Steve Sisolak
Governor

DEPARTMENT OF
HEALTH AND HUMAN SERVICES
Director's Office
Helping people. It's who we are and what we do.

Richard Whitley, MS
Director

October 21,2020

Brenda Erdoes, Director
Legislative Counsel Bureau
401 S. Carson Street
Carson City, NV 89701

Dear Director Erdoes,

Pursuant to Assembly Bill 122 of the 2019 Legislative Session, the Department of Health and Human Services is required to study the feasibility of establishing assisted living facilities in rural areas that also provide respite care and adult day care services and submit a written report of the study to the Director of the Legislative Counsel Bureau for transmittal to the Legislative Committee on Senior Citizens, Veterans and Adults with Special Needs.

The attached feasibility study was completed by the University of Nevada, Reno in consultation with members of an external working group, the Division of Health Care Finance and Policy, Division of Public and Behavioral Health and Aging and Disability Services Division within the Department of Health and Human Services.

Should you have any questions related to the report please do not hesitate to contact Veronica Dahir, Ph.D., Research Administrator, School of Community Health Sciences Dean's Office at veronicad@unr.edu or (775) 784-6272.

Sincerely,

Richard Whitley, Director
Department of Health and Human Services

A Feasibility Study of a Combined License for Assisted Living Facilities, Adult Day, and Respite Care Services in Non-Urban Nevada:

Response to AB122 Part 1

(Chapters 1-4)

Final Report

September 30, 2020

Sources for Cover Images:

https://seniors.lovetoknow.com/Adaptive_Games_and_Activities_for_Senior_Citizens

https://blog.highgateseniorliving.com/5-ways-assisted-living-facilities-can-help-decreases-depression-in-older-adults

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Note: This report was written by the UNR Internal Working Group with consultation from the members of the External Working Group.

Full citation: Katsikas, A., Wendel, J., Moody, S. A., Griswold, M. T., Dahir, V. B., Rerick, P. O., Harris, T. R., Carson, J., Reed, P., Warne, T. N., Mukhopadhyay, S., Huynh, D., Reuter, J. C., Hafdahl, R., & Edwards, C. P. (2020, September 30). *A feasibility study of a combined license for assisted living facilities, adult day, and respite care services in non-urban Nevada: Response to AB122*. University of Nevada, Reno. Submitted to the Nevada Department of Health and Human Services (Aging and Disability Services Division and the Division of Healthcare Financing and Policy) and the Nevada State Assembly.

Suggested citation: Katsikas, A., et al. (2020, September 30). *A feasibility study of a combined license for assisted living facilities, adult day, and respite care services in non-urban Nevada: Response to AB122.* University of Nevada, Reno. Submitted to the Nevada Department of Health and Human Services and the Nevada State Assembly.

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ASSEMBLY BILL 122

ASSEMBLY BILL NO. 122–COMMITTEE ON HEALTH AND HUMAN SERVICES

AN ACT relating to assisted living facilities; requiring the Department of Health and Human Services to study the feasibility of establishing assisted living facilities in rural areas that also provide certain other services; and providing other matters properly relating thereto.

Legislative Counsel's Digest:

Existing law establishes separate licensing categories for assisted living facilities and facilities for the care of adults during the day. (NRS 449.004, 449.017) This bill requires the Department of Health and Human Services to study the feasibility of establishing and operating in rural areas of this State assisted living facilities that also provide respite care and the services of a facility for the care of adults during the day.

EXPLANATION – Matter in ***bolded italics*** is new; matter between brackets **[**~~omitted material~~**]** is material to be omitted.

THE PEOPLE OF THE STATE OF NEVADA, REPRESENTED IN SENATE AND ASSEMBLY, DO ENACT AS FOLLOWS:

Sections 1-3. (Deleted by amendment.)

Sec. 3.5. On or before October 1, 2020, the Department of Health and Human Services shall:

1. Study the feasibility of establishing and operating in rural areas of this State assisted living facilities that also provide respite care and the services of a facility for the care of adults during the day, as defined in NRS 449.004. The study must include, without limitation:
   (a) An analysis of the feasibility of creating a single license for such a facility;
   (b) Identification of the manner in which such a facility would receive reimbursements from Medicaid;
   (c) An analysis of the feasibility of recruiting adequate staff to operate such a facility;
   (d) An analysis of the economic viability of and payment structure of such a facility;
   (e) Identification of technical, economic and legal barriers to the establishment and operation of such a facility; and
   (f) A possible timeline for creating a pilot program to establish such facilities.
2. Present the study at a meeting of the Legislative Committee on Senior Citizens, Veterans and Adults With Special Needs; and
3. Submit a written report of the study to the Director of the Legislative Counsel Bureau for transmittal to the Legislative Committee on Senior Citizens, Veterans and Adults With Special Needs.

Sec. 4. This act becomes effective on July 1, 2019.

REPORT DEFINITIONS

This report focuses on three types of Long-Term Services and Supports (LTSS): Assisted Living Facilities (ALF), Adult Day (AD) programs, and Respite Care (RC). The term LTSS also encompasses additional services not discussed in this report.

Medicaid covers the following LTSS for eligible individuals:

Facilities Services

- Nursing Facilities (NF)
- Intermediate Care Facilities for Individuals with Intellectual Disabilities (ICF/IID)
- Hospice Services

Home and Community Based Services

- Personal Care Services
- Intermediary Services Organization
- Home Health
- Private Duty Nursing

Nevada Division of Health Care Financing and Policy (DHCFP) administers LTSS services under the following structures:

- Waiver for the Frail Elderly (FE)
- Waiver for Individuals with Intellectual Disabilities and Related Conditions (ID)
- Waiver for Persons with Physical Disabilities (PD)
- 1915(i) St Plan Option – Adult Day Health Care and Habilitation
- Katie Beckett Eligibility Option (for children under age 19)

Although some children utilize LTSS, this report focuses solely on adult utilization of LTSS. In addition, throughout the report we will use the following definitions:

- We use the term *older adults* to refer to individuals who are 65 years of age or older.
- We use the term *non-urban* to refer to counties in Nevada other than Clark County and Washoe County. The non-urban counties include counties classified as "rural" and counties classified as "frontier."

In addition, we use some terms interchangeably because source materials vary in their terminology. For instance, Assembly Bill 122 uses the term *Assisted Living Facility* (ALF), defined as "an establishment that furnishes food, shelter, assistance and limited supervision to a person with an intellectual disability or with a physical disability or a person who is aged or infirm" (NRS 449.017). In other chapters of this report (namely Ch 2: Supply and Ch 4: Demand), we also use the terms "*Residential Care Community*" (per the National Study of Long-term Care Providers for 2016), "*Residential Care Facility*" (per Arkansas and Maine law), and "*Residential Facility for Groups*" with an ALF endorsement (per the Nevada licensure requirements). These four terms are synonymous within the context of this report.

We abbreviate *Adult Day* Programs and *Adult Day* Centers to AD.

We also discuss Home Health Services that are provided by *Home Health* (HH) Agencies. To streamline the discussion, we refer to them as Home Health Services, abbreviated to HH. We also refer to *Home Health Aides* as HH Aides.

HH services are delivered by nurses, including RN, LPN and CNA nurses. In contrast Personal Care services are delivered by *Personal Care Aides* (PCAs). These PCAs are employed by Personal Care agencies.

EXECUTIVE SUMMARY

CHAPTER 1: INTRODUCTION

- Characteristics of individuals living in licensed Assisted Living Facilities [(ALFs); licensed under "Residential Care Facilities"]:
    - Most (93%) of Nevadans living in ALFs are age 65 or older.
    - 40% of individuals living in ALFs are diagnosed with Alzheimer's or other dementias.
- Proportions of individuals using Long-Term Services and Supports (LTSS) who use specific services on any specific day:
    - 62% utilize home health and personal care services.
    - 18% utilize hospice.
    - 8% reside in a nursing home.
    - 8% reside in a licensed ALF.
    - 2% attend a licensed Adult Day (AD) program.
- Payment sources (nationwide):
    - Medicaid provided 57% of LTSS expenditures.
    - Out of Pocket payments provided 23% of LTSS expenditures.
    - Private Long-Term Care insurance provided 4% of LTSS expenditures.
    - The remaining expenditures were funded from other sources.
    - Medicaid is payer for 17% of residents in Residential Care Facilities nationwide, and 9% of residents of these facilities in Nevada.
- Statewide capacity for delivering ALF and AD Program services (per 1,000 older adults age at least 65 years) is comparable to nationwide capacity. However, licensed ALFs operate in only ten of Nevada's counties, and licensed AD facilities operate in only three of Nevada's counties.
- The lack of available services can impose costs on individuals who need help with Activities of Daily Living (ADL) and on unpaid caregivers that provide informal care for these individuals.
    - Self-neglect cases account for 39% of elder abuse cases in Nevada's non-urban counties. This issue is particularly salient in Nevada's non-urban counties. These counties include 11% of the state's population, yet they account for 19% of the state's cases of self-neglect.
    - An estimated 330,000 individuals provide unpaid (informal) care in Nevada. Caregiving imposes small but statistically significant adverse impacts on caregiver health and employment. A national survey funded by the National Institute on Aging (NIA) included 871 caregivers who were employed. Of these, 15% reported being absent from work in the month preceding the survey, due to caregiving responsibilities.
    - Providing caregiver support services, including AD programs and Respite Care (RC), may be useful from two perspectives:

        - Individuals with incomes below the federal poverty level are more likely to be caregivers than individuals with higher incomes.
        - Unpaid care delays the need for paid care.
    - Beginning January 1, 2020, private sector employers with at least 50 employees must provide a minimum amount of paid leave, and the employer cannot require the employee to provide a reason for taking paid leave. Prohibiting employers from requiring employees to provide a reason for taking leave gives employees flexibility to use the leave time to carry out caregiving duties.
- In a nationwide scorecard that focuses on state-level LTSS system quality:
    - Nevada's rank is in the third quartile for the metric Choice of Setting and Provider, and the second quartiles for both Quality of Life and Quality of Care, and Support for Family Caregivers.
    - However, Nevada's rank is in the bottom (fourth) quartile for Affordability and Access, and for Effective Transitions.

CHAPTER 2: SUPPLY

- Assisted Living Facilities (ALFs) are licensed in Nevada by the Bureau of Health Care Quality and Compliance (HCQC) as "Residential Facility for Groups" which can then attain a special endorsement to function as an Assisted Living Facility (ALF).
- Nevada distinguishes between Adult Day (AD) programs and Adult Day Health Care (ADHC). This report discusses AD programs, which provide personal care for adults in a supervised, protective, congregate setting during some portion of a 24-hour day. These facilities must be licensed by the Bureau of Health Care Quality and Compliance (HCQC).
- Examination of Nevada's Assisted Living Facility (ALF) and Adult Day (AD) licensure requirements suggests that a combined ALF/AD facility could potentially generate economies of scale and scope, particularly if the facility serves small numbers of residents and clients.
- Nevada Revised Statutes (NRS) and the Nevada Administrative Code (NAC) currently include provisions that prevent a combined license.
- Nevada does not currently license Respite Care (RC) facilities. Licensure requirements for ALFs do not include provisions based on the expected duration of stay. Licensure requirements for ADs do not include separate provisions for ongoing participants vs. one-time participants.
- Emerging technologies may make it possible for facilities and Long-Term Services and Supports (LTSS) workers to assist and monitor patients in new ways that may be more efficient and more effective than current strategies. If these technologies are widely adopted, they could alter the cost structures of ALFs and ADs.
- All Home and Community Based Services (HCBS) must comply with the Centers for Medicare and Medicaid Services Home and Community Based Services Final Regulation (Medicaid.gov, n.d.), as a condition for Medicaid reimbursement of HCBS. (This regulation is frequently denoted as the "Federal Settings Rule" or the "Settings Rule").

- All LTSS providers must comply with the 1999 U.S. Supreme Court decision in Olmstead v. L.C., regardless of the entity that will pay for the service.

CHAPTER 3: WORKFORCE ISSUES

- As of 2019, one in five non-urban Nevadans are age 65 or older compared to one in six nationally. Since 1990, the percentage of non-urban Nevada residents who are in this older age group has doubled from 10.8% to 21.1%.
- Although the number of people employed by Long-Term Services and Supports (LTSS) providers increased between 2015 and 2019, this workforce did not increase as quickly as the number of older adults. The number of LTSS workers per 100 older adults decreased.
- LTSS providers employ individuals in an array of occupations including personal care, healthcare practitioners, healthcare support, and business occupations.
- Home Health (HH) Aides and Personal Care Aides (PCAs) are an important component of this workforce. Aides account for three-fourths of the weekly hours of employees working in Residential Care Communities (RCCs) and nearly 40% of weekly hours in Adult Day (AD) programs. These workers are primarily female, have a high school degree or some college, and are citizens. On average, HHAs and PCAs earn $20,642 annually ($13.99 per hour) in the U.S. and $18,877 ($12.53) in Nevada. These aides work, on average, 35 hours per week.
- The turnover rate among PCAs is high. Factors contributing to worker turnover include low wages and benefits, unpleasant duties, lack of opportunity for advancement, on-the-job injuries, and insufficient work hours. The issue of workhours is complex. Aides must piece-together schedules constrained by the number of hours of care each client is authorized to receive per day or per week, and this authorization is driven by payer reimbursement criteria. Most care recipients receive fewer than eight hours of care per day. This means that aides might work at multiple homes in a day with travel time between these homes. Nevada Medicaid reimburses Personal Care agencies a 15-minute rate (which equates to an hourly rate) for care delivered. Nevada Division of Health Care Financing and Policy (DHCFP) does not specifically reimburse agencies for travel time. Beginning in 2015, federal regulations mandate that agencies must reimburse Personal Care aides for travel time between clients during the workday (U.S. Wage and Hour Division, 2016).
- The PCA workforce issue is a two-part issue.
    - First, agencies may have difficulty recruiting PCAs. The median wage is $11.70, which exceeds the current minimum wage. This implies that many agencies believe that above-minimum wages are needed to attract individuals into this occupation. Under current Nevada law, the minimum wage will be $11 per hour for employers offering health insurance in 2024.
    - Second, some agencies may not be willing to accept Medicaid reimbursement rates. The current rate paid to agencies is lower than the rate set in 2002. Since that time, the minimum wage increased from $5.15 per hour to $8.00 per hour (for employers offering health insurance), the Consumer Price Index increased 41% from 181 to 257, and federal regulations were modified to begin requiring agencies to pay aides for between-client travel time.

- Other states are implementing policies to address PCA workforce issues. In 2019 and 2020, 30 states increased the Medicaid hourly reimbursement rate. In addition, 17 states implemented new workforce development policies including recruiting, training, and credentialing.

CHAPTER 4: DEMAND

- Nationwide data indicates that the people who utilize Assisted Living Facilities (ALFs), Adult Day (AD), and Respite Care (RC) services are a subset of the people who report difficulties with Activities of Daily Living (ADL) and/or Instrumental Activities of Daily Living (IADL). Four of Nevada's non-urban counties (Douglas, Elko, Lyon, Nye) are estimated to have at least 1,000 people who report difficulties with IADL. This number is 250 or less in seven of Nevada's non-urban counties (Esmeralda, Eureka, Lander, Lincoln, Mineral, Pershing, Story).
- On average, people who utilize Adult Day (AD) services are younger than people who utilize ALFs. Therefore, as a population ages, people may move through a sequence of services. Demand for Residential Care Communities (RCCs) is likely to grow more slowly in the next decade than demand for Adult Day, Home Health or Personal Care services, but the growth in demand for RCCs may be more sustained as baby boomers continue to age into the category of individuals who are age 85 or older.
- Medicaid is an important payer for Long-Term Services and Supports (LTSS). Medicaid coverage has two important limitations.
    - First, coverage for services provided under waivers is constrained by the number of available slots. Nevada Medicaid maintains waitlists for these services.
    - Second, although Division of Health Care Financing and Policy (DHCFP) covers specific services provided in ALFs, federal policy prevents it from covering the room and board portion of ALF charges.
- States are taking two types of actions to address the challenge posed by lack of coverage for the room and board portion of Assisted Living Facility (ALF) charges:
    - Some states are implementing managed care programs for LTSS (known as MLTSS).
    - Some states are exploring opportunities for partnerships between Medicaid programs and Housing programs to develop strategies for offering subsidized housing along with Home Health, and/or Personal Care services in a combined package, or offering licensed assisted living in a facility that offers subsidized housing for low-income residents.

CHAPTER 5: STAKEHOLDER INTERVIEWS

- To inform our understanding of the current landscape of services across the state, as well as the strengths, gaps and needs, we conducted in-depth interviews with 14 aging services professionals from across Nevada, with an emphasis on those serving Nevada's non-urban communities.

- Common strengths identified in aging and disability services (i.e., long-term supports and services) available in non-urban Nevada include informal support from family and neighbors; the local senior center; and the local hospital.
- Common gaps identified in aging and disability services (i.e., long-term supports and services) available in non-urban Nevada include human resources/staffing shortages; financial resources (low income); lack of transportation; lack of adult day/respite programs; and lack of caregiver education and resources.
- In light of the gaps identified through the interviews, three common coping strategies were reported, including elders receive assistance from family, friends, and neighbors; elders are dropped off and abandoned at the local hospital; and elders are forced to move to another county or urban area to receive needed services. Additionally, several professionals expressed concern that many elders and their families simply may not be coping.
- When asked about the benefits and barriers of a combined-service model: Three themes emerged regarding the perceived benefits, including avoiding displacement by receiving services locally; opportunities to provide education locally and build capacity for family caregivers; and opportunities for engagement, meaning and purpose for elders ("someplace to go"). However, four strong themes emerged regarding perceived barriers to the idea, including human resources/staffing shortage; out-of-pocket costs (assisted living is "unaffordable" for most and generally "not covered by Medicaid"); strict licensing, regulations, and policies; and stigma.
- Overall, there was one theme that was very clear and very strong among respondents when asked what they believe are the "biggest needs" among elders and people living with disabilities in their communities. The biggest need identified was affordable or free respite support, whether in-home or through an adult day program.
- These major themes are all well-aligned with what we have learned about the service needs in rural communities and the general desire among older adults to 'age-in-place' or remain in their own homes, while receiving needed support services, for as long as possible.

CHAPTER 6: POTENTIAL SERVICE MODELS

- While there are many ways to enhance the resources available to support elders in living well across Nevada, any potential solution will require alignment with existing community assets and structures, connection to the preferences of community members, a commitment by state and local leadership to support it, and financial investment.
- This chapter includes exploration and description of several *possible* service models to consider, ranging from those simply requiring increased investments in existing community-based services to those including the development, construction, staffing and launch of all-new integrated models of care and support along with the physical structures and staffing needed to make them successful.
- This chapter describes four different potential service models, including: (1) Affordable Housing with Supportive Services; (2) Small House Assisted Living with Combined Adult Day; (3) Tiny House Villages or Pocket Neighborhoods; and (4) Rural PACE (Program of All-Inclusive Care for the Elderly).

CHAPTER 7: FEASIBILITY ANALYSIS

- Analysis of data on non-metropolitan counties in the eight Mountain States indicates that the probability that a non-urban county will have at least one ALF is significantly affected by the presence of a town with at least 2500 people. Counties that do not have such a town are significantly less likely to have an ALF than counties with similar populations that do include a town of this size.
- Of counties with ALFs, all but one (Pershing) have predicted probabilities ranging from 0.64 to 0.73. Of counties that do not have an ALF, all but one (Eureka) have predicted probabilities less than or equal to 0.54. This suggests that Eureka's current population size and distribution pose less of a challenge than that posed by population characteristics of the other non-ALF counties.
- County-level availability of ALF beds is positively associated with the number of adjusted potential ALF residents in the county.
    - Seven counties in Nevada are estimated to have 40 or fewer adjusted potential ALF residents. Of these, six do not have an ALF while the seventh has 10 ALF beds.
    - Two counties are estimated to have 40-99 adjusted potential ALF residents. Of these, one does not have an ALF, while one has 10 ALF beds.
    - Each of the remaining eight counties has at least 100 adjusted potential ALF residents, and all of these counties have at least 57 ALF beds.

  The computation of adjusted potential ALF residents in each county is based on the assumption that utilization patterns in each non-urban county would be the same as utilization patterns in the U.S., if facilities were available within the county.
- A spreadsheet accompanies this chapter ("*Excel template_ROM estimates to support early-stage financial analysis.xlsx*"). This interactive spreadsheet provides a tool to facilitate preliminary analyses of proposed projects. The tool can also be used by project planners and policy-makers to generate Rough-Order-of-Magnitude (ROM) estimates of Net Operating Income, Replacement Reserves and Debt Service, to assess the sensitivity of financial projections to underlying assumptions, and to consider impacts of business risk. For more information on this spreadsheet, contact Tom Harris (harris@unr.edu) at the Center for Economic Development, University of Nevada Reno.
- Under the cost and revenue assumptions used to construct the example analysis, small ALFs with 10 beds may not generate enough revenue to cover operating expenses. An ALF with at least 20 beds would generate sufficient Net Operating Income (NOI) to fund Replacement and Debt Service at the average levels indicated in the 2019 State of Senior Housing Cost Report (American Seniors Housing Association [ASHA], 2019). Under the assumptions used to create the example, facilities with at least 20 beds may be sustainable. However, seven of Nevada's non-urban counties have fewer than 40 adjusted potential ALF residents. A 20-bed ALF may not be realistic in some of these counties.
- In counties with small numbers of adjusted potential ALF residents, developing a strategy for sustainable ALF will require boosting per-resident monthly revenues and/or reducing per-resident monthly costs. A combined license that permitted an ALF/AD/RC to share the resources that generate fixed costs could be one step. It may also be necessary to increase monthly fees (although this must be considered carefully due to the potential impact on the number of residents). Collaborating with a neighboring county to increase the number of adjusted potential residents and AD/RC participants could be a useful step. Obtaining

funding to acquire, renovate or purchase a building from a source that does not rely on residents' monthly fees could also contribute to facility sustainability.

