interested in supporting home care cooperatives in North Carolina have an exciting opportunity to improve the quality of jobs, the quality of care, and access to care in the state.

However, while the potential for impact is high, the road is difficult. Nationwide, independent home care agencies are struggling to survive because of the small private market, low margins on Medicaid clients, difficulty in recruitment and retention, and high training costs. In North Carolina, some of these national trends are exaggerated. While demand for home care services in North Carolina is strong and growing, the continuing moratorium on in-home aide services in North Carolina presents a significant barrier to home care cooperative start-up. In North Carolina, the labor market is below the national ratio of caregivers to those needing care. As a result, in North Carolina, a key barrier to starting and growing a successful home care cooperative will be recruitment and retention of caregivers.



There are advantages to working in North Carolina, as well, though. The market for home care in North Carolina is sufficiently large to support home care cooperatives in the state. While the ongoing moratorium will continue to make it difficult to start a home care cooperative, license transfer is allowed under the moratorium in cases of agency acquisition, making acquisition a viable option for new home care cooperatives to enter the In-Home Aide Services space.

Furthermore, national home care cooperative development strategies can support the successful start-up and growth of local cooperatives. One potential strategy for operatives and partners to assist local home care cooperatives is through the development of a shared services cooperative. It can be difficult for smaller scale organizations to manage back office operations, training, and regulatory paperwork while also managing a home care business and generating new sales. A membership organization for cooperatives that provides more efficient payroll and scheduling solutions and access to high quality training can create the benefits of scale while also allowing for local control of the cooperative. An organization that can provide a pool of well-trained caregivers can significantly reduce recruitment costs and increase quality of care for cooperative members. and a membership organization is one strategy that may provide that advantage.

In North Carolina and nationwide, effecting the potential impact of cooperatives in the home care industry will require sufficient capital investment, collaboration, ingenuity, and a willingness to take risks and learn from failure. If done right, home care cooperatives can be a powerful, market-based approach creating access to dignified employment for low-wage workers in a difficult industry that has suffered from systemic underinvestment – an approach that is working for, but not waiting for, the policy solutions that are needed for larger-scale change.

APPENDICES

Appendix A: State Opportunity Matrix

Opportunity Assessment Framework		
Key Metrics - Labor Supply:	***US Average***	***North Carolina***
Assesses ease or difficulty of recruitment and retention for direct-care workforce.		
Prime-Age Labor Force Participation Rate (25-55 Years of Age)	**81.70%**	**76%**
Other Entry-Level Pay Comparison (Retail and Food Service)	**10.83%**	**1.90%**
Caregiver Dependency Ratio (direct care workforce over home care subset-frail elderly/dependent)	**7.98**	**9.94**
Unemployment Rate	**4.40%**	**4.90%**
Key Metrics - Firm Barriers to Entry:	***US Average***	***North Carolina***
Assesses ease or difficulty of entering the home care market as a new provider		
Scale Barriers	**$216,243**	**$171,511**
Average Sales of Home Care Companies Rural	**Rural: $431,300**	**Rural: $591,500**
Average Sales of Home Care Companies Urban	**Urban: $373,800**	**Urban: $438,572**
Scale of Service Area (as Population Density)	**91.39**	**208.7**
Rural Population Density	**Rural: 19.17**	**Rural: 48.7**
Suburban Population Density	**Suburban: 57.83**	**Suburban: 115.**
Urban Population Density	**Urban: 1015.17**	**Urban: 345.14**
Key Metrics - Market Competitiveness	***US Average***	***North Carolina***
Assesses the state of market consolidation/fragmentation, and dominance of any major firms.		
Total % Market Share of Top 5 Firms	**8.7% (Top Three)**	**46.02%**
Largest Provider Operating in State (Annual Sales)	**Kindred**	**Advanced Home Care**
Key Metrics - Client/Customer Demographics	***US Average***	***North Carolina***
Describes composition of population in state likely needing home care services.		
Total % in Home Care Subset (Frail Elderly & Ind'l with Disabilities, IL & SC)	**6.19%**	**6.79%**
Growth in Aging Population	**9.70%**	**12.28%**
Total % Population Age 65+	**14.10%**	***14.20%***
Total % Population Individuals with Disabilities	**6.81%**	***13.90%***
Total % Population on Medicaid	**18.00%**	**20.30%**
Home Care Costs as % of Median Income of 65+ Population	**119%**	**115%**
Key Metrics - Payer Composition	***US Average***	***North Carolina***
Describes key customers/payers in the state, how money flows, ability of providers to negotiate for better rates, etc.		
Percentage Total State Medicaid Spending on LTSS	**32%**	**26%**
Share Medicaid LTSS Spending for Devoted to HCBS	**53%**	**44%**
Self-Directed Care Program	**N/A**	**Yes**
Rate Flexibility	**N/A**	**Fee for Service no Managed Care**
Per Capita HCBS	**$18,870**	**$11,118**