CHAPTER 1: INTRODUCTION

KEY POINTS

- Characteristics of individuals living in licensed Assisted Living Facilities [(ALFs); licensed under "Residential Care Facilities"]:
    - Most (93%) of Nevadans living in ALFs are age 65 or older.
    - 40% of individuals living in ALFs are diagnosed with Alzheimer's or other dementias.
- Proportions of individuals using Long-Term Services and Supports (LTSS) who use specific services on any specific day:
    - 62% utilize home health and personal care services.
    - 18% utilize hospice.
    - 8% reside in a nursing home.
    - 8% reside in a licensed ALF.
    - 2% attend a licensed Adult Day (AD) program.
- Payment sources (nationwide):
    - Medicaid provided 57% of LTSS expenditures.
    - Out of Pocket payments provided 23% of LTSS expenditures.
    - Private Long-Term Care insurance provided 4% of LTSS expenditures.
    - The remaining expenditures were funded from other sources.
    - Medicaid is payer for 17% of residents in Residential Care Facilities nationwide, and 9% of residents of these facilities in Nevada.
- Statewide capacity for delivering ALF and AD Program services (per 1,000 older adults age at least 65 years) is comparable to nationwide capacity. However, licensed ALFs operate in only ten of Nevada's counties, and licensed AD facilities operate in only three of Nevada's counties.
- The lack of available services can impose costs on individuals who need help with Activities of Daily Living (ADL) and on unpaid caregivers that provide informal care for these individuals.
    - Self-neglect cases account for 39% of elder abuse cases in Nevada's non-urban counties. This issue is particularly salient in Nevada's non-urban counties. These counties include 11% of the state's population, yet they account for 19% of the state's cases of self-neglect.
    - An estimated 330,000 individuals provide unpaid (informal) care in Nevada. Caregiving imposes small but statistically significant adverse impacts on caregiver health and employment. A national survey funded by the National Institute on Aging (NIA) included 871 caregivers who were employed. Of these, 15% reported being absent from work in the month preceding the survey, due to caregiving responsibilities.
    - Providing caregiver support services, including AD programs and Respite Care (RC), may be useful from two perspectives:

        - Individuals with incomes below the federal poverty level are more likely to be caregivers than individuals with higher incomes.
        - Unpaid care delays the need for paid care.
    - Beginning January 1, 2020, private sector employers with at least 50 employees must provide a minimum amount of paid leave, and the employer cannot require the employee to provide a reason for taking paid leave. Prohibiting employers from requiring employees to provide a reason for taking leave gives employees flexibility to use the leave time to carry out caregiving duties.
- In a nationwide scorecard that focuses on state-level LTSS system quality:
    - Nevada's rank is in the third quartile for the metric Choice of Setting and Provider, and the second quartiles for both Quality of Life and Quality of Care, and Support for Family Caregivers.
    - However, Nevada's rank is in the bottom (fourth) quartile for Affordability and Access, and for Effective Transitions.

Scope of NV AB122

Assembly Bill 122 (AB122), adopted and signed in 2019, mandated a study of the feasibility of opening and operating a facility that would provide Assisted Living, Adult Day, and Respite Care services, under a single license, in a non-urban Nevada county. The Legislative Counsel's Digest notes that current law establishes separate licensing categories for Assisted Living facilities and facilities for the care of adults during the day. This report presents the results of that study.

AB122 addresses concerns about the availability of services to assist adults who need help with activities of daily living and instrumental activities of daily living[1] (ADLs and IADLs), as the number of these individuals increases (see Appendix A.1-1 for lists of ADLs and IADLs). Much of this assistance is provided by unpaid caregivers, such as relatives. Although this care is invaluable, informal caregiving may not be sufficient for several reasons:

- caregiving responsibilities impose costs on the caregivers that may limit their ability to continue providing care,
- the caregivers may not be able to provide the necessary amounts or types of care, or
- some adults needing care may not have relatives or friends who are available to provide care.

[1] People who need assistance with ADLs and IADLs include people with developmental or severe physical disabilities, people with mental illness or cognitive impairment, and older adults who need extra medical attention or required specialized services. People who need assistance with ADLs and IADLs include people with developmental or severe physical disabilities, people with mental illness or cognitive impairment, and older adults1 who need extra medical attention or required specialized services. This includes older adults and non-older adults living with intellectual, developmental, and physical disabilities, behavioral health diagnoses, long-term injuries (e.g., spinal cord, traumatic brain injuries) and/or disabling chronic conditions; individuals of all ages with functional limitations and chronic illnesses who need assistance to perform routine daily activities."

Nevada Medicaid covers Respite Care (RC) and Adult Day (AD) programs, Home Health (HH) and Personal Care services[2], and facility-based services provided in Assisted Living Facilities (ALFs). Despite this coverage, some or all of these services are not available in many of Nevada's non-urban counties.

This report focuses primarily on three services: Assisted Living Facilities (ALF), Adult Day (AD) programs, and Respite Care (RC). These services are a subset of Long-term Services and Supports (LTSS).

In Nevada, ALFs cannot admit individuals who are bedfast or require 24-hour skilled nursing or medical supervision unless the individual is in a hospice program and has an approved exemption from the Bureau of Health Care Quality and Compliance (HCQC), which is housed in the Nevada Department of Health and Human Services (DHHS) Division of Public and Behavioral Health (DPBH). In addition, these facilities are not permitted to admit individuals who require restraints (Office of Disabilities and Aging, 2015).

Services offered by ALF, AD, and RC providers are classified by Nevada Medicaid (Department of Health and Human Services (DHHS), Division of Health Care Financing and Policy (DHCFP)) as "Home and Community Based Services" (HCBS). Nevada Medicaid defines HCBS as services that "provide opportunities for Medicaid beneficiaries to receive services in their own home or community rather than institutions or other isolated settings" (Medicaid.gov, 2020). Other entities that provide LTSS, such as Nursing Facilities and Intermediate Care Facilities, are not included in this category. Instead, they are classified as Institutional Care or Long-Term Care Facilities.

This report also provides information about informal caregivers and home care aides, to provide a useful context for understanding the demand for AD and RC services.

Target Population of Service Users

Data from the 2016 National Center for Health Statistics (NCHS) National Study of Long-Term Care Providers (NSLTCP) show that 93% of Nevadans residing in residential care communities (RCC) are in the age group of 65 and over (National Study of Long-Term Care Providers, 2016). The report also noted that nearly 40% of patients in residential care are diagnosed with Alzheimer's disease or other dementias. The term "residential care community," as used in the NSLTCP study, refers to a licensed residential facility for groups[3] that provide Assisted Living services, which is the focus of this feasibility study.

[2] Home health aides deliver home health services; personal care aides deliver personal or home care services.
[3] Nevada Revised Statute 449.017 defines a "residential facility for groups" as "an establishment that furnishes food, shelter, assistance and limited supervision to a person with an intellectual disability or with a physical disability or a person who is aged or infirm. The term includes, without limitation, an ALF. Residential facilities for groups may

LTSS are delivered in five long-term care sectors. NSLTCP estimates of Nevadans who utilized these services in 2016 are detailed in Table 1.1. These estimates indicate that HH services were utilized by 37,300 individuals, whereas 1,300 and 5,300 individuals utilized AD and RCC, respectively.

Table 1.1: Estimated Service User Populations by Sector
Nevada, 2016

	AD Services Center	HH Services	Hospice	Nursing Home	RCC
Number of Users	1,300	37,300	11,200	4,800	5,300
Percentage Distribution	2.20%	62.20%	18.70%	8%	8%

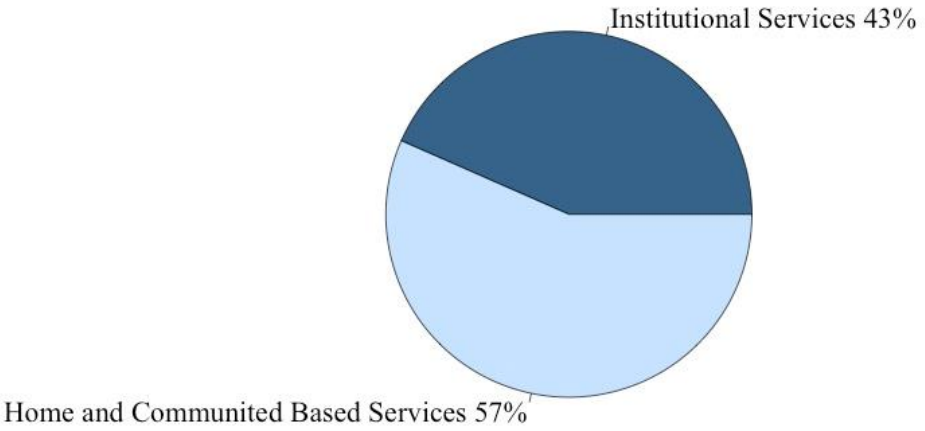
Source: National Study of Long Term Care Providers, 2016

Medicaid's Role in LTSS in Nevada

Medicaid expenditures for LTSS in Nevada were $698 million in (FY) 2016. That metric includes Medicaid spending on both ICF services and HCBS. Total spending for HCBS was $395 million, about 57% of total Medicaid LTSS spending (see Figure 1.1). Nevada's per capita expenditure for Medicaid LTSS spending was approximately $236 per Nevada resident in 2016 (Nevada population estimate from Nevada State Demographer, 2016).

apply for specific endorsements to provide specialized service, such as hospice care, Assisted Living services, care to persons with Alzheimer's disease, etc."

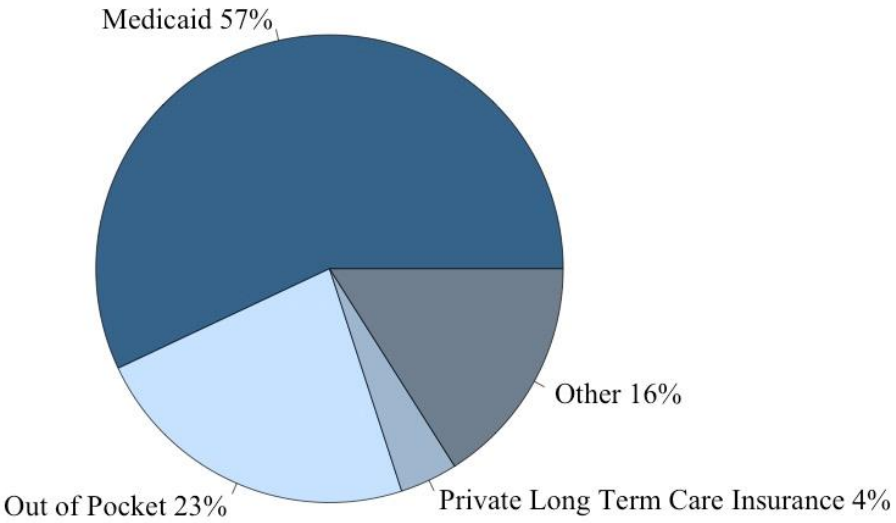
Figure 1.1: LTSS Expenditures by Types of Services, (2016)



Source: Eiken et al., 2018

Nationwide, Medicaid covered 57% of all national spending for LTSS in 2017 (see Figure 1.2). The next biggest payer was Out-of-Pocket spending, which accounted for 23% of total LTSS spending. The remaining coverage came from private insurance parties or other funding sources (AARP Public Policy Institute, 2019).

Figure 1.2: National Spending for LTSS by Payer, 2017



Source: Hado & Komisar, 2019

Current Supply of ALFs and AD Program Facilities

As of March 2020, there were 383 ALFs in the state with 8,823 licensed beds (see Table 1.2; Nevada DPBH, 2020b). Long-term care services are not widely available in Nevada's non-urban counties[4]:

- Of the state's 383 licensed ALFs, only 25 are located outside Clark and Washoe counties.
- Of the state's 35 licensed AD programs, only 1 is located outside Clark and Washoe counties. (These numbers do not include programs offered at county Senior Centers.)

Table 1.2: Assisted Living Facilities and Adult Day Care Facilities
Nevada, 2020

	Facility Count			Bed Count			Average Beds/Facility	
Facility Type	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
Assisted Living	25	357	382	1124	7699	8823	45	22
AD Services	1	34	35	20	3067	3087	20	90

Source: Nevada Department of Health and Human Services Division of Public and Behavioral Health Office of Analytics Health Care Quality Compliance Online Licensing System ALiS (CLICS), 2020

Licensed ALFs are located in ten of Nevada's counties. The seven counties that do not have any licensed ALFs are Esmerelda, Eureka, Lander, Lincoln, Mineral, Storey, and White Pine. Licensed AD programs are located in Clark, Douglas, and Washoe counties; the remaining counties do not have any licensed AD programs (see Table 1.3).

[4] The non-urban counties in Nevada include all counties except Clark and Washoe counties.

Table 1.3: Bed Counts for ALFs and AD Services Facilities

Nevada, 2020

	Assisted Living Facility Bed Count			Adult Day Services Bed Count		
County	ALF Bed Count	ALF Bed Count Per 1000 Residents	ALF Bed Count Per 1000 Older Adults, (age>=65)	AD Bed Count	AD Bed Count Per 1000 Residents	AD Bed Count Per 1000 Older Adults, (age>=65)
Carson	382	6.83	32.69	0	-	-
Churchill	112	4.34	27.54	0	-	-
Clark	6153	2.76	20.66	2914	1.31	9.78
Douglas	236	4.82	17.79	20	0.41	1.51
Elko	57	1.06	7.85	0	-	-
Esmeralda	0	-	-	0	-	-
Eureka	0	-	-	0	-	-
Humboldt	10	0.59	4.53	0	-	-
Lander	0	-	-	0	-	-
Lincoln	0	-	-	0	-	-
Lyon	145	2.62	13.04	0	-	-
Mineral	0	-	-	0	-	-
Nye	118	2.52	9.11	0	-	-
Pershing	10	1.50	9.67	0	-	-
Storey	0	-	-	0	-	-
Washoe	1821	3.99	25.89	153	0.34	2.17
White Pine	0	-	-	0	-	-
Nevada	9044	2.983	20.613	3087	1.018	7.036
U.S.	996,100	3.0446	19.0	298,400	0.912	5.70

Source: Nevada Department of Health and Human Services Division of Public and Behavioral Health Office of Analytics Health Care Quality Compliance Online Licensing System ALiS (CLICS). National Statistics are from the National Study of Long Term Care Providers, 2016. Population Statistics are from Griswold et al., 2019

Current Labor Supply of Long-Term Care Employees

The pool of long-term care employees includes Personal Care Aides (PCAs)[5] and Home Health (HH) Aides.[6] Both types of workers are employed by ALFs, AD programs, and HH agencies. PCAs also work in other settings. Employment data report occupation statistics for aides that work in all types of settings, including Residential Mental Health Facilities or Vocational Rehabilitation Services. This study focuses on aides working in Community and Residential Care Facilities or providing HH Care Services in care recipients' homes. Mean hourly wages for these workers range from $11.08 for PCAs working in Nursing and Residential Care Facilities to $17.60 for HH Aides working for agencies that provide Home Health Care Services (see Table 1.4).

Table 1.4: Labor Supply for HH Aides and Personal Care Aides
Nevada, 2018

	Home Health Aide		Personal Care Aide	
Place of Work	Mean Hourly Wage	Total Employment	Mean Hourly Wage	Total Employment
Community Care Facility for the Elderly	14.56	600	11.99	1260
Nursing and Residential Care Facilities	13.77	750	11.08	3020
Home Health Care Services	17.60	440	NA	NA

Source: Nevada Department of Employment Training and Rehabilitation (2018)

NA: data not available.

The Importance of NV AB122

The issue of access to LTSS in non-urban counties is important for two reasons. First, the proportion of county residents who are 65 years of age or older has been growing in all Nevada counties (see Table 1.5; Griswold et al., 2019). Second, the lack of facilities and services in non-urban counties imposes monetary and human costs on frail individuals, family caregivers, and other components of Nevada's healthcare social safety net systems.

[5] Personal Care Aide: "Assist the elderly, convalescents, or persons with disabilities with daily living activities at the person's home or in a care facility. Duties performed at a place of residence may include keeping house (making beds, doing laundry, washing dishes) and preparing meals. May provide assistance at non-residential care facilities. May advise families, the elderly, convalescents, and persons with disabilities regarding such things as nutrition, cleanliness, and household activities." (Bureau of Labor Statistics, 2018)

[6] Home Health Aide: "Provide routine individualized healthcare such as changing bandages and dressing wounds, and applying topical medications to the elderly, convalescents, or persons with disabilities at the patient's home or in a care facility. Monitor or report changes in health status. May also provide personal care such as bathing, dressing, and grooming of patient." (Bureau of Labor Statistics, 2018)

Table 1.5: Percent of County Population Age 65+ Nevada, 2018		
County	2015	2018
Carson City	18.40%	19.60%
Churchill	17.00%	18.50%
Clark	12.80%	14.10%
Douglas	23.50%	26.40%
Elko	9.00%	10.50%
Esmeralda	26.20%	27.40%
Eureka	14.60%	15.50%
Humboldt	9.90%	12.30%
Lander	13.70%	14.30%
Lincoln	19.30%	23.70%
Lyon	18.80%	20.60%
Mineral	22.60%	24.70%
Nye	26.60%	28.90%
Pershing	14.50%	16.00%
Storey	26.30%	29.80%
Washoe	13.90%	15.50%
White Pine	14.90%	16.30%
State Totals	13.60%	15.00%
Source: American Community Survey (2018)		

Costs Associated with a Lack of Facilities and Services

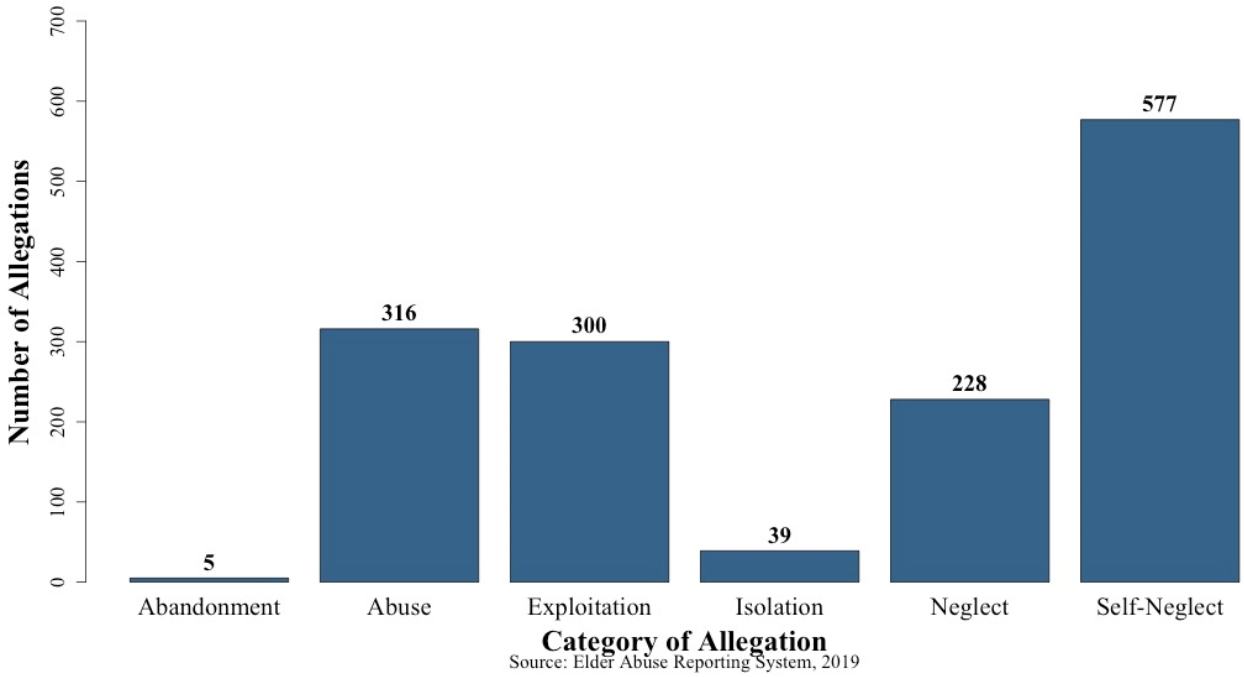
The lack of facilities and services in non-urban areas generates monetary and human costs. These costs include potential risks to the individual and costs borne by individuals who provide informal unpaid caregiving.

Potential Risks to the Individual

Elder Abuse

Of the elder abuse cases closed in Nevada during fiscal year 2018, 65% occurred while the individual was residing in his or her own residence or with a relative (Elder Abuse Reporting System [EARS], 2019). In the non-urban counties, 39% of elder abuse cases were categorized as caused by "self-neglect," which is defined as the failure of an older or vulnerable person to provide for his or her own needs because of an inability to do so (see Figure 1.3).

Figure 1.3: Elder Abuse Allegations in Rural Counties (2019)



Source: Elder Abuse Reporting System, 2019

Self-neglect was the most common category of abuse reported in each of the non-urban counties. Statewide, self-neglect accounted for 39% of all elder abuse cases. This issue is particularly important in the non-urban counties: 11% of the State's population resides in non-urban counties, but these counties accounted for 19% of all self-neglect cases (see Table 1.6).

Table 1.6: Elder Abuse Cases by Category and County in Non-Urban Nevada Counties Nevada, 2019								
	Category of Elder Abuse							
County	Abandonment	Abuse	Exploitation	Isolation	Neglect	Self Neglect	County Total	% Total Cases by County
Carson City	2	51	63	6	65	132	319.00	21.80%
Churchill	1	27	36	5	20	42	131.00	8.90%
Douglas	1	40	41	3	30	78	193.00	13.20%
Elko	0	19	11	1	13	53	97.00	6.60%
Esmeralda	0	2	2	1	2	3	10.00	0.70%
Eureka	0	0	1	0	0	2	3.00	0.20%
Humboldt	0	13	15	2	8	22	60.00	4.10%
Lander	0	3	3	0	1	5	12.00	0.80%
Lincoln	0	6	2	0	2	4	14.00	1.00%
Lyon	1	61	56	8	41	100	267.00	18.20%
Mineral	0	7	4	2	2	8	23.00	1.60%
Nye	0	78	58	10	37	101	284.00	19.40%
Pershing	0	1	3	0	1	11	16.00	1.10%
Storey	0	2	1	1	2	4	10.00	0.70%
White Pine	0	6	4	0	4	12	26.00	1.80%
Total Cases in Category	5	316	300	39	228	577	1465.00	
Events per 1,000 People	0	1.1	1	0.1	0.8	1.9	4.90	
Events per 1,000 Elders*	0.04	2.64	2.5	0.33	1.9	4.81	12.22	
Percentage of Total Cases by Category	0.30%	21.60%	20.50%	2.70%	15.60%	39.40%	NA	

Source: Elder Abuse Reporting System (2019)

*Elder is defined as someone 65 or older.

Potentially Avoidable Nursing Facility Placements

In the absence of conveniently located ALF, AD, and RC services, individuals needing care may be placed in nursing facilities (NFs) and/or they may be placed in facilities that are not located near the individual's home. The placements impose human costs to the extent that lower levels of care would have been sufficient for the individual, or the distant placement makes it difficult for family and friends to visit the individual.

Potential Costs Imposed on Families and Employers

Caregiver and Employer Strains

Care provided by unpaid family members, friends, or neighbors is known as "informal care." This care is an important "hidden" component of care provided to individuals needing assistance with ADLs and IADLs. The magnitude and economic value of this care is substantial.

Medicaid, which is the largest public payer for LTSS in the nation, spent $75 billion nationally on HCBS in 2017. However, an estimated 41 million family caregivers generated 34 billion hours of care nationally in the same year. Using an average value of $12.51 per hour, this implies an economic value of $470 billion in unpaid care for the U.S. as a whole (Reinhard et al., 2019).

The Reinhard et al. (2019) report also provides state-level detail. In 2017, an estimated 330,000 Nevadans provided informal care at any given time, which is 11% of the state's population. These caregivers provided 280 million hours of care. Valued at $14.01 per hour, the estimated value of this informal care was $3.9 billion. This annual value is equal to approximately $1,300 per Nevada resident (Reinhard et al., 2019), and it is also approximately equal to the total value of 2018 Medicaid expenditures in the state (Kaiser Family Foundation, 2019b). Supporting informal caregivers may generate both human and financial/fiscal benefits for the care recipients, the informal caregivers, and public programs that pay for potentially avoidable institutional care. Designing these programs requires a clear understanding of caregiver issues and stresses.

A nationally representative survey sponsored by the AARP and the National Alliance for Caregiving was conducted in 2015. This survey included detailed interviews with 1,248 people who were providing informal care. The majority (60%) were female, with an average age of 49. Most (85%) cared for relatives, with the parents (49%) and spouses/partners (10%) being the most common relationships between care recipients and caregivers (Caregiving in the U.S., 2015).

The survey report summarizes the self-reported impacts of caregiving on employment:

> *Of the caregivers, 60% were employed at some point during the year prior to the interview. Of these, 56% worked full time while also performing caregiving tasks. The employed caregivers worked an average of 35 hours per week. Notably, 60% of the employed caregivers reported impacts of their caregiving roles on their employment status. These impacts included decisions to work fewer hours or take a leave of absence or reduced workplace performance resulting in warnings about performance or attendance at work. Caregivers were also more likely to be self-employed than non-caregivers, and the self-employed caregivers reported reducing work hours or retiring early from previous employment.*

Given these impacts, it is not surprising the caregivers responding to this survey also reported that caregiving generated financial stress (Caregiving in the U.S., 2015).

In addition, the caregivers responding to the survey reported adverse impacts of caregiving on their health.

> *Of the caregivers, 22% stated that their health status had declined as a result of the caregiving tasks. The proportion of caregivers indicating a decline in health was higher for individuals providing more than 20 hours of care per week than for caregivers providing fewer hours of care.* (Caregiving in the U.S., 2015)

Econometric analyses of large datasets report additional information about these effects:

- Several studies report small—but statistically significant—impacts of caregiving on labor force participation. One study (Van Houtven et al., 2013) used longitudinal data from the nationally representative Health and Retirement Study (HRS) conducted by the University of Michigan and funded by the National Institute on Aging and the Social Security Administration. The HRS surveys 26,000 people every two years. This study concluded that female caregivers were more likely to be retired than male caregivers. For men, caregiving reduced the probability of working by 2.4 percentage points. For women who were working while providing informal care, caregiving led to reductions in work hours (by 3-10 hours per week) and in wages (by 3%).
- Bom et al. (2019) report a systematic review of studies using quasi-experimental designs to estimate causal effects of caregiving on caregiver health. They conclude that caregiving generates adverse impacts on caregivers' physical and mental health. The impact is greatest on female and married caregivers and those who deliver relatively intensive care.
- Spillman and Long (2009) analyzed data from the 1999 National Long-term Care Survey. They conclude that physical strain and financial hardship predict caregiver stress and that caregiver stress predicts nursing home entry.

Supporting informal care and alternatives to nursing home care, such as ALFs, could also have important implications for the financial strength of public health insurance and social safety net programs. For example, Du (2012) concludes that informal care is a substitute for nursing home care and hospital inpatient care, but it does not affect expenditures for home health care. Other evidence indicates informal care might be associated with increased numbers of outpatient visits in European countries (Bremer et al., 2017). This could reflect caregiver efforts to coordinate care for the care recipients.

Substitution and complementary relationships between informal care and care covered by payers such as Medicaid raise the question of whether programs to support informal caregivers, such as RC and AD programs, can generate cost savings for payers. Newcomer et al. (2016) analyzed data from California adults eligible for both Medicaid and Medicare and initiated LTSS (either HCBS or extended nursing facility care) in 2006 or 2007. These researchers concluded that both Medicaid and Medicare benefit from shifting care from nursing facilities to HCBS.

National Longitudinal Survey of Youth Estimation Results

We used data from the National Longitudinal Survey of Youth (NLSY) to gain additional insights about the characteristics of individuals who become caregivers. We estimate the health and labor market impacts of caregiving for a household member, and we examine characteristics of caregivers associated with termination of caregiving.

NLSY began interviewing 12,686 young people (age 14-22) in 1979. These individuals were re-interviewed annually until 1994 and bi-annually thereafter. The last five rounds of the survey that are currently available (2008, 2010, 2012, 2014, and 2016) include questions about caregiving (either to a member of the respondent's own household or to an individual who is not the respondent's household). The respondents were between the ages of 44 and 59 when the caregiving questions were asked. Because the same individuals were interviewed repeatedly, NLSY data allows us to follow the same individuals over time as their household needs for care and their decisions to provide care change. In 2016, the sample size was 6,912. This survey is sponsored by the U.S. Bureau of Labor Statistics. Funding for NLSY is provided by the Eunice Kennedy Shriver National Institute of Child Health and Human Development.

NLSY Estimation Results: Caregiver Characteristics

We estimated a series of regressions to explore characteristics of adults with a chronically ill or disabled household member who needs care. The dependent variables in these regressions indicate (i) whether the survey respondent has a household member who needed care, (ii) whether the respondent was providing care to a household member or to an individual outside the household, and (iii) the amount of care the respondent was providing to individuals within and outside the household. Compared with individuals living in relatively small households, individuals living in relatively large households were significantly more likely to self-report that they had a household member who needed care and that they provided care to a household member. The amount of care provided to chronically ill or disabled household members also increased significantly with family size (see Table 1.7).

Compared with individuals who were never married, widows and widowers were significantly less likely to report that they had a chronically ill or disabled household member who needed care, less likely to care for a household member, and less likely to provide care to a household member or to a member outside of their household. Employment was associated with reduced likelihood of reporting a household member who needed care and reduced likelihood of providing care (see Table 1.7).

These regressions also included variables measuring race, gender, highest grade completed in school, age and age-squared, and region of the country. These additional variables were not significantly associated with self-reported need for care, source of care, or amount of care.

Table 1.7: Caregiving Effort

OLS Regression Coefficients

		Do you provide care?			How many hours per week do you spend caregiving?		
Variables	Do you have a household member who needs care due to chronic illness or disability?	to a household member?	to an individual outside the household?	to anyone in or outside your household?	for a household member?	for an individual outside the household?	for anyone?
Family Size	0.0271***	0.0213***	-0.0125***	0.00843**	0.701***	-0.188***	0.513***
Married	0.028	0.0217	0.0166	0.0335	-0.233	-0.00414	-0.237
Separated	-0.0415	-0.015	-0.0197	-0.039	-1.176	-0.597	-1.772
Divorced	-0.00972	0.00926	-0.00393	0.00185	-0.0555	-0.322	-0.378
Widowed	-0.228***	-0.158***	-0.0241	-0.153***	-7.135***	-0.236	-7.371***
Employed	-0.0183**	-0.0113*	-0.0119	-0.0208**	-1.191***	-0.621***	-1.812***
Observations	30,009	30,009	30,009	30,009	30,009	30,009	30,009
R-squared	0.657	0.596	0.447	0.512	0.538	0.39	0.529

Source: National Longitudinal Survey of Youth 1979 and all survey waves through 2016

Each regression also controlled for years, highest grade completed in school, age and age-squared, and region of the country. These variables are not shown in the table because coefficients of the variables representing age and region are not significant and the year variables are included to control for any changes over time. Each regression included a constant term.

Robust standard errors. *** p<0.01, ** p<0.05, * p<0.1

NLSY Estimation Results: Impacts on Caregivers

We estimate the impacts of caregiving on physical and mental health as measured by scores computed from the SF-12 questionnaire.[7] The NLSY administered the SF-12 questionnaire when individual survey respondents turned 40, and again when they turned 50. The Physical and Mental Health Composite Scores (PCS & MCS) vary between 0 to 100, where a zero represents worst health and 100 represents best health. These scores are widely accepted as summary measures of physical and mental health. In 2016, the mean scores were 48.6 for the physical health module and 52.4 for the mental health module.

We begin by estimating two OLS regressions in which the NLSY physical and mental health scores at age 50 are the dependent variables. The key independent variables are binary variables indicating whether the individual was providing care for a household or non-household member. Additional independent variables controlled for employment status, income, race, gender, family size, region of the country, marital status, years of education, and age. The results indicate caregivers had lower health scores at age 50 than people who were not providing care, and the difference was statistically significant. These results indicate an association between caregiving and reduced health, but they do not provide evidence of a causal relationship (see Table 1.8a).

[7] The Short Form (SF) questionnaire is widely used in large surveys to generate scores for physical and mental health.

To learn whether these relationships are causal, we estimate the impact of caregiving on employment and income. The Fixed Effects (FE) results provide evidence indicating a causal relationship.[8] Caregiving reduced the probability that the individual is employed by 2.38 percentage points (which is equivalent to the effects of 0.75 fewer years of education), and reduced annual hours worked by approximately 74 hours. Caregiving reduced the individual's earnings by $1,929, but it did not affect total net family income, nor did it increase the probability that household income would be below the federal poverty level (see Table 1.8a). The difference between the OLS and FE results provide suggestive evidence that individuals who elect to become caregivers are less likely to be employed than individuals who do not become caregivers. They also work fewer hours and have lower earnings and net family income than individuals who do not become caregivers. In addition, people with income below the federal poverty level are 10% more likely to become informal (unpaid) caregivers than people with incomes above this level (see Table 1.8a).

To estimate a causal impact of caregiving on health, we add an independent variable to control for the individual's health at age 40. As shown in Table 1.8b, adding this variable to the equation reduces the magnitude of the health differences, but the differences remain statistically significant. On average, caregiving reduced the physical health score by 2.975 points, and it reduced the mental health score by 2.477 points.

Table 1.8a: Impacts of Caregiving on Income and Employment
United States, 2016

	OLS Regression		FE Regression	
Dependent Variable	Estimated Impact of Caregiving	Observations (n)	Estimated Impact of Caregiving	Observations (n)
Income				
Caregiver earnings	-14,005***	29,785	-1,929**	29,785
Total Net Family Income	-21,915***	29,785	-2,374	29,785
Income is below federal poverty level	0.0999***	29,785	-0.00212	29,785
Employment				
Employed	-0.178***	29,785	-0.0238*	29,785
Hours Worked	-428.5***	29,785	-73.93**	29,785

Source: National Longitudinal Survey of Youth 1979 and all survey waves through 2016

All OLS regressions controlled for race, gender, family size, region of the country, marital status, years of education, and age and age-squared. All FE regressions controlled for family size, region of the country, marital status, years of education, and age and age-squared.

Robust standard errors. *** p<0.01, ** p<0.05, * p<0.1

[8] FE estimates provide information about causal relationship when unobserved individual characteristics do not change over time.

Table 1.8b: Impacts of Caregiving on Physical and Mental Health United States, 2016				
	No control for health at age 40		Control for health at age 40	
Dependent Variable	Estimated Impact of Caregiving	Observations (n)	Estimated Impact of Caregiving	Observations (n)
Physical Health at Age 50	-4.546***	6107	-2.975***	6107
Mental Health at Age 50	-3.574***	6107	-2.477***	6107

Source: National Longitudinal Survey of Youth 1979 and all survey waves through 2016

All OLS regressions controlled for race, gender, family size, region of the country, marital status, years of education, and age and age-squared. All FE regressions controlled for family size, region of the country, marital status, years of education, and age and age-squared.

Robust standard errors. *** p<0.01, ** p<0.05, * p<0.1

NLSY Estimation Results: Decisions to Stop Caregiving

In Table 1.9, we explore characteristics of caregivers who stopped providing care, even though they reported a continued need for caregiving in their household. We do not know, from the survey data, whether care stopped because the care recipient transitioned to a different source of care (such as moving to an ALF or NF) or whether they arranged for paid caregivers.

The dependent variable in these OLS regressions indicates whether a caregiver stopped providing care. The sample is restricted to all individuals who meet two criteria:

- They were providing care to a household member in the previous survey, and
- A member of their household still needs care.

This allows us to examine characteristics of situations in which an individual stops providing care even when a need continues to exist. OLS estimates suggest that individuals who have provided care for a longer time are less likely to stop providing care. Compared with individuals who were never married, individuals who were married or divorced were more likely to stop providing care. Older caregivers were less likely to stop providing care than younger caregivers. Other variables, including education, employment, and income were not associated with the likelihood that a caregiver would stop providing care.

The key independent variable in the OLS regression, duration of caregiving, could be endogenous to the stopping decision. For example, the opportunity cost of caregiving is likely to affect both the duration of caregiving and stopping decision, making OLS estimates inconsistent. In the second regression reported in Table 1.9, we instrumented the variable of duration of caregiving with duration of the need for caregiving. Though the duration of caregiving is likely to be affected by opportunity cost, the need is unlikely to be affected by individual's opportunity cost, making the instrument valid. Therefore, the IV estimates (second column) provides the causal effect of duration of caregiving on stopping care. The IV estimates suggest that longer duration of caregiving increases the probability of stopping.

Table 1.9: Characteristics of People in Which Caregiver Stops Providing Care OLS Regression Coefficients		
Variables	OLS: Caregiver Stops Providing Care	IV: Caregiver Stops Providing Care
Duration of Caregiving	-0.0366***	
Duration of Care Prior to Decision to Stop		0.149***
Female	-0.0359	-0.0581*
Family Size	-0.0134	-0.0228**
Never Married	0	0
Married	0.191***	0.195***
Separated	0.0858	0.0654
Divorced	0.0890**	0.132***
Widowed	0.0834	0.160*
Age	-0.111**	-0.143**
Age squared	0.00103**	0.00137**
Observations	2,587	2,587
R-squared	0.042	-0.151

Source: National Longitudinal Survey of Youth 1979 and all survey waves through 2016

Each regression controlled for years, race, region of the country, years of education, employment status and log of family income.

Robust standard errors. *** p<0.01, ** p<0.05, * p<0.1

National Study of Caregiving Estimation Results

The National Study of Caregiving (NSOC) component of the National Health and Aging Trends Study (NHATS) provides additional detail about unpaid caregivers. NHATS surveys a nationally representative sample of individuals age 65 and older. The first annual survey was conducted in 2011. Data collected in 2017 is the most recent survey data available. The set of individuals initially surveyed in 2011 has been repeatedly surveyed in the subsequent years. If any of these individuals receive care from an unpaid caregiver, they are asked to name that caregiver. NSOC surveys a sample of those unpaid caregivers. The first NSOC survey was conducted in 2011, the second in 2015, and the third in 2017. The 2017 NSOC sample includes 2,651 caregivers. This sample includes individuals surveyed in NSOC 2015. Because the NSOC survey focuses specifically on caregivers, it provides additional rich detail about the caregiving experience.

NSOC Descriptive Statistics: Caregiver Characteristics

Most (93%) of these caregivers were relatives of the care recipients. Of these relatives, 21% were spouses, and 62% were daughters/sons, daughters-/sons-in-law, or stepdaughters/stepsons. Of cases in which the relationship indicates gender, two-thirds were female.

These caregivers helped with household tasks, personal care, health care, wellness, and transportation. Specific tasks reported by more than half of the caregivers included helping with chores, shopping, bills or banking, personal care, getting around the home, keeping track of medication, and driving. Assistance with healthcare tasks (taking shots or injections, managing medical tasks, and helping with skin care related to wounds or sores) was reported by less than 10% of caregivers. Help with wellness tasks (exercise and special diet) was reported by 27% of caregivers.

Of those who report helping with chores, 57% reported providing this help every day or most days. Helping with personal care, getting around home, and driving occurred every day or most days for 37%, 33%, and 27% of caregivers, respectively.

Caregivers also helped recipients locate and obtain other types of assistance: 46% of caregivers helped recipients get devices to get around more easily, 46% helped make the home safer, and 21% helped find a paid helper to do chores or personal care.

Caregivers reported the experience was both stressful and rewarding. Of those surveyed, 35% of caregivers reported they believe they do more than their fair share of caregiving (relative to other family members). Most caregivers obtained support services ranging from talking with others (88% of caregivers), receiving help with daily activities (57%), and receiving help with providing the care (72%). However, only 16% report using Respite Care (RC) services.

Many caregivers report being exhausted at night (44%), feeling that the care is more than they can handle (38%), and having no time for themselves (44%). In addition, 25% report that extra effort is required to adjust care routines as the care recipient's needs change.

However, caregivers generally describe themselves as resilient despite these challenges: at least two-thirds of respondents reported they feel cheerful, calm, peaceful, and full of life every night or most nights. In addition, at least two-thirds agree-strongly or agree-somewhat with the statements that they adjust to change easily and recover quickly.

Caregiving is a long-term activity for many of these caregivers: 20% reported being caregivers for less than one year, 28% had been caregivers for 1-3 years, 17% for 3-5 years, 22% for 5-10 years, and 13% for more than 10 years.

Of the 2,577 caregivers who reported hours spent helping the care recipient, 43% averaged less than 20 hours per month, 21% spent 20-40 hours, 17% spent 40-80 hours, 9% spent 80-160 hours per month, and 10% spent more than 160 hours per month. Approximately one-third of the caregivers reported having a regular schedule for caregiving. Of these, 58% provided care seven days per week.

In this survey, 283 individuals provided care during the last month of the care recipient's life. These individuals helped the recipient manage pain (53%), manage breathing (39%), and manage sadness or anxiety (76%). Approximately half (58%) made medical decisions for the care recipient.

Caregivers also reported positive aspects of caregiving. Most (87%) enjoyed being with the care recipient and reported (88%) that the recipient appreciated the caregiving efforts. In addition, 49% agree very-much with the statement that providing this care made them feel more confident, and 58% very-much agreed that the caregiving experience taught them to deal with difficult situations. Further, 73% very-much agreed that providing care bought them closer to the care recipient.

NSOC Estimation: Impacts on Caregivers

Of 2,288 caregivers answering questions about employment, 39% worked for pay during the week prior to the survey. Approximately one-third of the 871 employed caregivers worked less than 30 hours per week, one-third worked 31-40 hours per week, and one-third worked more than 41 hours per week. Of the 871 employed caregivers, 381 reported being absent from work in the last month. Of these absences, 35% occurred because the employed individual took time off to help the care recipient.

Some of these caregivers helped individuals with physical disabilities, whereas others helped individuals with dementia. Compared with caregivers helping people with physical disabilities, caregivers helping people with dementia were significantly more likely to have missed at least 40 hours of work in the last month, to be exhausted at night, feel that the care requirements were more than they could handle, report having no time for themselves, and report changes in care routine. They were significantly more likely to report having little interest or pleasure in doing things, feeling down or depressed, and being unable to control worrying on more than half of all days or nearly all days. They were significantly more likely to report that the caregiving experience was financially, emotionally, and physically difficult.[9]

NSOC Estimation: The Decision to Stop Providing Care

During the years covered by the annual surveys, 40 caregivers stopped providing care. Of these,

- 21% indicated the care recipient moved to a place with services or moved to a facility such as a hospital or rehabilitation facility,
- 21% indicated they stopped providing care because the caregiver faced a competing health problem, job demand or family demand, or the caregiver needed a break, and
- 56% indicated the caregiver lived too far from the recipient, or the caregiver moved too far away from the recipient.

[9]The level of significance for the first variable was 10%; the level of significance was 5% or less for the remaining variables.

NSOC Estimation: Impact of Respite Care on Caregiver Stress

Caregivers report experiencing stress. Yet, the NSOC survey results indicate only 16% percent of caregivers report utilizing Respite Care. The survey data does not indicate whether the low utilization rate reflects lack of interest in RC at current prices or lack of availability of RC. One policy question is whether utilization of RC helps to reduce caregiver stress. We test the hypothesis that utilization of RC has a significant impact on caregiver stress. We construct an index of caregiver stress that increases with the frequency with which caregivers experience the following indicators of stress:

- Caregiver is exhausted at night.
- The recipient requires care that is more than the caregiver can handle.
- Caregiver has no time for himself/herself.
- Care routines change frequently.
- Caregiver has trouble falling asleep.
- Helping the care recipient causes the caregiver's sleep to be interrupted.
- Caregiver has little interest or pleasure in doing things.
- Caregiver feels down, depressed, or hopeless.
- Caregiver feels nervous, anxious, or on-edge
- Caregiver is unable to stop or control worrying.

The stress index is the dependent variable in the regressions, and the key independent variable is a binary variable indicating whether the caregiver utilized RC during the year preceding the survey interview. The regressions also include additional independent variables to control for work status and total hours spent working for pay and providing care, types of assistance provided, and whether the caregiver provides any money to help pay for medications for the care recipient.