Appendix B: Detailed Medicaid Home Care Waiver Descriptions

1915(c) Home and Community-Based Waivers[i]

This waiver enables States to tailor services to meet the needs of a particular target group. Within these target groups, States are also permitted to establish additional criteria to further target the population to be served on a HCBS waiver (e.g. target by age or diagnosis such as autism, epilepsy, cerebral palsy, traumatic brain injury, HIV/AIDS; etc.). Eligible individuals must demonstrate the need for a Level of Care that would meet the State's eligibility requirements for services in an institutional setting. States choose the maximum number of people that will be served under a HCBS Waiver program. States can offer a variety of unlimited services under an HCBS Waiver program. Programs can provide a combination of standard medical services and non-medical services. Standard services include but are not limited to: case management (i.e. supports and service coordination), homemaker, home health aide, personal care, adult day health services, habilitation (both day and residential), and respite care. States can also propose "other" types of services that may assist in diverting and/or transitioning individuals from institutional settings into their homes and community.

1915(i) State Plan Home and Community Based Waivers[ii]

States can offer a variety of services under a State Plan Home and Community-Based Services (HCBS) benefit. People must meet state-defined criteria based on need and typically get a combination of acute-care medical services (like dental services, skilled nursing services) and long-term services (like respite, case management, supported employment and environmental modifications) in home and community-based settings.

1915(j) Self-Directed Personal Assistance Services Under State Plan Waivers[iii]

Self-directed personal assistance services (PAS) are personal care and related services provided under the Medicaid State plan and/or section 1915(c) waivers the State already has in place.

- Participation in self-directed PAS is voluntary. Participants set their own provider qualifications and train their PAS providers Participants determine how much they pay for a service, support or item

The plan must include an assessment of contingencies that pose a risk of harm to participants and an "individualized backup plan" to address those contingencies, as well as a "risk management plan" that outlines risks participants are willing to assume.

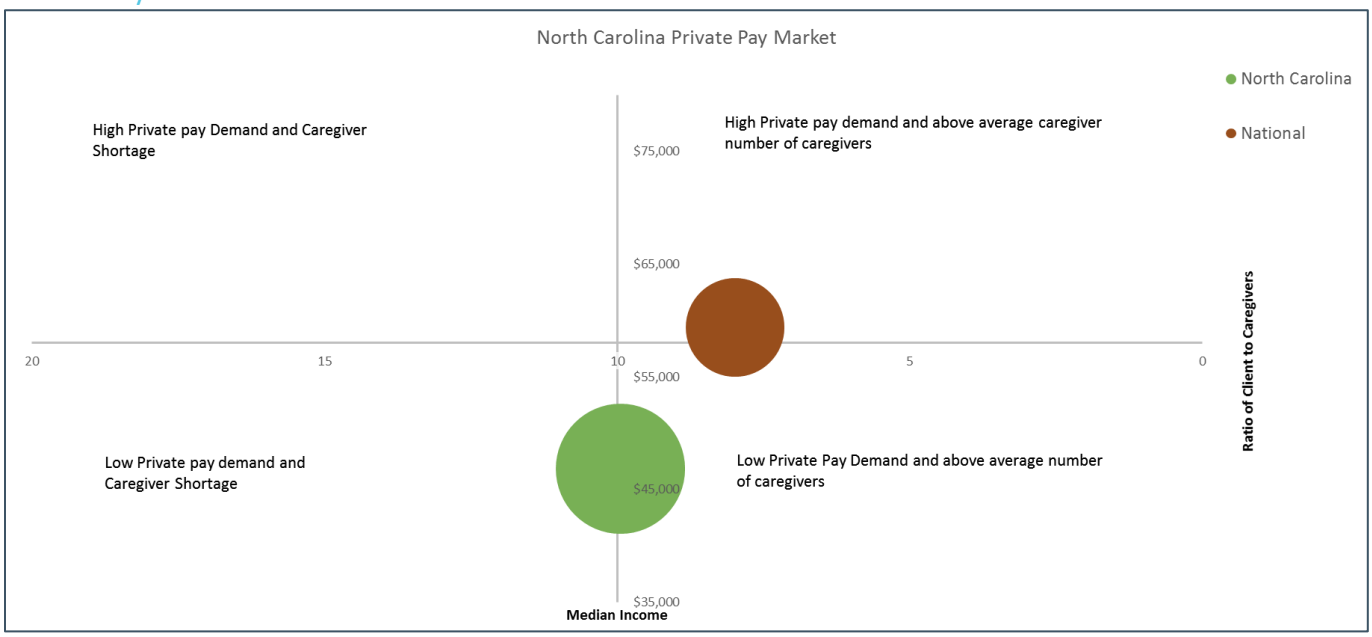
1915(k) Community First Choice Waivers[iv]