We begin by using the full sample to estimate an OLS regression. Caregiver stress is positively associated with total hours spent working and providing care, whether the caregiver contributed funds to help pay for medications for the care recipient, and whether the caregiver provided assistance with an array of tasks. In contrast, providing help with driving is negatively associated with stress. In this regression, RC utilization is positively and significantly associated with caregiver stress. The positive sign probably reflects a complex relationship between the two variables: Stressed caregivers may be more likely to utilize RC, and RC could potentially reduce caregiver stress. The positive sign suggests the first relationship dominates the second.

To gain insight about this two-way interaction, we estimated a second regression using Fixed Effects (FE). This regression strategy controls for unobserved characteristics of individual caregivers that remain constant over time.[10] The coefficients of most control variables remain

[10] For example, gender is a time-constant characteristic for many people, and education is a time-constant characteristic for many adults older than age 30.

significant in the FE regression. However, RC utilization is not significant in the FE regression. Controlling for individual characteristics reduces the measured association between RC and stress. However, the results do not support the hypothesis that RC will reduce caregiver stress. Regression coefficients and standard errors are detailed in Table A.1-2 in the appendix to Chapter 1.

We estimated additional regressions to test whether RC utilization reduces stress among individuals providing unpaid care to recipients with dementia or recipients with physical disabilities. In both cases, the FE regression results do not support the hypothesis that RC utilization reduces stress.

Policy Implications

Informal caregiving is a valued and cost-effective component of the LTSS system. However, it may adversely impact caregiver health, employment, and family income. The NSOC data also indicates that caregiving is frequently a long-term activity, a substantial proportion of caregivers are employed, and caregiver stress may be associated with the recipient's condition. When caregivers decide to stop providing informal care, the care recipient might move to an ALF (if one is available) or an NF. If the individual is financially eligible for Medicaid coverage, Medicaid might incur the cost of reimbursing the NF. To the extent that supporting informal caregivers can delay or avoid some Medicaid expenditures for institutional care, it might be cost-effective for states to invest in programs to support informal caregivers. Rector (2014) reported evidence from Washington State indicating caregiver supports generated three types of benefits:

- A statistically significant delay in Medicaid expenditures for LTSS for the care recipient,
- Improved health for the caregiver, and
- Reduced likelihood that the caregiver will utilize Medicaid LTSS.

Employment flexibility may also provide important support for unpaid caregivers balancing employment and caregiving responsibilities. Beginning January 1, 2020, Nevada law requires private employers with at least 50 employees to provide 0.01923 hours of paid leave for each hour of work performed. Employers cannot require employees to provide reasons for using this leave. This provides flexibility for employees to use paid leave time for caregiving duties (Office of the Labor Commissioner, 2019).

Assessing Nevada LTSS System Performance: Criteria and Ranking

The AARP Foundation, the Commonwealth Fund, and the SCAN Foundation produce the Long-Term Services and Supports State Scorecard that measures "state-level LTSS system performance from the viewpoint of users of services and their families" (http://www.longtermscorecard.org/). This LTSS Scorecard provides a set of criteria for assessing LTSS systems and provides benchmarks for assessing LTSS services in Nevada. The most recent LTSS Scorecard was issued in 2020 (Reinhard et al., 2020). The LTSS scorecard includes 26 indicators that comprise five dimensions of LTSS performance: affordability and access, choice of setting and provider, quality of life and quality of care, and effective transitions. Table 1.10 lists the indicators that comprise each dimension and indicates Nevada's 2020 ranking on each indicator. Each state is scored on each indicator, and each indicator is weighted equally within each dimension.[11]

As shown in Table 1.10, the state's score is in the bottom quartile on the first dimension (Affordability and Access). The state's score is in the second and third quartiles on the next three dimensions (Choice of Setting and Provider, Quality of Life and Quality of Care, Support for Family Caregivers). Nevada ranks in the bottom (fourth) quartile on the fifth dimension (Effective Transitions).

[11] See Long-Term Services and Supports State Scorecard 2020 Edition (2020) for more detail on the scorecard methodology.

Table 1.10: Nevada Rankings on LTSS Scorecard Dimensions and Indicators

Nevada, 2020

Indicator	Nevada Rank
Effective Transitions	
Effective Transitions Overall Ranking	45.00
Percent of nursing home residents with low care needs	24.00
Percent of home health patients with a hospital admission	31.00
Percent of long-stay nursing home residents hospitalized within a six-month period	45.00
Percent of nursing home residents with one ore more potentially burdensome transitions at end of life	43.00
Percent of people with 90+ day nursing home stays successfully transitioning back to the community	39.00
Support for Family Caregivers Overall	
Support for Family Caregivers Overall Ranking	19.00
Supporting working caregivers (composite indicator, scale 0-9.0)	3.00
Person- and Family-Centered Care (composite indicator, scale 0-5.5)	2.80
Nurse Delegation and Nurse Practitioner Scope of Practice (composite indicator, scale 0-5.0)	4.75
Transportation Policies (composite indicator, scale 0-5.0)	0.00
Quality of Life and Quality of Care	
Quality of Life and Quality of Care Overall Ranking	26.00
Rate of employment for adults with ADL disabilities ages 18-64 relative to rate of employment for adults without ADL disabilities ages 18-64	2.00
Percent of high-risk nursing home residents with pressure sores	41.00
Percent of long-stay nursing home residents who are receiving an antipsychotic medication	30.00
HCBS quality cross-state benchmarking capability	24.00
Choice of Setting and Provider	
Choice of Setting and Provider Overall Ranking	39.00
Percent of Medicaid and state-funded LTSS spending going to HCBS for older people and adults with physical disabilities	22.00
Percent of new Medicaid aged/disabled LTSS users receiving HCBS	14.00
Number of people self-directing services per 1,000 people with disabilities	41.00
Home health and personal care aides per 100 adults age 18+ with ADL disabilities	45.00
Assisted living and residential care units per 1,000 population age 75+	34.00
Adult day services total licensed capacity per 10,000 population ages 65+	24.00
Subsidized housing opportunities (place-based and vouchers) as a percentage of all housing units	43.00
Affordability and Access	
Affordability and Access Overall Ranking	51.00
Median annual nursing home private pay cost as a percentage of median household income age 65+	28.00
Median annual home care private pay cost as a percentage of median household income age 65+	13.00
Private long-term care insurance policies in effect per 1,000 people age 40+	49.00
Percent of adults age 21+ with ADL disabilities at or below 250% of poverty receiving Medicaid	41.00
Medicaid LTSS beneficiaries per 100 people with ADL disabilities	46.00
ADRC/No Wrong Door Functions (composite indicator, scale 0-100%)	27.00
Long-term Services and Supports Scorecard Overall Ranking	41.00

Source: Long-Term Services and Supports State Scorecard 2020 Edition, 2020

Additional detail on two indicators in the dimension of "Support for Family Caregivers" illustrates the Scorecard methodology (Nurse Delegation and Scope of Practice, and Transportation; Reinhard et al., 2020).

Nurse Delegation and Scope of Practice

Nevada ranked relatively high (12th) on nurse delegation and scope of practice in 2020, indicating little to no change since the 2017 report. Nurse delegation and scope of practice is a composite measure composed of two scores. The first score focuses on the number of health maintenance tasks that can be delegated to LTSS workers by a registered nurse. There are 16 possible tasks. For each task that can be performed by a direct care aide, a state receives 0.25 points, for a possible total of four if all 16 tasks can be delegated. The second score involves the extent to which states and licensure laws permit a nurse practitioner (NP) to practice to the fullest extent of his or her educational training. States that permit an NP to evaluate patients; diagnose, order, and interpret diagnostic tests; initiate and manage treatments; and prescribe medications (full practice authority) receive one point. States that require a collaborative practice agreement with a physician specifying the scope of practice allowed (reduced practice) receive half a point. Finally, states that require a physician to oversee all care provided by the NP (restricted practice) get 0 points. Therefore, the maximum score on the Nurse delegation and score practice dimension is 5.0.

Nevada scored 4.75 on this dimension. According to the Scorecard report (2020), the only health maintenance task which NPs were not able to delegate was performing ventilator respiratory care. NPs in Nevada were able to delegate:

Medication Administration

1. Oral medication
2. As-needed medication
3. Prefilled insulin/insulin pen
4. Draw-up insulin
5. Other injectable medication
6. Glucometer testing
7. Medication through tubes
8. Insertion of suppositories
9. Eye/ear drops

Tube Feeding and Gastric Care

10. Gastrostomy tube feeding
11. Administer enema Bladder Regimen and Skin/Appliance Care
12. Perform intermittent catheterization
13. Perform ostomy care including skin care and changing appliance

Respiratory Care

14. Perform nebulizer treatment
15. Administer oxygen therapy

Nevada also received one point for allowing NPs full practice authority.

Transportation

Transportation policies that support family caregivers include several components. Some states implement two types of legal protections for volunteer drivers:

- Nonprofit volunteer drivers and programs are protected from unreasonable or unfair increases in liability or insurance rates.
- Nonprofit volunteer driver programs are protected from insurance cancelation.

In addition, some states have statewide transportation coordinating councils. States with volunteer driver policies and statewide transportation coordinating councils received one point if the state had a policy and zero points if the state did not have a policy.
Nevada did not meet any of the above criteria, and the state was tied for 37th (last position) with 13 other states and the District of Columbia.

Contents of this Report

As mandated in AB 122, this study focuses on the financial viability of a facility offering Assisted Living services in conjunction with AD programs and facility-based RC under a combined license.

This report provides background information needed to support analyses of the issues detailed in AB 122:

(a) feasibility of creating a single license for such a facility;
(b) manner in which such a facility would receive reimbursements from Medicaid;
(c) feasibility of recruiting adequate staff to operate such a facility;
(d) economic viability of and payment structure of such a facility;
(e) technical, economic, and legal barriers to the establishment and operation of such a facility; and
(f) potential timeline for creating a pilot program to establish such facilities.

To provide the information needed to support these analyses, the report includes the following sections.

- Chapter 1 provides the report Introduction. It also provides background information about unpaid caregivers and describes criteria utilized in a nationwide scorecard to assess the quality of state LTSS systems. This information is essential for understanding costs imposed by the absence of ALF, RC, and AD services in Nevada's non-urban counties.
- Chapter 2 discusses the Supply of LTSS currently available in Nevada, certificate of need requirements in Nevada, license requirements in Nevada, and license requirements in other states. It also includes a discussion of the current supply of transportation services and facilities. This chapter also provides essential background information for

considering issues involved in creating a single license for facilities that offer ALF, RC, and AD services (AB122-a).

- Chapter 3 discusses Workforce Issues, such as the current labor supply, license requirements for aides, and Medicaid reimbursement for Personal Care services. This chapter provides essential background information for considering policies designed to increase the size of the LTSS workforce (AB 122-c).
- Chapter 4 discusses the Demand for LTSS. It reports information about LTSS utilization rates for the U.S. and Nevada, characteristics of LTSS users, and information about LTSS coverage by Nevada Medicaid. This chapter provides essential background information for considering the topics detailed in AB122-b and AB122-d.
- Chapter 5 discusses the methodology and results of the set of interviews with key stakeholders in Nevada's non-urban counties. These results provide background information for outlining options for new facilities in Chapter 6.
- Chapter 6 presents information about state-of-the-art ALF, AD, and RC facilities and programs in other states. This information is combined with information from the preceding chapters to define a set of options for building and operating a new facility to support offering a combination of the three services.
- Chapter 7 presents a template for comparing rough-order-of-magnitude (ROM) estimates of costs and revenues for such a facility. This chapter also describes an Excel template for comparing operating costs and revenues, to assess whether the example facility would be financially viable without subsidies (AB122-d).
- Chapter 8 summarizes the report's findings regarding AB122-a through AB122-d, and it discusses the implications of the report's findings for the issues raised by AB122-e and AB122-f.

APPENDIX 1

Table A.1-1: Activities of Daily Living and Instrumental Activities of Daily Living, as defined in the Medicaid Services Manual Addendum (Phinney, 2020)

Table A.1-1a: Activities of Daily Living (ADLs)
ADLs as defined by Medicaid
Walking
Toileting
Feeding
Bathing
Dressing and grooming
Transferring

INSTRUMENTAL ACTIVITIES OF DAILY LIVING (IADLs) IADLs are activities related to independent living including meal preparation, laundry, light housekeeping and essential shopping.

Table A.1-1b: Instrumental Activities of Daily Living (ADLs)
IADLs as defined by Medicaid
Meal preparation
Laundry
Light housekeeping
Essential shopping

Table A.1-2: Does Utilization of Respite Care Reduce Caregiver Stress?

Nevada,2017

	Full Sample		Recipients have dementia		Recipients have physical disability	
Independent Variable	OLS	FE	OLS	FE	OLS	FE
Caregiver Contributes Money to Pay for Recipient's Medications						
Caregiver contributes money	0.769***	0.451	0.274	-0.187	0.961**	1.581*
Types of Assistance						
chores	0.891***	0.974**	1.180**	-1.481	0.463	0.311
shopping	0.571**	0.35	0.506	1.623	0.393	0.737
banking	0.706***	0.664*	1.226***	1.265	0.580**	0.718
mobility	0.975***	0.647*	1.368***	1.911*	1.356***	1.066*
medication management	0.711**	0.355	1.187**	-0.0415	0.508	1.133
driving	-0.833***	-0.756*	-0.997**	-1.548*	-0.776**	0.417
Work Status and Total Hours						
working	-1.519***	-1.151***	-1.815***	-1.843	-1.630***	-1.378*
retired	-0.253	-0.771**	-0.154	-0.468	-0.294	-0.634
total hours (work plus caregiving)	0.0303***	0.0291***	0.0303***	0.0160*	0.0376***	0.0391***
utilized Respite Care	1.212***	0.413	0.607	-0.336	1.752***	0.943
Observations	3,703	3,703	813	813	1,214	1,214
R-squared	-	0.081	-	0.109	-	0.143
Number of individuals	2,853	2,853	658	658	930	930

*** p<0.01, ** p<0.05, * p<0.1

Each regression includes a constant term.

Each of the `FE` columns controls for unobserved characteristics of caregivers that do not change over time.

Dependent variable is index of caregiver stress.

The omitted categories under `work status` are `not working currently, but not retired` and `did not answer`

CHAPTER 2: SUPPLY

KEY POINTS

- Assisted Living Facilities (ALFs) are licensed in Nevada by the Bureau of Health Care Quality and Compliance (HCQC) as "Residential Facility for Groups" which can then attain a special endorsement to function as an Assisted Living Facility (ALF).
- Nevada distinguishes between Adult Day (AD) programs and Adult Day Health Care (ADHC). This report discusses AD programs, which provide personal care for adults in a supervised, protective, congregate setting during some portion of a 24-hour day. These facilities must be licensed by the Bureau of Health Care Quality and Compliance (HCQC).
- Examination of Nevada's Assisted Living Facility (ALF) and Adult Day (AD) licensure requirements suggests that a combined ALF/AD facility could potentially generate economies of scale and scope, particularly if the facility serves small numbers of residents and clients.
- Nevada Revised Statutes (NRS) and the Nevada Administrative Code (NAC) currently include provisions that prevent a combined license.
- Nevada does not currently license Respite Care (RC) facilities. Licensure requirements for ALFs do not include provisions based on the expected duration of stay. Licensure requirements for ADs do not include separate provisions for ongoing participants vs. one-time participants.
- Emerging technologies may make it possible for facilities and Long-Term Services and Supports (LTSS) workers to assist and monitor patients in new ways that may be more efficient and more effective than current strategies. If these technologies are widely adopted, they could alter the cost structures of ALFs and ADs.
- All Home and Community Based Services (HCBS) must comply with the Centers for Medicare and Medicaid Services Home and Community Based Services Final Regulation (Medicaid.gov, n.d.), as a condition for Medicaid reimbursement of HCBS. (This regulation is frequently denoted as the "Federal Settings Rule" or the "Settings Rule").
- All LTSS providers must comply with the 1999 U.S. Supreme Court decision in Olmstead v. L.C., regardless of the entity that will pay for the service.

The availability of long-term services and supports (LTSS) is a nationwide issue, as (1) baby boomers age and (2) medical advances strengthen the health and capabilities of people with intellectual and developmental disabilities (ID/DD) and people with physical disabilities (PD). Although it is important to expand provider supply to address these trends, market entry by new providers or expansion of existing providers may be constrained by financial limitations or by regulatory requirements. Financial limitations may stem from cost issues such as labor costs, or from revenue issues stemming from lack of coverage by private or public insurance or low reimbursement rates offered by these entities. Licensure requirements constitute the primary potential regulatory constraint for new ALFs, AD programs, and RC providers. Scope of practice constraints could pose regulatory constraints for implementation of new types of technologies.

This chapter will provide information about the current supply of Assisted Living Facilities (ALFs), Adult Day (AD) programs, and Respite Care (RC) services in Nevada counties. Assisted living and AD programs are provided in licensed facilities, whereas respite care may also be provided in the home. This chapter will detail Nevada facility licensure requirements for ALF and AD facilities, and it will summarize licensure requirements in other states.

Home Health (HH) aides and Personal Care aides (PCAs) provide care in these facilities and in homes. They are licensed under personal license requirements. Information about aides is reported in Chapter 3: Workforce.

Current Supply of Long-Term Services and Supports (LTSS) in Nevada

There are 383 ALFs licensed to operate in Nevada as of March 2020. These facilities include 8,823 beds, which provide 20.11 beds per 1,000 older adults living in the state. This statewide availability of ALF beds is similar to the nationwide availability of 19.03 beds per 1,000 older adults.

As detailed in Table 1.3 (in Chapter 1), 358 of these facilities are located in Nevada's two urban counties, and 25 are located in the state's non-urban counties. Seven non-urban counties (Eureka, Esmeralda, Lander, Lincoln, Mineral, Storey, and White Pine counties) do not have any ALFs.

There are 35 licensed AD program facilities in Nevada: 31 in Clark County[12], three in Washoe County, and one in Douglas County. The remaining counties do not have any licensed AD program facilities.

License Requirements for Assisted Living Facilities (ALFs) in Nevada

Each ALF is licensed in Nevada by the Bureau of Health Care Quality and Compliance (HCQC) as a "Residential Facility for Groups" which can then attain a special endorsement to provide Assisted Living services. Residents are assessed as Care Category 1 (ambulatory) or Care Category 2 (non-ambulatory; Carder et al., 2015). Residents assessed as Care Category 1 can

[12] The most recent facility opened in Clark County in February 2020.

move from an unsafe area to a safe area without assistance from another person in four minutes or less. Admitting non-ambulatory individuals requires facilities to meet specific building standards.

Medical Restrictions

ALFs cannot admit individuals who are bedfast, require 24-hour skilled nursing or medical supervision, or have a specified health condition (e.g., diabetes) unless the HCQC approves an exemption request. Facilities cannot admit individuals who require restraints. Facilities with an assisted living services endorsement must include services that enable the facility to retain residents who would otherwise be prohibited from admission (e.g., treatment for diabetics). The administrator of a facility must assess whether residents' needs have changed and arrange for assessment and monitoring by a health professional when a resident's health declines. Services must be arranged based on this health professional's assessment. Residents may directly contract with licensed home health and hospice agencies to provide services within these facilities.

Unlicensed staff may administer medication after completing a 16-hour medication course from an approved training provider. Capable residents may self-administer medications.

Service Requirements

ALFs must offer the following services: social/recreational activities, protective supervision, laundry, assistance with access to dental and optical care, and assistance with access to social services. Facilities can also obtain an endorsement to "care for a resident with Alzheimer's disease or other related dementia." This endorsement mandates that the facility must provide activities related to gross motor skills, social activities, and sensory enhancement activities. See Table 2.1 for specific services required.

Table 2.1: Service Requirements by Facility Types
Nevada, 2015

Service	Required in All Facilities	Required in Facilities with Alzheimer's Disease Endorsements
10 Hours of social/recreational activities a week	Yes	Yes
Protective supervision	Yes	Yes
Laundry	Yes	Yes
Assistance with access to dental	Yes	Yes
Assistance with access to optical	Yes	Yes
Assistance with access to social services	Yes	Yes
Activities related to gross motor skills	No	Yes
Social activities	No	Yes
Sensory enhancement activities	No	Yes

Source: Adapted from Carder et. al, 2015

Staffing and Training Requirements

ALFs are required to employ an administrator and caregivers. There are no minimum staffing ratios. Caregivers must receive at least 4 hours of training related to the care that is specific to the facility's resident population. They also must receive 8 hours of continuing education and training relevant to the residents at the facility. To serve people with dementia, one person with at least 3 years of experience (or experience the Bureau deems equivalent) must be on-duty at all times. All staff must receive 2 hours of training in providing care to residents with any form of dementia. Caregivers must complete 8 hours of this training within 3 months of beginning employment, and then annually. One member of the staff must be awake and on duty at all times if a facility is serving persons with dementia.

Occupancy and Building Requirements

ALFs can provide private or shared rooms housing up to 3 people.

A facility licensed as a Residential Facility for Groups must meet specific requirements to attain this endorsement (see Table 2.1).

See Table 2.2 for building requirements in facilities with and without residents living with dementia.

Table 2.2: Building Requirements of Facility Type
Nevada, 2015

Requirement	Required in All Facilities	Required in Alzheimer's Disease Facilities
Private or shared rooms (between 1-3 people)	Yes	Yes
One toilet and sink for every four residents	Yes	Yes
One bathtub or shower for every six residents	Yes	Yes
Locked quarters	No	Yes
Warning devices on exits (alarms, horns, etc.)	No	Yes
Secure yard	No	Yes
Gated with locking devices	No	Yes
Apartment style	No	No

Source: Adapted from Carder et. al, 2015

License Requirements for Adult Day (AD) Program Facilities in Nevada

According to the Regulatory Review of Adult Day Services: 2014 Edition (O'Keeffe et al., 2014), "facilities for the care of adults during the day" are establishments operated and maintained to provide care during the day on a temporary or permanent basis for aged or infirm

persons. Nevada distinguishes between Adult Day (AD) programs and Adult Day Health Care (ADHC). AD programs are the provision of personal care for adults in a supervised, protective, congregate setting during some portion of a 24-hour day. ADHC facilities are charged with maintaining or improving residents' quality of life, improving or maintaining participants' level of functioning, or lessening any decline in functioning due to disease and/or the aging process. All facilities must be licensed by the HCQC in the Nevada DHHS. Licensed applicants must receive training to recognize and prevent the abuse of older persons.

Providers must meet additional licensure and service requirements for AD services covered by Nevada Medicaid or the Nevada Department of Health and Human Services (DHHS) Aging and Disability Services Division (ADSD). See Table 2.3 for services offered by both AD programs and ADHC facilities. See Appendix Table A.2-3 for more detail about AD regulatory requirements.

Table 2.3: Service Offered by ADC and ADHC Facilities
Nevada, 2014

	Adult Day Care		Adult Day Health Care	
Service	Required Service	Optional Service	Required Service	Optional Service
Social activities	Yes	No	Yes	No
Nutrition services	Yes	No	Yes	No
Health monitoring	Yes	No	Yes	No
Restorative therapy	Yes	No	Yes	No
Assistance with ADLs	Yes	No	Yes	No
Health education and counseling	No	No	Yes	No
Medication administration	No	Yes	Yes	No
Nursing services	No	No	Yes	No
Physical, occupational, or speech therapy	No	Yes	Yes	No
Skilled nursing services	No	No	No	No
Social services	No	Yes	Yes	No
Transportation	No	No	No	Yes

Source: O'Keeffe et al., 2014

Medication Administration Requirements

AD programs and ADHCs have different requirements for medication administration, staffing, and training, depending on whether they are a grant funded program or Medicaid 1915(i) State Plan. See Table 2.4 for these specifications.

Table 2.4: ADHC Medicaid Requirements Nevada, 2014			
Requirement	License	Grant Program	Medicaid 1915(i) State Program
Establish procedures for participants for self-medication and medication administration by an employee	Yes	Yes	Yes
Participants must be able to administer their own medications, or contract a registered nurse	No	Yes	No
A registered nurse will administer participants' medications while in the facility's care	No	No	Yes
Staff to patient ratios	No	No	No
Director	Yes	No	Yes
Constant presence of first aid trained employee	Yes	Yes	Yes
Registered nurse or licensed practical nurse	No	No	Yes
Direct care staff	No	No	Yes
Activity staff	No	No	Yes
Program of general orientation at facility	Yes	Yes	Yes
12 hours per year of training at facility	Yes	Yes	Yes
Training in prevention and recognition of the abuse of older persons	Yes	Yes	Yes
Staff must have necessary training to perform Medicaid-required services	No	No	Yes

Source: O'Keeffe et al., 2014

Licensing Provisions Relevant to Consideration of Combined License for a Facility that would Provide ALF and AD Services

For the purpose of considering the feasibility of a combined ALF/AD license, four provisions of Nevada's licensure requirements are salient (https://www.leg.state.nv.us/NAC/NAC-449.html):

Pertaining to AD facilities:

> NAC 449.4067 Operation in combination with other medical facility or facility for the dependent. (NRS 449.0302) A facility must not be operated in combination with any other medical facility or facility for the dependent unless it is licensed as a separate and distinct unit.

Pertaining to ALFs:

> NAC 449.190 License: Contents; validity; transferability; issuance of more than one type. (NRS 449.0302)
> 3. A residential facility may be licensed as more than one type of residential facility if the facility provides evidence satisfactory to the Bureau that it complies with the requirements for each type of facility and can demonstrate that the residents will be protected and receive necessary care and services.

NAC 449.208 Restrictions on conducting other businesses or providing other services on premises. (NRS 449.0302) No other business may be conducted or other services may be provided on the premises of a residential facility if the business or services would interfere with the operation of the facility or the care provided to the residents of the facility.

Pertaining to the licensure Board:

NRS 449.0302 Board to adopt standards, qualifications and other regulations. [Effective through December 31, 2019.]

2. The Board shall adopt separate regulations governing the licensing and operation of:

(a) Facilities for the care of adults during the day; and

(b) Residential facilities for groups, which provide care to persons with Alzheimer's disease or other severe dementia, as described in paragraph (a) of subsection 2 of NRS 449.1845.

The first and fourth of these provisions appear to prohibit a combined license. Nonetheless, examination of the Nevada licensure requirements for ALF and AD services suggests that a single facility offering both services could generate several types of economies of scale and economies of scope. These opportunities for increased efficiency are likely to be particularly relevant for small facilities. Potential economies of scale and scope include:

1. For both an ALF and an AD, the director (or administrator), or the designated acting director (or administrator) must be present on-site whenever the facility is operational. If an ALF and an AD are licensed separately, each facility would be required to have a director (or administrator) or the acting director (or administrator) on site during operating hours. The ALF administrator is currently required to be licensed by the Board of Examiners for Long-Term Care Administrators. The AD director is not required to meet this type of requirement. The State might consider whether an ALF-AD facility serving small numbers of residents and clients could have one director (or administrator) on-site, who meets the requirement for an ALF administrator.

2. The director and caregivers at an ALF must be trained in First Aid and CPR. At least one staff-member on duty at an AD must be trained in First Aid and CPR. Both facilities must maintain First Aid Kits. The State might consider whether the trained ALF administrator and caregivers could provide the necessary protections for the AD program, without requiring that an AD staff member be trained. Similarly, the State might consider whether a single First Aid Kit would be sufficient.

3. Separate ALF and AD facilities must address requirements for:
    a. facility maintenance, inspections, security,
    b. administrative tasks such as payroll, resident/client records, admissions personnel, marketing, and employee training,
    c. meal planning, dietary consultants, food preparation and serving,

d. laundry,
e. medication administration, and
f. implementing systems for monitoring resident and client health and noting changes in health.

A combined facility could potentially find ways to streamline these tasks to obtain economies of scale and scope.

4. Separate ALF and AD facilities must organize daytime activities and maintain space to conduct these activities.

The requirement for ALF licensure states:

NAC 449.260 Activities for residents. (NRS 449.0302)

1. The caregivers employed by a residential facility shall:

(a) Ensure that the residents are afforded an opportunity to enjoy their privacy, participate in physical activities, relax and associate with other residents;

(b) Provide group activities that provide mental and physical stimulation and develop creative skills and interests;

(c) Plan recreational opportunities that are suited to the interests and capacities of the residents;

(d) Provide each resident with a written program of activities;

(e) Provide for the residents at least 10 hours each week of scheduled activities that are suited to their interests and capacities;

(f) Encourage the residents to participate in the activities scheduled pursuant to paragraph (e); and

(g) Post, in a common area of the facility, a calendar of activities for each month that notifies residents of the major activities that will occur in the facility. The calendar must be:

(1) Prepared at least 1 month in advance; and

(2) Kept on file at the facility for not less than 6 months after it expires.

[…]

4. A residential facility shall have areas of sufficient size to conduct indoor and outdoor activities, including, without limitation:

(a) A common area that complies with the provisions of NAC 449.216; and

(b) An outdoor activity area that is easily accessible for the residents and is safe from vehicular traffic.

The requirement for AD licensure states:

NAC 449.4079 Required services. (NRS 449.0302) The facility must:

2. Provide activities for a client which are suited to his or her interests and capacities;

8. Prepare a monthly calendar of activities at the facility and distribute the calendar to clients and their families.

(Added to NAC by Bd. of Health, eff. 6-23-86)

The requirement for ALF licensure with a dementia/Alzheimer's endorsement states:

> NAC 449.2754 Residential facility which provides care to persons with Alzheimer's disease: Application for endorsement; general requirements. (NRS 449.0302)
> The members of the staff of the facility shall develop a program of activities that promotes the mental and physical enhancement of the residents. The following activities must be conducted at least weekly:
> (a) Activities to enhance the gross motor skills of the residents;
> (b) Social activities;
> (c) Activities to enhance the sensory abilities of the residents; and
> (d) Outdoor activities.

The State might consider whether the sets of activities generally conducted in ALF and AD facilities could be combined. Combining activities for a small set of ALF residents and a small set of AD clients could potentially allow a combined facility to offer a more diverse set of activity options, or it could allow the facility to offer options similar to those offered in separate ALF and AD facilities at lower cost per participant.

5. ALFs must ensure that residents have opportunities to obtain dental, optical and audiology care.

> NAC 449.262 Provision of dental, optical and hearing care and social services; report of suspected abuse, neglect, isolation or exploitation; restrictions on use of restraints, confinement or sedatives. (NRS 449.0302)
>
> 1. The administrator of a residential facility shall ensure that residents are provided with or are assisted in obtaining dental and optical care, treatment for hearing and hearing impairment and social services.

An ALF could achieve this goal by providing transportation to these services or by arranging for mobile services to come to the ALF. That State might consider whether AD program participants could elect to participate in this service if the participants or their family caregivers are willing to pay a fee to cover the cost of this participation.

The cost of activity participation by Medicaid LTSS-eligible ALF residents would be covered in the Medicaid daily reimbursement rate for Residential Facilities for Groups. The cost of activity participation by Medicaid LTSS-eligible AD residents would be covered in the Medicaid daily reimbursement rate for AD.

Finally, ALFs and AD programs in areas with small numbers of potential clients may face business risk stemming from fluctuations in the numbers of ALF residents and AD clients. A combined facility may be able to reduce this risk, if it can flexibly shift resources (e.g. food service, laundry, space utilization) between ALF and AD services.

ALF Licensure Requirements in Other States

In addition to general licensure requirements, ALFs are regulated on numerous dimensions in every state, including Admission Criteria, Resident Participation, Grievance Procedures and more. A summary of issues regulated in Nevada is provided in Appendix Table A.2-1 and a summary of issues regulated across all states is provided in Appendix Table A.2-2.

Most states, including Nevada, have similar or identical facility and license requirements for assisted living facilities. Every state requires a facility administrator on site. Most states mandate a full-time administrator (40 hours/week) be employed. However, some allow for a part-time administrator for smaller facilities. For example, Delaware allows part-time administrators (20 hours/week) at facilities that house fewer than 24 residents.

Four states define multiple "levels" of licensing for a facility, implying that a "higher level" facility is licensed to cover more services, such as medication administration: Arkansas, Florida, Maine, and Maryland. None of these license-level models includes an explicit combined ALF/AD model; however, the flexibility offered by the license-level approach could provide a useful framework under which Nevada could allow ALF entities to apply for a stand-alone ALF license or a combined ALF/AD license.

Arkansas

The Arkansas DHHS regulates ALFs under Level I and Level II facilities. Level II facilities can provide direct care services to assist residents with ADLs, as well as coordinate basic health care and social services. Level I facilities offer a smaller scope of services that focus on assistance with social and recreational activities. The only healthcare services offered by Level I facilities are medication assistance and emergency care, if needed. However, neither of the two levels can provide the services of a Residential Care Facility, which is akin to a Skilled Nursing Facility in Nevada. These facilities provide intensive, specialized, and 24-hour care to their residents, typically at a higher cost.

Staffing requirements vary between license levels. For example, a Level II facility is required to employ a consulting pharmacist. A Level I facility does not have to meet this requirement. Also, staff at Level I facilities can only assist with self-administration of medication. In Level II facilities, licensed nursing personnel administer medications to residents. Level II facilities require a Registered Nurse or a Licensed Practical Nurse to be employed by the facility. Both facilities must meet staffing ratios depending on current occupancy, and both facilities must have a full-time certified administrator.

Florida

The Florida Bureau of Health Facility Regulation offers a variety of license models for assisted living facilities. All fall under the title of "assisted living facilities," but they vary in the specialized services offered, contingent on license type. For instance, an assisted living facility in

Florida offers housing, meals, and personal services for adults. Each facility can obtain a standard license or pursue various "levels" of licensing. See Table 2.5 for a description of the services associated with each license level.

Table 2.5: Assisted Living Facility Specialty Licenses in Florida
Florida, 2015

Specialty License	Description
Standard	A "Standard" licensed facility can offer basic services of assisted living facilities, including medication assistance and routine personal care services.
Limited Nursing Services (LNS)	A "Limited Nursing Services" licensed facility can offer more health-focused services as managed by a registered nurse (RN), such as replacing catheters.
Extended Congregate Care (ECC)	An "Extended Congregate Care" licensed facility can offer a higher level of care with the focus on residents aging in place. Any nursing service (in the scope of an RN) can be offered to residents.
Limited Mental Health (LMH)	A "Limited Mental Health" licensed facility can offer care focused on mental-health services. Any facility that serves three or more residents receiving Social Security Disability Insurance or Supplemental Security Income because of a mental disorder must obtain this license.

Source: Carder et al., 2015

Staffing requirements vary depending on the level of specialty license of the facility. All facilities must meet minimum staffing ratios depending on occupancy levels. Each facility must also have an administrator to serve in the role of a general manager. Facilities with a Limited Nursing Services (LNS) license or an Extended Congregate Care (ECC) license must employ a registered nurse.

The Florida statute 429.905(2) also describes a situation in which an ALF can provide AD services to non-residents, without obtaining an AD license. However, this statute also states: "A licensed assisted living facility, a licensed hospital, or a licensed nursing home facility may provide services during the day which include, but are not limited to, social, health, therapeutic, recreational, nutritional, and respite services, to adults who are not residents. Such a facility need not be licensed as an adult day care center; however, the agency must monitor the facility during the regular inspection and at least biennially to ensure adequate space and sufficient staff. If an assisted living facility, a hospital, or a nursing home holds itself out to the public as an adult day care center, it must be licensed as such and meet all standards prescribed by statute and rule. For the purpose of this subsection, the term "day" means any portion of a 24-hour day." (http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&URL=0400-0499/0429/0429.html) However, regular state inspections included monitoring of space and staff adequacy (Assistant Secretary for Planning and Evaluation [ASPE], 2005).

Maine

The Maine DHHS regulates nine types of facilities that provide assisted living services under the umbrella term of "assisted housing programs." Assisted Living Programs, Residential Care Facilities, and Private Non-Medical Institutions are all licensed under this system and have various facility license levels depending on the level of occupancy. However, all three categories provide assisted living services which are defined as assistance with ADLs, medication administration, and other personal care services (see Table 2.6).

Table 2.6: Assisted Housing Programs Licenses in Maine
Maine, 2015

Levels of Facility License
Private Non-Medical Institution
Level I: Licensed capacity of 1-2 residents
Level II: Licensed capacity of 3-6 residents
Level III: Licensed capacity of 3-6 residents and employment of 3+ persons
Level IV: Licensed capacity of more than 6 residents
Residential Care Facility
Level I: Licensed capacity of 1-2 residents
Level II: Licensed capacity of 3-6 residents
Level III: Licensed capacity of 3-6 residents and employment of 3+ persons
Level IV: Licensed capacity of more than 6 residents
Assisted Living Program
Type I: Services include medication administration
Type II: Services include medication administration and nursing services

Source: Carder et al., 2015

Residential Care Facilities and Private Non-Medical Institutions vary from an Assisted Living Program in that they offer a more health-focused scope of services, including medical transportation and nursing services. Residents in Level IV facilities are offered personal care plans with the aim of aging in place.

All facilities require the supervision of a licensed administrator of the facility. Residential Care Facilities and Private Non-Medical Institutions require an on-site pharmacist consultant, as well as an on-site registered nurse. All facilities must meet the state's specified staff ratios based on current occupancy.

Maryland

The Maryland Department of Health and Mental Hygiene regulates three levels of licensing for assisted living programs depending on the level of care provided. Each level can offer various services. For instance, Level III facilities cover a comprehensive set of services and assistance with ADLs. Level I facilities offer a "basic" level of assistance. Maryland's Medicaid Waiver program does not cover services provided in Level I facilities. All three license levels require an on-site administrator to manage facility operations. Facilities also must provide contracted RN services, including nursing tasks based on residents' needs.

AD Program Requirements in Other States

Licensure requirements for AD program facilities are similar across all states. Almost every state requires administrator supervision of the facility and has minimum staffing requirements. However, some states offer a licensing structure that varies between health versus social AD models for facilities. Facilities licensed under the health model[13] offer more health-focused services compared to facilities under the social model. States such as Alabama, Arkansas, and California administer these distinct licensing models.

Notably, an AD center in Tennessee that operates in a licensed nursing home does not need to obtain a separate license for the Adult Day Center. Tennessee regulations allow the nursing home licensing provisions to suffice. While the AD center does not need to obtain a separate license, the program must still comply with regulations (Rules of Tennessee Department of Human Services, 2018):

> *When adult day services are co-located within other licensed settings such as nursing homes or assisted living facilities, states vary regarding licensure requirements. In Tennessee, if an ADC center is operated by a licensed facility such as a nursing home, the state may determine that its licensing provisions adequately regulate the ADC center's program and that a separate ADS license is not needed. But an ADC program, regardless of its affiliation or location, must comply with the program content requirements as detailed in the rules.*

Alabama

AD programs and AD health services are administered by several agencies in Alabama. AD program administration depends on the funding program: Adult Protective Services or the CARES program. Table 2.7 reports the definitions of programs in Alabama.

[13] ALF services may be offered under either a social model or a medical model. AD services may be offered under either the AD model or the ADH (Adult Day Health) model.

Table 2.7: Definitions of Adult Day Programs in Alabama Alabama, 2015	
Term	Definition
ADC under Adult Protective Services	"Adult day care as provided under Adult Protective Services is a program of care for a portion of a 24-hour day in a protective setting for eligible adults 18 years of age or older. This service is for adults who need care during the day and individuals who live alone and cannot manage totally on their own and who need meals and supervision. ADC enables families to maintain the adults at home. Its purpose is to prevent or remedy abuse, neglect, or exploitation, and to prevent unnecessary institutionalization."
ADC under CARES Program	"Adult day care as provided under the CARES program is designed to meet the needs of adults with functional impairments through a structured and comprehensive program. A variety of health, social and related support services are offered in a supervised protective setting during some portion of a 24-hour day."
Adult Day Health	"Adult day health is a service that provides Medicaid waiver participants with a variety of health, social, recreational, and support activities in a supervised group for 4 or more hours per day on a regular basis. The services furnished by ADH providers are based on the needs of individual participants. The objective of ADH services is to provide an organized program of rehabilitative, therapeutic, and supportive health and social services and activities to waiver program participants who are functionally impaired and who, because of the severity of their functional impairment, are not capable of living independently in the community."
Source: O'Keefe et al., 2014	

Arkansas

The Arkansas Office of Long-term Care in the Department of Human Services licenses AD Programs and ADHC facilities. Each license has distinct requirements and allows a specific set of services to be offered at the facility. ADHC facilities can provide services that AD programs cannot. For example, the former can provide medication administration and skilled nursing services, whereas the latter cannot.

Both facilities require the general supervision of a facility director. Both facilities also require minimum staffing ratios contingent on current occupancy. For example, the ratio of paid staff to participants must be sufficient to meet the program's objectives. The difference is that an ADHC program must have a full-time health care coordinator to supervise health services provided at the facility. This coordinator must be an RN or LPN under the supervision of an RN.

California

The California Department of Social Services regulates licensing of Adult Day Programs (ADP) and the California Department of Public Health regulates licensing of ADHC programs. Only ADHC programs can be covered under the Medi-Cal (Medicaid) State Plan—ADP are not covered under California's Medicaid program.

Under California's license model, both types of facilities offer similar sets of services. However, an ADHC program is required to offer certain medical services that are optional for an ADP. For example, both can offer medication administration and nursing services, but an ADP is not required to offer them. An ADHC must offer medication administration. The only services that an ADP cannot offer are physical, occupational and speech therapy.

Current Supply of Respite Care Providers in Nevada

RC is provided by a licensed Home Health (HH) Agency (Agency to Provide Nursing in the Home) or a licensed Personal Care Agency (Agency to Provide Personal Care Services in the Home). The definitions of these agencies are detailed below in Table 2.8. Personal Care Agencies provide in-home personal care services to elderly persons or persons with disabilities while HH Agencies provide in-home skilled nursing services along with assistance and training in health and housekeeping skills.

Table 2.8: Legal Definitions of Respite Care Providers in Nevada
Nevada, 2015

Agency	Definition
Home Health Agency (Agency to Provide Nursing in the Home)	NRS 449.0015: "Agency to provide nursing in the home" means any person or governmental organization which provides in the home, through its employees or by contractual arrangement with other persons, skilled nursing and assistance and training in health and housekeeping skills."
Personal Care Agency (Agency to Provide Personal Care Services in the Home)	NRS 449.0021: "Agency to provide personal care services in the home" means any person, other than a natural person, which provides in the home the services authorized pursuant to NRS 449.1935 to elderly persons or persons with disabilities."

Source: Nevada Revised Statute Chapter 449 (2017) Medical Facilities and Other Related Entities

Nevada's current supply of respite care providers is provided in Table 2.9 below. There are 228 providers in the state: 205 of these entities are located in Clark County, and 17 are located in Washoe County. The remaining six remaining providers are located in Elko, Lyon, Nye, and White Pine Counties. Nine counties (Churchill, Douglas, Eureka, Esmeralda, Lander, Lincoln, Mineral, Pershing, and Storey counties) do not have any providers in either category. In comparison, Table 2.9 also includes the total for the U.S., which has approximately 12,200 home health and personal care providers (the value for U.S. respite care providers includes both personal care providers and home health providers).

Table 2.9: Supply of Respite Care Providers in Nevada Nevada, 2020		
County	Home Health Agency Providers	Personal Care Agency Providers
Carson	0	3
Churchill	0	0
Clark	205	4
Douglas	0	0
Elko	2	0
Esmeralda	0	0
Eureka	0	0
Humboldt	0	0
Lander	0	0
Lincoln	0	0
Lyon	1	0
Mineral	0	0
Nye	2	0
Pershing	0	0
Storey	0	0
Washoe	17	0
White Pine	1	0
Nevada	228	7
U.S.	12,200	NA

Source: Nevada Division of Public and Behavioral Health, 2020; National Adult Day Services Association, 2016.

Special Endorsements for Assisted Living Facilities

ALFs fall under the umbrella of Residential Facilities for Groups, which are regulated by the DHHS HCQC. These facilities can specialize in care for certain populations; to do so, facility administrators must apply for a special endorsement with additional requirements. Several endorsements are available, such as providing care to persons with Alzheimer's Disease or dementia. Facilities can obtain multiple endorsements, although there are some restrictions on types of endorsements that can be combined. For example, an ALF cannot have endorsements for both Mental Illness and Alzheimer's Disease. Table 2.10 provides an outline of the number of providers with special endorsements in Nevada. The total number of provider endorsements exceeds the number of ALFs in the state (383).