The "Community First Choice Option" allows States to provide home and community-based attendant services and supports to eligible Medicaid enrollees under their State Plan. This State plan option was established under the Affordable Care Act of 2010.

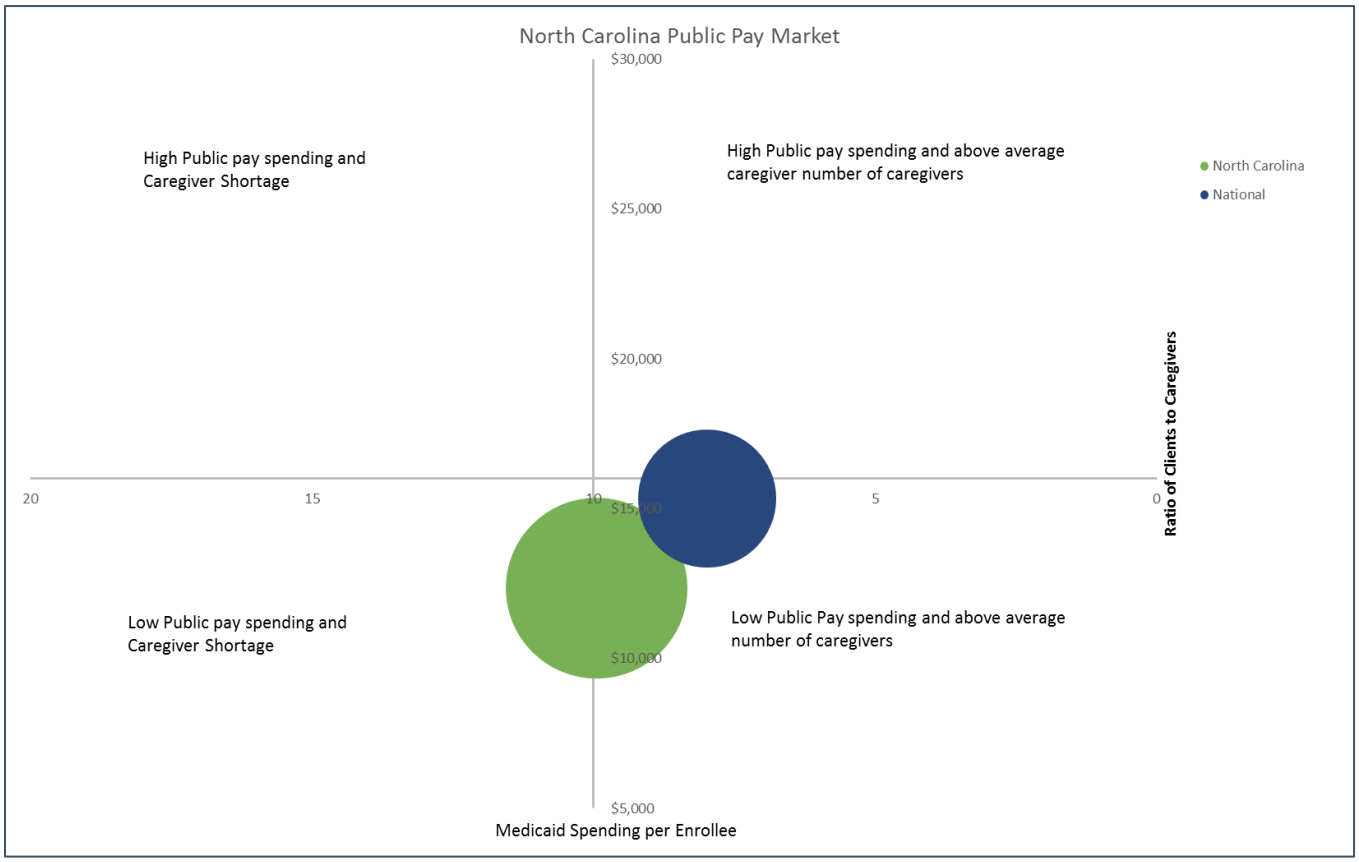
Appendix C: 2x2 Analysis

The two graphics below analyze both the private pay market and the public pay market by integrating the labor supply, the number of clients needing home care services, and the pool of money available for those services. In both charts the size of the bubble indicates the total number of potential home care clients in the state. Along the x-axis, we have the ratio of home care clients to caregivers in the state. For example, nationally, there are about eight home care clients for every one working caregiver. States to the right of the national bubble have a relatively strong supply of caregivers in the state in comparison to the national average. Finally, on the y-axis we have two different data points depending on whether we are assessing the private pay market or the public pay market. In the private pay assessment, we use the state's median income to determine the potential pool of private money available to pay for home care. In the public pay assessment, we use the state's per enrollee Medicaid spending on aged and disabled beneficiaries.

Private Pay 2x2:



Public Pay 2x2:



Appendix D: Methodology

To better understand the opportunities and challenges of creating or expanding a home care cooperative we assessed the state on five dimensions: labor supply, barriers to entry, market competitiveness, customer demographics, and payer composition. We used multiple data points and measures to assess each category, and the sources and calculation methods for each data point is outlined in Appendix X.

Labor Supply: To evaluate the state's labor supply, we wanted to understand how difficult it is to recruit, attract, and retain homecare workers. The caregiver dependency ratio is the ratio of the number of direct care workers to the number of potential homecare customers which paints a picture of how much demand there is for homecare workers in the state. We also compare wages for homecare workers to wages for other service sector jobs to determine how easy it is to recruit homecare workers away from other entry-level work. Finally, the state labor force participation rate and unemployment rate are used to determine whether there is an available pool of workers to recruit from.

Barriers to Entry: Barriers to entering the homecare market were assessed using the National Establishment Time Series (NETS) database and the Mergent Intellect online database. These two databases were used to calculate the average size of homecare companies for rural counties, urban counties, and for the entire state. This data is useful in understanding how large a homecare company must be to successfully operate in a state. Additionally, we calculated the population density of rural, urban, and suburban counties to understand how travel time and costs may affect homecare companies operating in those counties.