Table 2.10: Endorsement Categories for Residential Facilities for Groups Nevada, 2020			
Endorsement	Non-Urban Counties	Clark and Washoe Counties	Total
Assisted Living Services	9	52	61
Chronic Illness	5	142	147
Mental Illness	5	150	155
Residential Facility for Elderly or Disabled Persons	27	214	241
Alzheimer's Disease	16	147	163
Individuals with Intellectual Disabilities	2	39	41
None	NA	1	1

Source: Nevada Department of Health and Human Services Division of Public and Behavioral Health Office of Analytics Health Care Quality Compliance Online Licensing System ALiS (CLICS).

Supply of Skilled Nursing Facilities

According to DPBH.gov and Nevada Revised Statutes, the term “Facility for skilled nursing” means an establishment which provides continuous skilled nursing and related care as prescribed by a physician to a patient in the facility who is not in an acute episode of illness and whose primary need is the availability of such care on a continuous basis. Nevada does not differentiate between skilled nursing facilities and nursing homes (NRS 449.0302). See Table 2.11 for the numbers of skilled nursing facilities and beds by county.

Table 2.11: Skilled Nursing Facilities by County

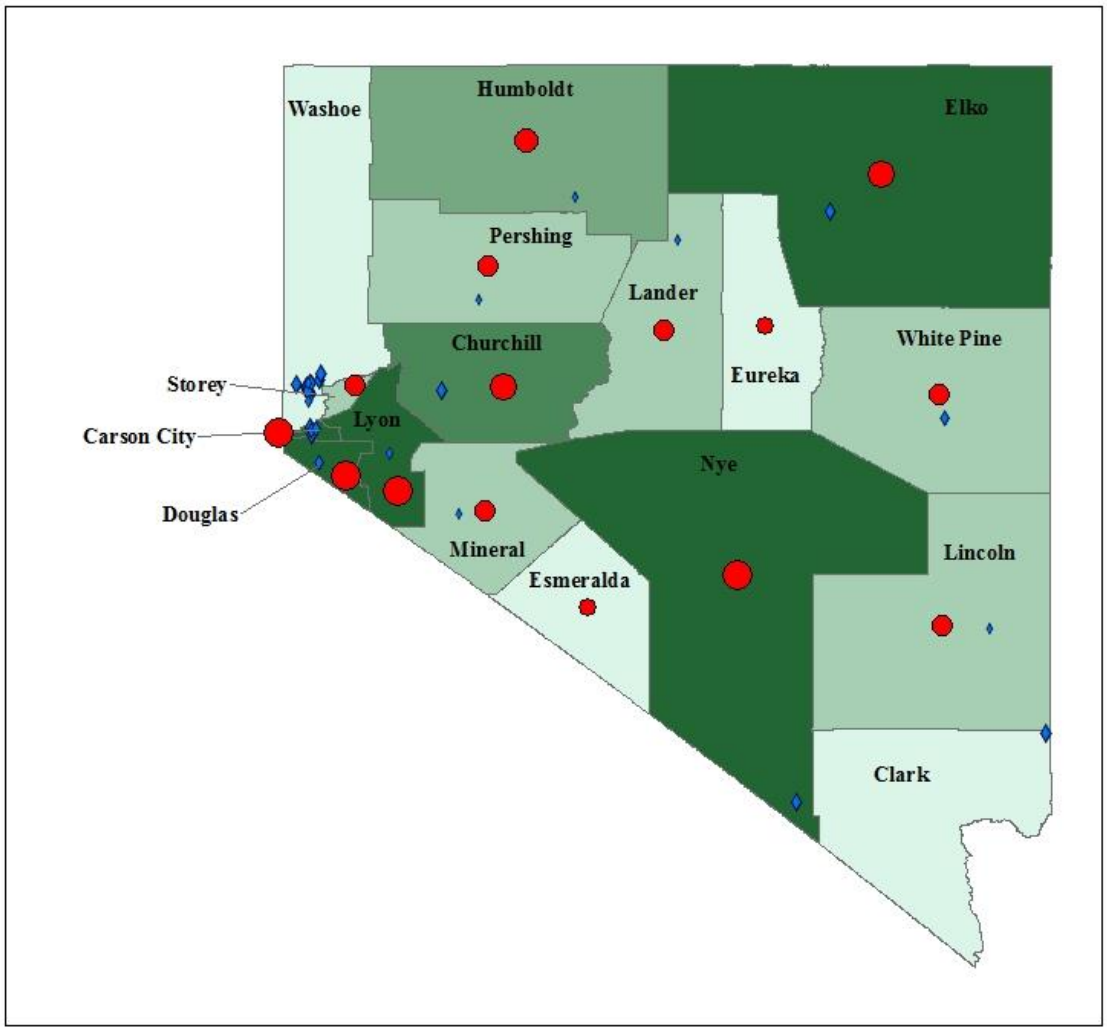
Nevada, 2020

County	Number of Skilled Nursing Facilities	Bed Count	Bed Count per 1000 People	Bed Count per 1000 Older Adults
Carson City	3	339	0.007	0.02
Churchill	1	102	0.005	0.014
Clark	38	4,447	0.002	0.009
Douglas	1	60	0.001	0.003
Elko	1	146	0.004	0.009
Esmeralda	0	0	-	-
Eureka	0	0	-	-
Humboldt	0	0	-	-
Lander	0	0	-	-
Lincoln	0	0	-	-
Lyon	0	0	-	-
Mineral	0	0	-	-
Nye	1	120	0.003	0.006
Pershing	0	0	-	-
Storey	0	0	-	-
Washoe	10	1,212	0.003	0.011
White Pine	1	97	0.011	0.039
Total	56	6523	0.003	0.009

Source: Nevada Department of Health and Human Services Division of Public and Behavioral Health Office of Analytics Health Care Quality Compliance Online Licensing System ALiS (CLICS), 2020

Figure 2.1 shows the distribution of NF facilities and population across Nevada's counties.

Figure 2.1: Nursing Facilities in Non-Urban Nevada Counties



Supply of Services for Local Senior Transportation

Transportation Reported by the Nevada Department of Transportation

A lack of local transportation within a county can pose a barrier for individuals trying to access LTSS in non-urban areas. If there is a lack of transportation for service users to access facilities, it poses another "hurdle" to overcome to establish a facility. If ALFs or AD programs do not have the resources to offer transportation for their service population, administrators might choose not to establish a facility at all. The existence of public transportation services in the community that can meet this need might influence the decision.

Nevada Department of Transportation (2019) provides a comprehensive review of the resources available in each county to meet these needs. Table 2.12 exhibits the number of "trips" taken by Nevada residents listed by each public transportation provider in non-urban counties in 2018.

Non-Emergency Medical Transportation Covered by Nevada Medicaid

DHCFP contracts with a broker to provide non-emergency transportation to services covered by Nevada Medicaid. DHCFP provides a capitated monthly payment to the broker. Where services are not available, Medicaid-covered service providers can organize a transportation service. After completing an application and approval process, these services can be reimbursed through the broker.

Table 2.12: Annual Trips by Provider per County in Nevada (2018) Nevada, 2018			
Provider Name	Annual Trips	Per 1000 People	Per 1000 Older Adults
Churchill Area Regional Transportation	17,077	0.80	2.39
Douglas Area Rural Transit	39,561	0.84	1.95
Elko County	40,605	0.98	2.52
Esmeralda County	9,803	10.11	1.09
Humboldt County/Pleasant Senior Center	11,262	0.83	26.19
Lincoln County Human Services	3,180	0.63	1.63
Lyon County Human Services	10,474	0.21	0.58
Nye County Senior Nutrition Program	10,160	0.23	0.50
Pahrump Senior Center (Nye)	18,214	0.41	0.89
Pyramid Lake Paiute Tribe (Washoe)	4,097	0.01	0.04
Southern Nevada Transit Coalition (Clark)	377,401	0.21	0.77
Tahoe Transportation District (Douglas/Carson)	30,437	0.31	0.82
White Pine County - Ely Bus	11,859	1.38	4.82
Source: State of Nevada and Department of Transportation, 2019			

Certificate of Need Requirements

Certificate of need (CON) requirements were initially created by states, with the first CON law appearing in New York in 1964. A decade later, the federal Health Planning Resources Development Act of 1974 required states to create a process for approving health care facilities before the states incurred significant monetary expenditures.

By 1982, all states except Louisiana had some form of approval process regulations. Since then, several states have repealed their CON laws, largely because the federal mandate and funding for CON was repealed in 1987 (Pitsor, 2019).

As of December 2019, 35 states including Nevada have some form of CON program. Three states (AZ, WI, and MN) do not officially operate a CON program but have other approval processes that serve a very similar purpose (National Conference of State Legislators, 2020). Twelve states have fully repealed their CON programs.

In Nevada, CON requirements apply to new construction or expansion of healthcare facilities costing at least two million dollars and located in counties with fewer than 100,000 people. Nevada CON laws and regulations are detailed in NRS 439A.100 and NAC 439A.010 – NAC 439A.675. Nevada defines a healthcare facility as,

> *A facility in or through which health services are provided, except for the office of a practitioner used solely to provide routine services for health to the practitioner's patients. The term includes any parent, affiliate, subsidiary, or partner of such a facility and any other entity which has a primary purpose of providing a benefit to such a facility. For the purposes of this section, 'office of a practitioner used solely to provide routine services for health to the practitioner's patients' does not include a facility which is or will be qualified to receive reimbursement, other than for the services of a practitioner, as a health facility from any public agency*. (NRS 439A.015)

According to the Nevada DPBH Primary Care office (personal communication via email with Joseph Tucker, Manager, May 1, 2020) ALFs are not subject to CON requirements, but skilled nursing facilities are.

Emerging Technologies that Could Potentially Affect LTSS Delivery

Technologies can assist in the care of chronic medical conditions related to aging, improve the independence of older adults while reducing both burden on caregivers and medical costs, delay placements in residential care, and increase health and well-being (Juul et al., 2019). About three quarters of all long-term care is provided by unpaid by relatives and friends of the care recipients (Thomas & Applebaum, 2015). This unpaid care is valued at approximately $450 billion per year in the U.S. (Feinberg et al., 2011). Technological solutions have been shown to reduce caregiver burden by substituting for caregiver assistance in specific situation (Hoenig et al., 2019). Recent research indicates caregivers are willing to adopt technologies that reduce their burden, even if they result in a net increase of expenses (Schulz et al., 2015). Technology can also aid caregivers by enhancing knowledge about caregiving and by providing strategies to help facilitate caregiving tasks (e.g., Lewis et al., 2010; Marziali & Donahue, 2006).

The Center for Technology and Aging (CTA; 2009) identified seven areas of useful technology: medication optimization, remote patient monitoring, assistive technologies, remote training and supervision, disease management, cognitive fitness and assessment, and social networking. See Appendix Table A.2-4 for specific outcomes identified by the CTA (2009) for each area.

Medication Optimization

Medication optimization refers to a wide array of technologies designed to help manage medication information, dispensing, adherence, and tracking. These technologies include comprehensive systems that inform and remind users and providers at multiple decision and action points, as well as single-purpose devices (CTA, 2009). Telehealth is included in this category because telehealth visits can facilitate adjusting doses, modifying medications, and renewing prescriptions. A recent study indicated users viewed a home telehealth system as easy to use and useful (after they received training), and providers indicated the system improved their ability to manage patients (Czaja et al., 2014). Additionally, telehealth can improve continuity of care (Archer et al., 2011) and is useful for people in non-urban locations (Czaja, 2016).

Remote Patient Monitoring

Remote Patient Monitoring (RPM) includes a wide variety of technologies designed to manage and monitor health conditions. Remote patient monitoring is used to collect and report information, or to send alerts about changes in health status or upcoming appointments to caregivers and providers. Point-of-care monitoring devices, such as weight scales, glucometers, and blood pressure monitors, may stand alone to collect and report health data, or they may become part of an integrated health data collection system that also reports information to providers and caregivers. These systems can also analyze information to generate alerts when health conditions change (CTA, 2009).

RPM systems are designed to be unobtrusive as they track patients throughout the day (Schmitter-Edgecombe et al., 2014). These technologies can include both wearable devices and sensors embedded in the home (Sun et al., 2014). RPM systems can alert caregivers when a care recipient wanders away from the residence. These sensors can allow health care providers to detect changes in health-related mobility patterns and proactively address them (Bae & Kim, 2015; Son & Kim, 2019). RPM systems also assist older adults by generating auto-alerts after falls that do not require the user to press a button (Stein, 2010; Czaja, 2016). In addition, Son and Kim (2019) and Kaye et al. (2011) report this technology can improve both the overall quality of care and working conditions of nurses.

Assistive Technologies

Assistive technologies include a wide range of devices and equipment that help individuals perform a task or prevent injury. Assistive technologies promote independence as they compensate for sensory, physical, and cognitive impairments, and promote safety for vulnerable individuals as they detect and report health hazards. Non-computer-based assistive technologies include items such as wheelchairs, grab bars, and Braille. Examples of computer-based technologies include voice recognition software and monitoring and alert systems that detect and report environmental hazards or personal crises (CTA, 2009).

Older adults are generally receptive to independence-promoting technology in their homes (Assistive Technology Act of 1998). More recent research suggests adults with mild cognitive impairments, and their caregivers, perceive socially assistive robots (SAR) as useful and are willing to use them (Pino et al., 2015). SAR are an emerging form of assistive technology that encompass all technology used to aid users through means of social interaction (Flandorfer, 2012). SAR can also function as a companion (akin to therapy animals) or coach/instructor (Rabbitt et al., 2015). In some cases, SAR are human- or animal-like robots like Paro, which looks like a baby seal and is employed to encourage social behavior and alleviate stress in patients with dementia (Shibata & Wada, 2010). In other cases, SAR are machine-like robots (MacDorman & Ishiguro, 2006). Assistive technology can prolong independence and inform caregivers and providers about users' functional status (Czaja, 2016). In general, participants perceive assistive technologies as helpful (Demiris et al., 2004) and this perception is important for utilization of assistive technology by older adults (Chaudhuri et al., 2015).

Remote Training and Supervision

Remote Training and Supervision (RTS) technologies can be used to train and supervise health and long-term care workers, to offer continuing education and to support quality assurance. Examples include distance learning courses, simulation exercises, and video-guided practicums (CTA, 2009).

Disease Management

Disease Management (DM) supports coordinated care for patients with specific chronic conditions that have a significant self-care component. DM programs include data-mining processes to identify high risk patients, use of evidence-based medical practice guidelines to support and treat individual patients, and data-driven systems supporting patient monitoring and support (CTA, 2009).

Cognitive Fitness and Assessment

Cognitive fitness and assessment technologies include thinking games and cognitive challenge regimens. The emphasis with older adults is to prevent or delay Alzheimer's and related dementias. These technologies are computer or Internet based, and they typically include assessment and tracking components (CTA, 2009).

Social Networking

Social networking technologies focus on building communities of interest that help older adults communicate, organize, and share with other older adults and with their care providers (CTA, 2009). Social networking can reduce feelings of social isolation, which are associated with poor quality of life and life satisfaction (Aylaz et al., 2012). Increasing social contact through installation of video phones has also been shown to alleviate caregiver distress who for those who provide support to a person living with dementia (Czaja et al., 2013).

Policies Affecting Technology Implementation

RPM, and other technologies, are receiving increased attention from policy analysts and policy makers. Three examples illustrate current policy discussions and actions:

1. The federal Commission on Long-term Care (2013) issued a report to Congress. This report details 28 recommendations, including recommendations that recognize the importance of new technologies to strengthen care coordination and support caregivers. For example, two of these recommendations describe problems that may be addressed through new types of technology:

    > <u>Problem to be solved</u>: *Activity underway now to develop the platform for electronic health records (EHRs) does not currently incorporate the LTSS components of care in a way that would enable all care providers to have access to a unified care plan. … Some*

states have begun to incorporate LTSS in state-level Health Information Exchanges (HIE) that enable providers to exchange health records for purposes of providing coordinated services.

Recommendation: *Use technology more effectively to mobilize and integrate community resources and to share information among providers, individuals and family caregivers across settings of care*."

Problem to be solved: *It is important that caregivers have access to all the information that they need to provide care, in addition to being listed on medical records.*

Recommendation: *Ensure family caregivers have access to relevant information through technology.*

2. The National Academy of Sciences, Engineering, and Medicine conducted a workshop entitled "Strengthening the Workforce to Support Community Living and Participation for Older Adults and Individuals with Disabilities: Proceedings of a Workshop." One section of the workshop was titled "Harnessing the potential of technology to enable community living and participation and optimize person-centered services" (National Academies of Sciences, Engineering, and Medicine, 2017). One speaker predicted emerging technology may lead to changes in the skills required for LTSS workers and the training needed by those workers.

3. Centers for Medicare and Medicaid Services (CMS) announced, in 2016, that states may cover expenditures for "substitutes for human assistance. "For example, an attendant assisting an individual with transferring from sitting to standing would be considered an ADL and therefore, considered a covered CFC activity. … the state could cover the cost of [a] seat lift, so the individual can get up and sit down independently…" (Wachino, 2016). In addition, CMS announced payment changes for RPM on Oct 31, 2018 (cms.gov, 2018). Under the heading "Fostering Innovation," this announcement states:

   *"**The Use of Remote Patient Monitoring under the Medicare Home Health Benefit***

   CMS is finalizing its proposal to define remote patient monitoring in regulation for the Medicare home health benefit and to include the cost of remote patient monitoring as an allowable cost on the HHA cost report."

4. CMS created two CPT codes to support billing for RPM services in 2020: 99457 and 99458 (Wicklund, 2019).

   Under the new guidelines, CPT code 99457 covers the first 20 minutes per month of RPM services, defined as "remote physiologic monitoring treatment management services, clinical staff/physician/other qualified health care professional time in a calendar month

> *requiring interactive communication with the patient/caregiver during the month. CPT code 99458 would then be used for an additional 20 minutes.* (Wicklund, 2019).

State Medicaid organizations face several types of trade-offs as they explore strategies for encouraging beneficial new technologies, while also providing appropriate consumer protection. For example, distinct billing codes for specific technologies would allow the state to track utilization of various types of technologies. However, creation of these distinct billing codes also raises concerns about potentially blocking new technologies that may emerge in the future. In addition, remote cameras may help caregivers discern whether care recipients need help, but they also raise concerns about privacy and appropriate consent procedures (Berridge, 2018).

Finally, implementation of technology such as telemedicine may involve coordination between care recipients, unpaid caregivers, Home Health and/or Personal Care Aides, and healthcare providers. To the extent that healthcare providers are important team members, the distribution of healthcare providers across Nevada's non-urban counties may be an important issue. See Appendix Table A.2-5 for a list of hospitals in these counties.

APPENDIX 2

The Division of Health HCQC manages the licensing procedure for facilities to obtain a Residential Facility for Groups license. This Division also manages special endorsements for facilities. The license mandates most aspects of facility operations. Table A.2-1 provides a concise list of requirements for facilities to meet to obtain a Residential Facility for Groups license.

Table A.2-1: Nevada Assisted Living Facility License Requirements

Nevada, 2015

License Requirements
Public Financing
The Nevada Aging and Disability Services Division covers augmented personal care for older persons (65+ years) in a licensed residential facility for groups under the Medicaid Frail Elderly 1915(c) Waiver program. Augmented personal care includes homemaker services, chore services, social and recreational programming, personal care services, companion services, medication oversight, and services that will ensure that residents of the facility are safe, secure, and adequately supervised. Assisted living is covered under the Home and Community-Based Services for Persons with Physical Disabilities 1915(c) Waiver program that serves all age groups.
Background Checks
Within 10 days of hire, all employees must undergo a fingerprint criminal background check. Facilities may not accept the results of background checks conducted in other states or by companies other than the Department of Public Safety and the Federal Bureau of Investigation. Caregivers must have no prior convictions or findings of abuse, neglect, or exploitation or other serious convictions relating to the ability to care for dependent persons. All other staff must not have any convictions or history of abuse, neglect, or exploitation.
Provisions for Serving Persons with Dementia
Dementia Care Staff. A residential facility that provides care to persons with Alzheimer's disease must be administered by a person who has no less than 3 years of experience in caring for residents with Alzheimer's disease or other dementias in a licensed facility; or has a combination of education and training that the Bureau determines equivalent to the experience required. The admin- istrator is responsible for facility policies and services and must ensure that at least one member of the staff is awake and on duty at the facility at all times.
Dementia Staff Training. Within a week of employment, all staff must receive at least 2 hours of training in providing care, including emergency care, to residents with any form of dementia, including Alzheimer's disease; and providing support for the members of the resident's family. Within 3 months of employment and then annually, caregivers must complete 8 hours of training in providing care to a resident with any form of dementia, including Alzheimer's disease.

If an employee is licensed or certified by an occupational licensing board, at least 3 hours of required continuing education must address the provision of care to residents with dementia. Continuing education must be completed on or before the first anniversary date of employment.

Dementia Facility Requirements. Locked quarters are allowed in Alzheimer's/dementia units. Exits must have warning devices such as alarms, buzzers, horns, or other audible devices that are activated when a door is opened, or time-delay locks. Facilities must have a secure yard, completely fenced and gated with locking devices.

Provisions for Apartments and Private Units

Apartment-style units are not required. Facilities may provide private or shared rooms. No more than three residents may share a room. One toilet and sink is required for every four residents, and a bathtub or shower for every six residents.

Training Requirements

Within 60 days of employment, caregivers must receive at least 4 hours of training related to the care specific to the facility's resident population (e.g., the elderly, persons with mental illness, or persons with debilitating diseases or chronic illness; and must receive 8 hours of annual continuing education and training related to the care of such residents.

Within 30 days after an administrator or caregiver is hired, they must be trained in first-aid and cardiopulmonary resuscitation (CPR) and maintain a current certification based on the requirements of the certifying agency. The advanced certificate in first-aid and adult CPR issued by the American Red Cross or an equivalent certification will be accepted as proof of training.

Staffing Requirements

Type of Staff. The administrator provides oversight and direction for facility staff to ensure (a) residents receive needed services and protective supervision and (b) the facility is in compliance. Administrators must be licensed by the Nevada State Board of Examiners for Administrators of Facilities for Long-term Care and must designate one or more employees to be in charge of the facility when the administrator is absent. Caregivers provide personal care services and may assist with medication services after completing required training.