Competitiveness: The market competitiveness category is an evaluation of the business environment for the home care industry in the state. We assessed the competitiveness of the homecare industry by calculating what percentage of the industry's sales revenue was captured by the five largest firms in the state. Since many of the larger homecare companies simultaneously operate personal care, home health, and nursing facility lines of business in multiple states, this measure does not have a high level of precision but does give an accurate assessment of the general level of homecare industry competitiveness in the state.

Client Demographics: This category is an assessment of the current and future demand for homecare services in a state based upon the size and growth of the customer base. Primarily using US census data, we determined the size of the state's elderly population, the growth rate of the elderly population, the size of the adult disabled population, and the size of the homecare subset (frail elderly plus individuals with disability). Additionally, we determined the client base's ability to pay for homecare services by comparing the current per capita homecare costs to the states per capita median wage. Finally, the potential size of the public pay market is estimated using the total percentage of the state's population currently on Medicaid.

Payer Composition: The payer composition category uses both qualitative and quantitative data to assess the regulatory environment, the amount of public money allocated towards homecare, and the funding streams for homecare in the state. The total amount of money available for homecare is

measured using the percent of Medicaid spending dedicated to Long-term Support and Services (LTSS) and Home and Community Based Care (HCBS). Per capita spending on HCBS is used to determine how much public money is dedicated to each homecare customer.

Labor Supply		
Data Point	**Source**	**Calculation/Notes**
Prime-Age Labor Force Participation Rate (25-55 Years of Age)	BLS	Direct from source
Other Entry-Level Pay Comparison (Retail and Food Service)	OES wage data	Average of retail and food service wages divided by average of personal care and home health aide wages
Caregiver Dependency Ratio	OES wage data and US Census (2015 American Community Survey 5-year Estimates)	Sum of nursing assistants in home care (7.9% of all nursing assistants nationally), personal care aides, and home health aides divided by sum of adults with disabilities and seniors designated as frail or dependent
Unemployment	BLS	Direct from source
Firms Barriers to Entry		
Data Point	**Source**	**Calculation/Notes**
Scale Barriers	Mergent Intellect	Median revenue of homecare companies in D&B database
Average Sales Revenue Rural Home Care Companies	NETS Data	Rural designation based county in which the company's headquarters is located
Average Sales Revenue Urban Home Care Companies	NETS Data	Urban designation based county in which the company's headquarters is located
Scale of Service Area	US Census	Direct from source
Rural Population Density	US Census	Direct from source
Suburban Population Density	US Census	Direct from source
Urban Population Density	US Census	Direct from source
Market Competitiveness		
Data Point	**Source**	**Calculation/Notes**