Facilities licensed for 20-49 residents must have one staff member designated to organize, conduct, and evaluate activities. Facilities with 50 or more residents must have a full-time person to assist with activities. Volunteers may be used to supplement the services and programs of a residential facility, but may not be used to replace staff members.

Staff Ratios. No minimum ratios. Facilities must maintain staffing patterns that are sufficient to meet residents' care needs and enable them to achieve and maintain their functioning, self-care, and independence. There must be at least one caregiver on facility premises if one or more residents are present. Facilities with more than 20 residents must ensure at least one employee is awake and on duty at all times. An additional employee must be available to provide care within 10 minutes of being informed that their services are needed.

Medication Provisions

Residents who are capable may self-administer medications. Unlicensed staff may administer medications after completing a 16-hour medication course from an approved medication training provider. Four of these hours must be hands-on training with a Bureau-approved provider. These staff annually must complete 8 hours of continuing education and pass an approved examination. Because they manage unlicensed staff, administrators also must take the same 16-hour medication course and annual 8 hours of continuing education.

Services

Services provided include personal care; at least 10 hours of social/recreational activities per week; protective supervision; laundry; and assistance with access to dental, optical, social, and related services needed by residents. Facilities endorsed to provide assisted living services must include services that enable the facility to retain residents who are otherwise prohibited from admission to the facility due to specified health conditions or requiring certain treatments (e.g., diabetics). Facilities that are endorsed to provide dementia care must offer activities related to gross motor skills, social activities, sensory enhancement activities, and outdoor activities.

Admission and Retention Policy

Facilities may not admit individuals who are bedfast or require 24-hour skilled nursing or medical supervision unless they are in a hospice program and have an approved exemption request from the Bureau. Facilities may not admit individuals who require restraints.

Disclosure Provisions

Facilities must make a full written disclosure to prospective residents regarding the type of personal care services available and their cost.

Definition of Residential Facility for Groups

Residential facilities for groups means establishments that furnish food, shelter, assistance, and limited supervision to persons who are aged or infirm, have physical or other disabilities, or have chronic illnesses. The term includes assisted living facilities.

Source: Carder et al., 2015

Table A.2-2: State Residential Care and Assisted Living Requirements						
State	Unlicensed Staff May Administer Medications	Registered Nurse or Licensed Practical Nurse Required	Minimum Staffing Ratio Mandates	Building Design Mandates for Dementia Care Units	Medicaid Waiver Financing Available	Facility Administrator Required*
Alabama		x		x	No public financing	x
Alaska	x	x		x	x	x
Arizona		x			x	x
Arkansas		Depends on Level of License	x	x	x	x
California		x	x	x	x	x
Colorado	x	x		x	x	x
Connecticut	x	x			x	x
Delaware		x			x	x
District of Columbia	x				x	x
Florida		x	x	x	x	x
Georgia	x	x	x	x	x	x
Hawaii	x	x			x	x
Idaho		x	x		x	x
Illinois		x		x	x	x
Indiana	x	x	x		x	x
Iowa	x	x		x	x	x
Kansas	x	x			x	x
Kentucky			x		No public financing	x
Louisiana				x	No public financing	x
Maine	x	Depends on Level of License		x	x	x
Maryland	x	x			x	x
Massachusetts		x		x	x	x
Michigan	x		x		State Plan Only	x
Minnesota	x	x			x	x
Mississippi		x	x	x	x	x
Missouri	x	x	x		State Plan Only	x
Montana	x	x		x	x	x
Nebraska	x	x			x	x
Nevada	x			x	x	x
New Hampshire	x	x			x	x

New Jersey	x	x			x	x
New Mexico	x	x	x	x	x	x
New York			x		x	x
North Carolina	x	x	x	x	State Plan Only	x
North Dakota	x	x			x	x
Ohio	x	x			x	x
Oklahoma	x	x			x	x
Oregon	x	x		x	x	x
Pennsylvania	x	x		x	No public financing	x
Rhode Island	x			x	x	x
South Carolina	x	x	x		State Plan Only	x
South Dakota	x	x		x	x	x
Tennessee		x			x	x
Texas	x			x	x	x
Utah	x	x			x	x
Vermont	x	x			x	x
Virginia	x	x		x	x	x
Washington	x	x		x	x	x
West Virginia	x	x		x	No public financing	x
Wisconsin	x	x			x	x
Wyoming		x		x	x	x

Source: Carder et. al., 2015

*Certain states allow for part-time instead of full-time administrators on site for smaller facilities with less residents.

Table A.2-3: State Adult Day Center Requirements

State	Required Provisions for Serving Participants with Dementia	Staff Training	Staff Ratios	Public Funding Source
Alabama	No	Varies for ADC vs. ADHC	1:10	1915(c) Waiver
Alaska	Yes	Basic Training	1:04	1915(c) Waiver
Arizona	No	Basic Training	None	Managed Care Waiver
Arkansas	Yes	Varies for ADC vs. ADHC	1:5, 1:8	1915(c) Waiver
California	Yes	Varies for ADC vs. ADHC	1:08	Managed Care Waiver
Colorado	No	Basic Training	1:09	1915(c) Waiver, Non-Medicaid Program
Connecticut	No	Basic Training	1:07	1915(c) Waiver, Non-Medicaid Program
Delaware	Yes	Basic Training	1:4, 1:8	1915(c) Waiver, Managed Care Waiver
District of Columbia	No	Basic Training	None	None
Florida	Yes	Basic Training	1:06	1915(c) Waiver, Managed Care Waiver, Non-Medicaid Program
Georgia	Yes	Basic Training	1:4, 1:8	1915(c) Waiver, Non-Medicaid Program
Hawaii	No	Varies for ADC vs. ADHC	1:06	Managed Care Waiver, Non-Medicaid Program
Idaho	No	Varies for ADC vs. ADHC	1:06	1915(c) Waiver
Illinois	No	Basic Training	1:06	1915(c) Waiver
Indiana	No	Varies for level of license.	1:4, 1:6, 1:8	1915(c) Waiver
Iowa	Yes	Basic Training	None	1915(c) Waiver
Kansas	Yes	Basic Training	None	1915(c) Waiver, Non-Medicaid Program
Kentucky	Yes	Varies for ADC vs. ADHC	1:05	1915(c) Waiver
Louisiana	Yes	Basic Training	1:09	1915(c) Waiver
Maine	Yes	Basic Training	1:06	1915(c) Waiver, Non-Medicaid Program, State Plan
Maryland	No	Basic Training	1:7, 1:8	1915(c) Waiver, Non-Medicaid Program, State Plan
Massachusetts	Yes	Varies for ADC vs. ADHC	1:4, 1:6, 1:8	1915(c) Waiver, Non-Medicaid Program, State Plan
Michigan	Yes	Varies for ADC vs. Dementia ADC	1:10	1915(c) Waiver, Non-Medicaid Program
Minnesota	Yes	Basic Training	1:5, 1:8	1915(c) Waiver, Managed Care Waiver, Non-Medicaid Program
Mississippi	No	Basic Training	1:4, 1:5, 1:6, 1:7, 1:8, 1:9, 1:10	1915(c) Waiver
Missouri	Yes	Basic Training	1:08	1915(c) Waiver
Montana	No	Basic Training	None	1915(c) Waiver

Nebraska	x	x			x	x
Nevada	x			x	x	x
New Hampshire	x	x			x	x
New Jersey	x	x			x	x
New Mexico	x	x	x	x	x	x
New York			x		x	x
North Carolina	x	x	x	x	State Plan Only	x
North Dakota	x	x			x	x
Ohio	x	x			x	x
Oklahoma	x	x			x	x
Oregon	x	x		x	x	x
Pennsylvania	x	x		x	No public financing	x
Rhode Island	x			x	x	x

South Carolina	No	Basic Training	1:08	1915(c) Waiver
South Dakota	Yes	Basic Training	1:5, 1:6	1915(c) Waiver, Non-Medicaid Program
Tennessee	Yes	Basic Training	1:08	Managed Care Waiver
Texas	No	Basic Training	1:08	1915(c) Waiver, Managed Care Waiver, State Plan
Utah	Yes	Basic Training	1:6, 1:8	1915(c) Waiver
Vermont	No	Basic Training	1:07	Managed Care Waiver , State Plan
Virginia	No	Basic Training	1:06	1915(c) Waiver
Washington	No	Basic Training	1:06	1915(c) Waiver, Managed Care Waiver, Non-Medicaid Program
West Virginia	Yes	Basic Training	1:06	Non-Medicaid Program
Wisconsin	No	Basic Training	1:06	1915(c) Waiver, Managed Care Waiver
Wyoming	No	Basic Training	1:06	1915(c) Waiver, Non-Medicaid Program

Source: Carder et. al., 2015

Basic training includes workplace safety, CPR, first aid, universal health precautions, fall prevention, dementia direct care, etc.

Table A.2-4: Outcomes, Vendors, and Information Sources for the Center of Technology and Aging Report	
Outcomes	Vendors
Social Networking	
1. Provide support for patients, especially those with chronic conditions.	Patientslikeme, DiabetesMine, Jive Kinnexxus, Facebook, Tyze
2. Deliver services to patients who may not be able to attend in person groups.	
3. Caregivers can manage and coordinate care.	
4. Clinicians can educate and promote preventative health, and remotely assist a patient.	
Cognitive Fitness and Assessment	
1. Reduced cognitive decline especially for Alzheimer's or dementia patients[1]	Nintendo, Dakim, Brain Resources, Archimage, Second Life, HopeLab
2. Assess cognitive decline/ lack of decline with standardized measures	
3. Assist in rehabilitation of strokes and traumatic brain injuries	
Disease Management	
1. Decreased utilization of emergency department and hospital services	Healthways, Health Dialog, LifeMasters, McKesson Health Solutions and many more
2. Health status improvements	
3. Decreases in health care costs	
4. Increased utilization of evidence-based medical practices	
5. Improvements in a patient's self-management skills	
6. Improved Satisfaction with care	
7. Increased perceived quality of life	
Remote Training and Supervision (RTS)	
1. Reduce Severity of the estimated shortage of registered nurses and other workforce shortages by increasing education capacity of institutions.	MedSmart, InTouch, acquire Training Solutions
2. Provide consultation and support from more skilled professionals for less skilled family caregivers.	

Assistive Technologies	
There is limited evidence with regard to the effectiveness of the assistive technologies in improving patient outcomes, reducing workforce demand, and reducing overall health care expenses[2]	ADT, ScanSoft, IBM, Honda, AbleNet
Remote Patient Monitoring (RPM)	
1. Reduce unnecessary hospital visits	Many; some examples include Bosch, Philips, Cisco, Intel and other companies
2. Improve medication compliance	
3. Enhanced communication between patient, caregivers, and providers	
4. Decrease in emergency visits[3]	
5. Decreased hospitalizations for cardiac issues[3]	
6. Reduced costs for end of life care[4]	
Medication Optimization	
1. Help physicians and pharmacists provide the right medications in the right dose	Many; some examples include Pillbox Pager, EMMATM, Mede-MonitorTM, Health Hero® Network
2. Improve patent medication compliance	

[1] Wilson et al., 2003

[2] Fuhrer, Agree, Freedman, Cornman, Wolf, Marcotte, 2007

[3] Coye, Haselkorn & DeMello, 2009

[4] Darkins et al., 2008

Source: The Center for Technology and Aging, 2009

Table A.2-5: Hospitals located in Nevada's Non-Urban Counties	
Banner Churchill Community Hospital	Humboldt General Hospital
801 East Williams Avenue	118 East Haskell Street
Fallon, Nevada 89406	Winnemucca, Nevada 89445
Phone: (775) 423-3151	Phone: (775) 623-5222
Fax: (775) 423-3365	Fax: (775) 623-5904
Battle Mountain General Hospital	Incline Village Community Hospital
535 South Humboldt	880 Alder Avenue
Battle Mountain, Nevada 89820	Incline Village, Nevada 89451
Phone: (775) 635-2550	Phone: (775) 833-4100
Fax: (775) 635-8844	Fax: (775) 832-3800
Boulder City Hospital	Mt. Grant General Hospital
901 Adams Boulevard	200 South "A" - PO Box 1510
Boulder City, Nevada 89005	Hawthorne, Nevada 89415
Phone: (702) 293-4111	Phone: (775) 945-2461
Fax: (702) 293-0430	Fax: (775) 945-2359
Carson Valley Medical Center	Pershing General Hospital
1107 Hwy 395	855 6th Street - PO Box 661
Gardnerville, NV 89410	Lovelock, Nevada 89419
Phone: (775) 782-1500	Phone: (775) 273-2621
Fax: (775) 783-4849	Fax: (775) 273-3213
Desert View Hospital	South Lyon Medical Center
360 S Lola Lane	213 S Whitacre
Pahrump, NV 89048	Yerington, Nevada 89447
Phone: (775) 751-7500	Phone: (775) 463-2301
Fax: (775) 751-7835	Fax: (775) 463-7864
Grover C. Dils Medical Center	William Bee Ririe Hospital
700 N Spring Street - PO Box 1010	1500 Avenue H
Caliente, Nevada 89008	Ely, Nevada 89301
Phone: (775) 726-3171	Phone: (775)289-3001
Fax: (775) 726-3797	Fax: (775) 289-3498

Source: Nevada Rural Hospital Partners and 2019 Nevada Rural and Frontier Health Data Book 9th edition (Table 6.10)

The Northeastern Nevada Regional Hospital in Elko, NV and Mesa View Regional Hospital in Mesquite, NV are not listed above because they are not part of the Nevada Rural Hospital Partners.

Desert View Hospital, Northeastern Nevada Regional Hospital, and Mesa View Regional Hospital are all for-profit hospitals, and all the other hospitals are Not-for-profit 501(c)(3)s.

CHAPTER 3: WORKFORCE ISSUES

KEY POINTS

- As of 2019, one in five non-urban Nevadans are age 65 or older compared to one in six nationally. Since 1990, the percentage of non-urban Nevada residents who are in this older age group has doubled from 10.8% to 21.1%.
- Although the number of people employed by Long-Term Services and Supports (LTSS) providers increased between 2015 and 2019, this workforce did not increase as quickly as the number of older adults. The number of LTSS workers per 100 older adults decreased.
- LTSS providers employ individuals in an array of occupations including personal care, healthcare practitioners, healthcare support, and business occupations.
- Home Health (HH) Aides and Personal Care Aides (PCAs) are an important component of this workforce. Aides account for three-fourths of the weekly hours of employees working in Residential Care Communities (RCCs) and nearly 40% of weekly hours in Adult Day (AD) programs. These workers are primarily female, have a high school degree or some college, and are citizens. On average, HHAs and PCAs earn $20,642 annually ($13.99 per hour) in the U.S. and $18,877 ($12.53) in Nevada. These aides work, on average, 35 hours per week.
- The turnover rate among PCAs is high. Factors contributing to worker turnover include low wages and benefits, unpleasant duties, lack of opportunity for advancement, on-the-job injuries, and insufficient work hours. The issue of workhours is complex. Aides must piece-together schedules constrained by the number of hours of care each client is authorized to receive per day or per week, and this authorization is driven by payer reimbursement criteria. Most care recipients receive fewer than eight hours of care per day. This means that aides might work at multiple homes in a day with travel time between these homes. Nevada Medicaid reimburses Personal Care agencies a 15-minute rate (which equates to ann hourly rate) for care delivered. Nevada Division of Health Care Financing and Policy (DHCFP) does not specifically reimburse agencies for travel time. Beginning in 2015, federal regulations mandate that agencies must reimburse Personal Care aides for travel time between clients during the workday (U.S. Wage and Hour Division, 2016).
- The PCA workforce issue is a two-part issue.
    - First, agencies may have difficulty recruiting PCAs. The median wage is $11.70, which exceeds the current minimum wage. This implies that many agencies believe that above-minimum wages are needed to attract individuals into this occupation. Under current Nevada law, the minimum wage will be $11 per hour for employers offering health insurance in 2024.
    - Second, some agencies may not be willing to accept Medicaid reimbursement rates. The current rate paid to agencies is lower than the rate set in 2002. Since that time, the minimum wage increased from $5.15 per hour to $8.00 per hour (for employers offering health insurance), the Consumer Price Index increased 41% from 181 to 257, and federal regulations were modified to begin requiring agencies to pay aides for between-client travel time.

- Other states are implementing policies to address PCA workforce issues. In 2019 and 2020, 30 states increased the Medicaid hourly reimbursement rate. In addition, 17 states implemented new workforce development policies including recruiting, training, and credentialing.

Workforce training, licensure, and availability pose important issues for healthcare administrators, payers, and policy makers. The U.S. DHHS et al. (2018) project the demand for direct care workers (i.e., nursing assistants, HH Aides, PCAs,[14] and psychiatric assistants and aides) could grow by 48% between 2015 and 2030. This increased demand is driven by demographic shifts, increased longevity, and increased disability prevalence.

Despite the resulting high demand for Long Term Services and Supports (LTSS) workers, worker retention is low. Eight-month worker retention for HH Aides is only 32% (Osterman, 2017).

This chapter includes three sections to address key aspects of these issues. The first section focuses on the structure of the workforce that delivers LTSS. This section explains the codes used to structure relevant employment data, growth of the older adult population, and employment data for multiple industries that provide LTSS at the national level and in Nevada. Although LTSS are utilized by both older adults and younger adults with specific conditions, we focus on the growth of the older adult population because LTSS utilization rates are higher among older adults than among younger adults.

The second section focuses on workforce demographic characteristics and occupations, both nationally and Nevada-specific. The third section discusses issues and challenges facing the workforce that provides LTSS and the organizations that employ this workforce. This section also discussed policy initiatives implemented in other states to address these issues.

Part I: Health Care Industries for Older Adults and People with Disabilities

The framework for this study of the workforce is based on Watson's (2007) work. In part one, industry data is defined by a six-digit NAICS (North American Industry Classification System) code used to retrieve data. In Table 3.1, we list industries with their descriptive NAICS codes and definitions. For example, *Health and Social Assistance* is Sector 62, which is the first two numbers of the six-digit code. The third digit is coded '1' for Ambulatory Services, '2' for Hospital Services, '3' for Nursing and Residential Services and '4' for Social Assistance. The additional three digits identify more specific industries within this hierarchy.

The following table shows the NAICS hierarchy for the sector *Health and Social Assistance*. There are standalone NAICS codes such as *Home Health Care Services* without further descriptive sub-industries. *Home Health Care* is in the section beginning with '621,' *Ambulatory*

[14] HH Aide: "Provide routine individualized healthcare such as changing bandages and dressing wounds, and applying topical medications to the elderly, convalescents, or people with disabilities at the patient's home or in a care facility. Monitor or report changes in health status. May also provide personal care such as bathing, dressing, and grooming of patients." (Bureau of Labor Statistics, 2018)
Personal Care Aide: "Assist the elderly, convalescents, or people with disabilities with daily living activities at the person's home or in a care facility. Duties performed at a place of residence may include keeping house (making beds, doing laundry, washing dishes) and preparing meals. Aides may provide assistance at non-residential care facilities. Aides may advise families, the elderly, convalescents, and people with disabilities regarding such things as nutrition, cleanliness, and household activities." (Bureau of Labor Statistics, 2018)

Care. Section '622' contains *Hospitals*, which are not part of this study. Section '623' is *Nursing and Residential Care Facilities* which has many subcategories. The full six-digit code, which is the most detailed category available, was used to retrieve more specific data (e.g., 623110, 623210, and 623220). When categories are without data, estimates are calculated from the data which are available. This will be described later in the report when these estimates are used.

Table 3.1: Industry Description and NAICS Codes for Health and Social Assistance
Nevada, 2020

NAICS Code	Industry Description
6216	Home Health Care Services
623	Nursing and Residential Care Facilities
623110	Nursing Care Facilities (Skilled Nursing Facilities)
6232	Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities
623210	Residential Intellectual and Developmental Disability Facilities
623220	Residential Mental Health and Substance Abuse Facilities
6233	Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly
623311	Continuing Care Retirement Communities
623312	Assisted Living Facilities for the Elderly
6239	Other Residential Care Facilities (temporary shelter and correctional camps)
624	Social Assistance
6241	Individual and Family Services
624110	Child and Youth Services
624120	Services for the Elderly and Persons with Disabilities
624190	Other Individual and Family Services

Source: www.census.gov

Because multiple types of care are combined within these codes, additional descriptions are needed. For the purposes of this report, the following list was used to find labor force data (when available) to the sixth digit. The national data use the full six-digit code. Due to suppression of categories with small numbers of observations, the Nevada data do not always go to the six-digit level. For example, all but one of the following industries are bundled together in code 6241 (*Individual and Family Services*) in the Nevada data. The Bureau of Labor Statistics (BLS) descriptions for these codes are detailed below:

> *Code 6216, Home Health Care Services*: Services are delivered by home health care agencies, visiting nurse associations, home infusion therapy services, and in-home hospice care services. Skilled nursing services are available in the patient's own home.

Code 623311, Continuing Care Retirement Communities: Services are for assisted living facilities with on-site nursing, continuing care retirement communities, or retirement communities with nearby on-site nursing.

Code 623312, Assisted Living Facilities: Services for homes for the aged, homes for older adults, old age homes, old soldiers' homes, rest homes, retirement homes, and senior citizens' homes all without onsite nursing care facilities.

Code 6241, Individual and Family Service: Services are engaged in providing nonresidential social assistance to children and youth, the elderly, people with disabilities, and all other individuals and families.

Code 624120 describes services specifically for the elderly and the disabled. These services provide:

- Job training for people diagnosed with intellectual and developmental disabilities or people with disabilities,
- Residential care for the elderly and people diagnosed with intellectual and developmental disabilities,
- Places for these services include facility centers for disabled people, the elderly, and people diagnosed with intellectual and developmental disabilities:
    - Adult day care centers
    - Senior citizen centers
    - Adult community centers
    - Companion services (for disabled people, the aged, and people diagnosed with intellectual and developmental disabilities)
    - Day care centers (for disabled people, older adults, and people diagnosed with intellectual and developmental disabilities)
    - Disability support groups
    - Home care of older adults (non-medical)
    - Homemaker's service for older adults and people with disabilities (non-medical)
    - Self-help organizations (for disabled people, the aged, and people diagnosed with intellectual and developmental disabilities)

This coding system was not designed to separate types of services and locations of service or to distinguish between services provided to children, youth, and adults. These distinctions are critical for the workforce analysis in this chapter. Hence, the numbers reported here are best estimates of the workforce that provides LTSS to adults.