Total % Market Share of Top 5 Firms	Mergent Intellect cross checked with state list	Revenue of five largest homecare firms in state divided by total state homecare market revenue
Largest Provider is state by sales revenue	Mergent Intellect cross checked with state list	Direct from Source
Client Demographics		
Data Point	**Source**	**Calculation/Notes**
Total Percent in Home Care subset	US Census (2015 American Community Survey 5-year Estimates)	Sum of adults with disabilities and frail elderly population
Growth in Aging Population	US Census (2015 American Community Survey 5-year Estimates)	
Total Percent Population 65+	US Census (2015 American Community Survey 5-year Estimates)	
Total Percent Population Individuals with Disabilities	US Census (2015 American Community Survey 5-year Estimates)	
Total Percent Population on Medicaid	Kaiser State Health Facts	
Home Care Costs as Percent of Median Income of 65+ Population	US Census (2015 American Community Survey 5-year Estimates) and…	
Payer Composition		
Data Point	**Source**	**Calculation/Notes**
Percent Total Medicaid Spending on LTSS	CMS and Truven Health Analytics report	Direct from Source
Share Medicaid LTSS Spending dedicated to HCBS	CMS and Truven Health Analytics report	Direct from Source
Per Capita HCBS	Kaiser Health Foundation from 2013 based off KCMU and UCSF analysis	Total number of state Medicaid HCBS spending divides by number of participants.

Opportunity Matrix Sources:

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Employment Statistics*, July, 2017 Retrieved from www.bls.gov/oes/

Mergent Intellect Dun and Bradstreet. (n.d.). Loblaws Inc. Retrieved from Mergent Intellect database.

National Establishment Time Series (NETS). *NETS is a proprietary database developed by Walls & Associates that converts Dun and Bradstreet (D&B) archival establishment data into a time-series database of establishment information.*

State Health Facts. The Henry J. Kaiser Family Foundation, 2017. Retrieved from http://www.kff.org/statedata.

U.S. Census Bureau. *S0103 Population 65 Years and Over in the United States 2011-2015 American Community Survey 5-Year Estimates*, 2015. Retrieved from www.factfinder.census.gov.

U.S. Census Bureau. *S1902 Mean Income in the past 12 Months (2015 Inflation-Adjusted Dollars) 2011-2015 American Community Survey 5-Year Estimates*, 2015. Retrieved from www.factfinder.census.gov.

U.S. Census Bureau. *S1810 Disability Characteristics 2011-2015 American Community Survey 5-Year Estimates*, 2015. Retrieved from www.factfinder.census.gov.

U.S. Census Bureau. *Monthly Population Estimates for the United States: April 1, 2010 to December 1, 2017 2016 Population Estimates*, 2016. Retrieved from www.factfinder.census.gov.

Improving the Balance, The Evolution of Medicaid Expenditures for Long-Term Services and Supports (LTSS), FY 1981-2014, Wenzlow, A., Eiken, S., Stredl, K., June 2016. Retrieved from www.medicaid.gov.

Appendix E: Cooperative Law

Cooperatives based in North Carolina can organize under Subchapter IV (Article 16) of Chapter 54: Cooperative Organizations. Cooperatives may also organize as regular business corporations or LLC's, and specify their intent to operate cooperatively in their by-laws or operating agreement[42]. For more information, please see: http://www.co-oplaw.org/statebystate/northcarolina/.

[i] Medicaid. *Home and Community Based Services 1915(c).* Retrieved from www.medicaid.gov/medicaid/hcbs/authorities/1915-c/index

[ii] Medicaid. *Home and Community Based Services 1915(i).* Retrieved from at www.medicaid.gov/medicaid/hcbs/authorities/1915-i/index

[iii] Medicaid. *Home and Community Based Services 1915(j).* Retrieved from at www.medicaid.gov/medicaid/hcbs/authorities/1915-j/index

[iv] Medicaid. *Home and Community Based Services 1915(k).* Retrieved from at www.medicaid.gov/medicaid/hcbs/authorities/1915-k/index