Recent growth of older adult populations in Nevada and in the U.S. pose significant challenges for LTSS providers, payers, and policy makers. According to the U.S. Census Bureau, Nevada has one of the fastest growing aging populations in the country, fourth after Delaware, Hawai'i, and South Carolina. Figure 3.1 displays the percentages of population aged 65 and older in the

United States, the State of Nevada, and Nevada's non-urban counties from 1990 to 2019. In 1990, the older adults represented a lower percentage of the population in Nevada than in the U.S. In non-urban Nevada, however, the trend since 1990 highlights that older adults now constitute a higher percentage of the population in Nevada than in the U.S. As of 2019, one in five non-urban Nevadans are in this age category compared to one in six nationally. Since 1990, the percentage of non-urban Nevada residents who are age 65 or older doubled, from 10.8% to 21.1%.

Figure 3.1: Percentage of the Population Age 65 and Older– 1990 to 2019

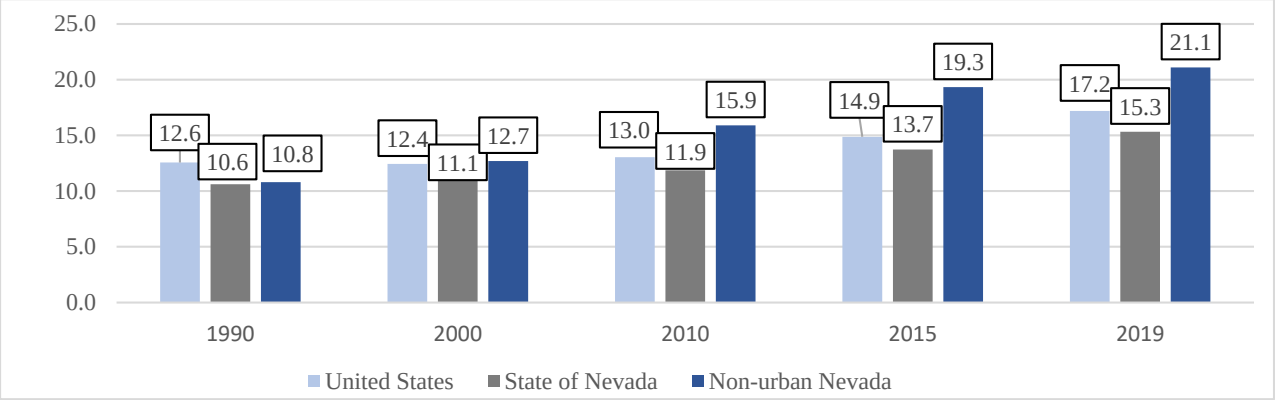


Table 3.2 presents population data for people aged 65 and older in Nevada and for the United States. These data show a continuing increase since the year 2000 for the U.S.—as baby boomers aged—and since 1990 for Nevada. These population estimates will be used later in the report to estimate the change in the ratio of workers to older adults from 2015 to 2019.

Table 3.2 shows the population of Nevada grew by 163% during the three decades from 1990 to 2019, and the population of the U.S. grew more slowly (32%) during those years. The older adult populations grew more rapidly: The number of older adults in Nevada grew by 279% since 1990, whereas the number of older adults in the U.S. grew by 73%.

Table 3.2: Nevada and United States Older Adult Population 1990 - 2019							
						Change from 1990-2019	
Location	1990	2000	2010	2015	2019	Number	Percent
Population							
United States	248,709,873	281,421,906	308,745,538	320,635,163	328,239,523	79,529,650	32%
US Aged 65 and Older	31,242,000	34,992,999	40,268,000	47,667,696	54,159,521	22,917,521	73%
Nevada	1,201,756	1,998,257	2,700,551	2,897,585	3,160,955	1,959,199	163%
Nevada Aged 65 & Older	127,631	222,277	320,207	397,622	484,328	356,697	279%
Percent of Population Ages 65 and Older							
United States	12.6%	12.4%	13.0%	14.9%	16.5%	-	-
Nevada	10.6%	11.1%	11.9%	13.7%	15.3%	-	-
Non-urban Nevada	10.8%	12.7%	15.9%	19.3%	21.1%	-	-

Source: U.S Census and Nevada State Demographer (2020)

Carson City is not included in the non-urban percentage.

Tables 3.3 and 3.4 report changes in the LTSS workforce from 2015 to 2019 in Nevada and in the U.S. Though these tables show increasing numbers in the labor force, they also show the workforce did not increase as quickly as the population. Therefore, the numbers of LTSS workers per 100 older adults declined in all but two of the LTSS industries.

Calculations in the report use data from 2015 and 2019 for both the number of workers and the percent change over five years as the data were available for both Nevada and the U.S. (Quarterly Census of Employment and Wages, Bureau of Labor Statistics, 2020b). We also report the number of workers per 100 older adults for Nevada and the U.S. These ratios compare the availability of LTSS workers in Nevada and in the U.S.

Table 3.3 shows the change in employment for the LTSS industries in Nevada. Total LTSS employment increased from 29,024 to 34,400 over the five years, an increase of 5,376 workers or 19%. Employment increased in seven of the nine industries. After dividing the 2015 number of employees by the number of older adults in Nevada in 2015 (397,622 from Table 3.2) and multiplying by 100, we obtain the number of employees per 100 older adults in Nevada in 2015. We use a comparable procedure to compute the number of employees per 100 adults in Nevada in 2019, after changing the number of older adults in Nevada to 484,328 for 2019. Total LTSS industry employment dropped from 7.30 workers per 100 older adults in 2015 to 7.10 workers per 100 older adults in 2019. This was a 3% drop in the number of workers per 100 older adults.

Table 3.3: Employment in Health Care Industries Supporting Older Adults and People with Disabilities in Nevada
2015-2019

	Total Number Employed				Total Number Employed per 100 Older Adults			
Industry Sector	2015	2019	Difference	Percent Difference	2015	2019	Difference	Percent Difference
Home Health Care	4,765	5,766	1,001	21%	1.20	1.19	-0.01	-0.7%
Services for Older Adults and Disabled	9,869	12,294	2,425	25%	2.48	2.54	0.06	2.3%
Nursing and Residential Care	14,390	16,340	1,950	14%	3.62	3.37	-0.25	-6.8%
Community Care/Assisted Living	3,626	4,323	697	19%	0.91	0.89	-0.02	-2.1%
*Continuing Care Retirement	1,111	1,403	292	26%	0.28	0.29	0.01	3.7%
*Assisted Living Facilities	2,515	2,920	405	16%	0.63	0.60	-0.03	-4.7%
Nursing Care Facilities	6,281	7,324	1,043	17%	1.58	1.51	-0.07	-4.3%
**Residential Mental Health Facilities	3,926	4,260	334	9%	0.99	0.88	-0.11	-10.9%
**Other Residential Facilities	557	433	-124	-22%	0.14	0.09	-0.05	-36.2%
Total	29,024	34,400	5,376	19%	7.30	7.10	-0.20	-2.7%

Source: QCEW from Bureau of Labor Statistics, 2020b

*These facilities are a subset of Community Care/Assisted Living and are not part of the total employment.

**These facilities are a subset of Nursing Care Facilities and are not part of the total employment.

Community Care/Assisted Living and Nursing Care Facilities are part of the Nursing and Residential Care industry and are not added into the total employment.

Comparison of the 2015 and 2019 rates per 100 older adults by industry indicates steady growth for two industries: *Services for Older Adults and People with Disabilities* (0.06 or 2.3%) and *Continuing Care Retirement* (0.01 or 3.7%). The workforce grew by 19%, and the population grew by 21.8%. The difference between these two growth rates mean fewer people were available to work in these industries per 100 older adults living in Nevada. To achieve the 2015 ratio of workers to 100 older adults with the 2019 number of older adults, employment would have to increase by 968 individuals.[15]

[15] Calculated via 0.2 * 484,328 / 100, where 484,328 was the number of older adults in 2019 and 0.2 was the change in the ratio of workers per 100 adults.

Table 3.4 reports comparable information about the U.S. workforce in the same industries. The 2015 and 2019 numbers of workers per 100 older adults are substantially larger in the U.S. than in Nevada. In 2019, for example, there were 7.1 workers in the LTSS industries per 100 older adults in Nevada, compared to 12.9 workers per 100 older adults in the U.S. Like in Nevada, the growth of the nationwide workforce did not keep pace with the growth of the aging population in the U.S. The number of workers per 100 older adults in the U.S. dropped by 9.2% between 2015 and 2019.

Table 3.4: Employment in Health Care Industries Supporting Older Adults and People with Disabilities in the United States
2015-2019

	Total Number Employed (Thousands)				Total Number Employed per 100 Older Adults			
Industry Sector	2015	2019	Difference	Percent Difference	2015	2019	Difference	Percent Difference
Home Health Care	1,321.3	1,517.7	196.4	14.9%	2.77	2.80	0.03	1.1
Services for Older Adults and Disabled	1,576.5	1,896.5	320.0	20.3%	3.31	3.50	0.19	5.9
Nursing and Residential Care	3,480.2	3,547.9	67.7	1.9%	7.30	6.55	-0.75	-10.3
Community/Assisted Living	878.4	969.2	90.8	10.3%	1.84	1.79	-0.05	-2.9
*Continuing Care Retirement	470.6	511.5	40.9	8.7%	0.99	0.94	-0.04	-4.3
*Assisted Living Facilities	407.8	457.7	49.9	12.2%	0.86	0.85	-0.01	-1.2
Nursing Care Facilities	1,717.9	1,666.0	-51.9	-3.0%	3.60	3.08	-0.53	-14.6
**Residential Mental Health Facilities	707.3	740.8	33.5	4.7%	1.48	1.37	-0.12	-7.8
**Other Residential Facilities	176.6	179.2	2.6	1.5%	0.37	0.33	-0.04	-10.7
Total Employment	6,378.0	6,962.1	584.1	9.2%	13.38	12.85	-0.53	-3.9

Source: QCEW from Bureau of Labor Statistics, 2020b

*These facilities are a subset of Community Care/Assisted Living and are not part of the total employment.

**These facilities are a subset of Nursing Care Facilities and are not part of the total employment.

Community Care/Assisted Living and Nursing Care Facilities are part of the Nursing and Residential Care industry and are not added into the total employment.

Table 3.5 estimates the number of additional workers that would be needed in Nevada to match the same number of workers per 100 older adults as the national average. Table 3.5 combines the data from the previous two tables. The percent increases required to achieve the same numbers of workers per 100 older adults as in the U.S. overall range from 38% for *Services for Older Adults and Disabled* to 226% for *Continuing Care Retirement*.

Table 3.5: Difference between Nevada and National Average 2019						
Industry Sector	Nevada Labor Force	Labor Force per 100 Older Adults (Nevada)	Labor Force per 100 Older Adults (U.S.)	Difference between Nevada and U.S. Labor Force per 100 Older Adults	Difference statewide = number of additional workers to achieve the nationwide number of workers per 100 older adults	Percent Increase in Labor Force
Home Health Care	5,766	1.19	2.80	1.61	7,806	135.4%
Services for Older Adults and Disabled	12,294	2.54	3.50	0.96	4,666	38.0%
Nursing and Residential Care	16,340	3.37	6.55	5.75	15,387	94.2%
Community Care/Assisted Living	4,323	0.89	1.79	0.90	4,344	100.5%
*Continuing Care Retirement	1,403	0.29	0.94	0.65	3,171	226.0%
*Assisted Living Facilities	2,920	0.66	0.85	0.24	1,173	40.2%
Nursing Care Facilities	7,324	1.51	3.08	1.56	7,575	103.4%
**Residential Mental Health	4,260	0.88	1.37	0.49	2,365	55.5%
**Other Facilities	433	0.09	0.33	0.24	1,169	270.0%
Total Employment	34,400	7.10	12.85	3.18	27,859	81.0%

Source: QCEW from Bureau of Labor Statistics, 2020b

*These facilities are a subset of Community Care/Assisted Living and are not part of the total employment.

These facilities are a subset of Nursing Care Facilities and are not part of the total employment.

Community Care/Assisted Living and Nursing Care Facilities are part of the Nursing and Residential Care industry and are not added into the total employment

Part II: Occupations in Health Care Industries for Older Adults and People with Disabilities

Part two has three subsections. The first subsection explains the relationship between industries and occupations. The second subsection reports data on demographic characteristics of the national and Nevada LTSS workforces. The third subsection discusses additional issues.

The LTSS industries share some similar occupation composition. Health care workers constitute a large percentage of employment in these industries, whereas personal care and service occupations are primarily utilized in two industries (*Home Health Care* and *Services for Older*

Adults and People with Disabilities). The national workforce data are from the Bureau of Labor Statistics (2020b), and the Nevada workforce data are from the Nevada Department of Employment, Training and Rehabilitation (NV DETR, 2020).

Health care occupations begin with a two-digit Standard Occupation Code (SOC) such as SOC code '29' for health care practitioners or SOC code '31' for health care support staff. Occupations are important because staffing patterns vary from industry to industry and LTSS industries employ workers from health care, personal care, and business occupations, as well as other industries.[16] Community and social services occupations (e.g., counselors, recreation therapists, and fitness workers) vary by LTSS industry. Other types of non-medical support staff have a large presence in residential care industries such as food preparation staff, buildings and grounds, and security. Office administration and management staff appear in all areas.

Tables 3.6 through 3.9 discuss the national distribution of occupations in these selected industries. Tables presenting Nevada data are later in this section. Table 3.6, focusing on the *Home Health Care* industry, presents the model used in subsequent tables. This table details occupation groups, names of the occupations, percentage of occupations within a group, and the overall percentage of the workforce by occupation for this industry. Home health care provides the narrowest range of services in the client's home; primarily health care and personal care services.

Health care support staff, health care practitioners, and PCAs comprise 86% of the national employment in home health care. The next column lists the titles for the major occupations. For health care support with 41.8% of the total staffing, the major occupations are HH Aides (70.4%), nursing assistants and aides (12.5%), therapy assistants (2.0%), and assorted other staff (15.2%), such as medical records clerks.

The next largest occupation group is health care practitioners. The major practitioners are primarily registered nurses and licensed practical nurses (79.7%). The remaining 20% are therapists (14.9%) and other professionals (e.g. physicians; 5.4%). The third largest group are the personal care staff (21.5%). Within this occupational group, 98% of the staff are PCAs. Community and social services have a small presence (2.6%). Note that the management, office administration, and support staff account for almost 12% of total employment.

The last column shows the distribution of employees by occupation. The major occupations are HH Aides (29.4%), PCAs (21.1%), RNs and LPNs (17.8%), and office administration (8.6%).

[16] Personal care aides are intermingled with home health aides and not considered a health care occupation. Personal care aides will be discussed later in the appropriate industry. In 2019, personal care aides were merged into home health care aides for these industries in Nevada.

Table 3.6: Home Health Care Industry in the United States 2018				
Occupation Group	Occupation Title	Employed (thousands)	Percent of Occupation	Percent of Total Employment
Health care support	Home health aides	441.1	70.4%	29.4%
	Nursing assistants etc.	78.2	12.5%	5.2%
	Therapy assistants	12.3	2%	0.8%
	Other staff	95.4	15.2%	6.4%
Sub-total		627	100%	41.8%
Health care practitioner	Registered nurses	177.8	53.2%	11.9%
	LPNs	88.6	26.5%	5.9%
	Therapists	49.9	14.9%	3.3%
	Other Staff	18	5.4%	1.2%
Sub-total		334.3	100%	22.3%
Personal care and service	Personal care aides*	316.4	98%	21.1%
	Other staff	6.5	2%	0.4%
Sub-total		322.9	100%	21.5%
Community & social services		38.8		2.6%
Management		37.9		2.5%
Office admin and support	Operations, IT, et al	128.56		8.6%
Buildings & grounds		2.2		0.1%
Food preparation		2.4		0.2%
Transportation		4.6		0.3%
Sub-total		214.5		14.3%
Total		1,498.60		100.0%

Source: Nevada Department of Employment, Training and Rehabilitation 2018. Retrieved 2020.

Note: Labor collection has combined health care aides and personal care aides together as an occupation. Separating aides into their respective categories was estimated from the data for the previous year which was divided using a percentage developed by A. Watson, see bibliography.

Services for Older Adults and People with Disabilities in the United States are the subject of Table 3.7. These occupations primarily deliver nonmedical services. There are very few health care support staff and health care practitioners listed, less than 10%. Most of the staff (72.8%) are in personal care and 95.9% of them are PCAs. These aides perform a variety of nonmedical services, including day care, homemaking, and social activities. Community and social services are the third largest group due to counselors, social workers, and nonmedical therapists being part of the staffing model (5.7%). Office staff and support staff comprise 12% of the labor pool.

Table 3.7: Services for Older Adults and People with Disabilities in the United States 2018				
Occupation Group	Occupation Title	Employed (thousands)	Percent of Occupation	Percent of Total Employment
Health care support	Home health aides	77.2	56.1%	4.1%
	Nursing assistants	37.9	27.5%	2.0%
	Therapy assistants	1.3	1.0%	0.1%
	Other staff	21.3	15.4%	1.1%
Sub-total		137.7	100.0%	7.3%
Health care practitioner	Registered nurses	19.1	48.2%	1.0%
	LPNs	8.7	21.9%	0.5%
	Therapists	8.7	21.9%	0.5%
	Other Staff	3.5	8.8%	0.2%
Sub-total		40	100.8%	2.1%
Personal care and service	Personal care aides	1,324.10	95.9%	69.8%
	Recreation & fitness staff	13	0.9%	0.7%
	Other staff	44	3.2%	2.3%
Sub-total		1,381.10	100.0%	72.8%
Community & social services		109		5.7%
Management		46.8		2.5%
Office admin and support	Operations, IT, et al	123.2		6.5%
Buildings & grounds		9.2		0.5%
Food preparation		14		0.7%
Education		13		0.7%
Transportation		22.5		1.2%
Sub-total		228.7		12.1%
Total		1,896.50	-	100%

Source: Nevada Department of Employment, Training and Rehabilitation 2018. Retrieved 2020.

The last column shows the percentage of employees by occupation. The major occupation, PCAs, accounts for 69.8% of the workforce in this industry.

Continuing Care Retirement Communities and *Assisted Living Facilities* in the United States provide an array of services associated with residential facilities and have a more diversified staffing pattern than seen in *Home Health Care* or *Services for Adults and People with Disabilities*.

Information about these occupations is presented in Table 3.8. The two health care occupation groups contain over 50% of the staff, a little less than the home health care model. In the health care support group, over half of the workers are HH Aides (54.2%) with the remainder being nursing assistants, including orderlies and aides (39.9%).

Table 3.8: Continuing Care Retirement Communities and Assisted Living Facilities in the United States
2018

Occupation Group	Occupation Title	Employed (thousands)	Percent of Occupation	Percent of Total Employment
Health care support	Home health aides	214.3	54.2%	22.6%
	Nursing assistants, etc.	157.6	39.9%	16.6%
	Therapy assistants	2.1	0.5%	0.2%
	Other staff	21.3	5.4%	2.2%
Sub-total		395.3	100.0%	41.6%
Health care practitioner	Registered nurses	34.9	34.3%	3.7%
	LPNs	53.3	52.3%	5.6%
	Therapy assistants	5.4	5.3%	0.6%
	Other Staff	8.3	8.1%	0.9%
Sub-total		101.9	100.0%	10.8%
Personal care and service	Personal care aides	29.5	41.6%	3.1%
	Recreation & fitness staff	23.6	33.2%	2.5%
	Other staff	17.9	25.2%	1.9%
Sub-total		71.0	100.0%	7.5%
Community & social services		7.3		0.8%
Management		32.9		3.5%
Office admin and support	Operations, IT, et al	100.5		10.6%
Buildings & grounds		57.1		6.0%
Food preparation		170.5		18.0%
Transportation		10.2		1.1%
Sub-total		371.2		39.2%
Total employment		946.7	-	100.0%

Source: Nevada Department of Employment, Training and Rehabilitation 2018. Retrieved 2020.

Within the health care practitioner occupation, registered nurses (RNs) and licensed practical nurses (LPNs) are the primary health care practitioners (86.6%). The personal care and service group has almost 75% PCAs and recreation and fitness staff. In terms of overall employment, HH Aides are the largest occupation at 22.6%, followed by food preparation staff at 18.0%. The

third largest employed group involves nursing assistants, orderlies, and aides at 16.6%. A significant portion of overall employment is in nonmedical or personal care services. Almost 40% of the staff is needed to support business operations of the continuing care retirement communities and assisted living facilities (ALFs; see Table 3.8).

Healthcare support and practitioners are the two largest occupation groups in *Nursing Care Facilities*, as seen in Table 3.9, totaling almost 67% of the staff. At the national level, nursing home facilities have nursing staff as the largest group of employees in both support (40%) and as practitioners (27%). Nursing assistants, orderlies, and aides are 88.6% of the health care support workforce. RNs and LPNs combined are 83.5% of the health care practitioner occupation group. The combination of health care support, practitioners, and personal care and service occupations total to 70.3% of all employees. Food preparation and serving is 9.5% of staff. Office administration is 8.9% of staff.

Table 3.9: Nursing Care Facilities in the United States
2018

Occupation Group	Percent of Industry	Occupation Title	Employed (thousands)	Percent of Occupation	Percent of Total Employment
Health care support	40%	Home health aides	39.5	6.2%	2.5%
		Nursing assistants, etc.	568.4	88.6%	35.4%
		Therapy assistants	12.3	1.9%	0.8%
		Other staff	21.3	3.3%	1.3%
Sub-total			641.5	100.0%	40.0%
Health care practitioner	26.90%	Registered nurses	151.3	35.0%	9.4%
		LPNs	209.4	48.5%	13.1%
		Therapy assistants	40	9.3%	2.5%
		Other Staff	31	7.2%	1.9%
Sub-total			431.7	100.0%	26.9%
Personal care and service	4.30%	Personal care aides	20.4	29.4%	1.3%
		Recreation & fitness staff	38.3	55.1%	2.4%
		Other staff	10.8	15.5%	0.7%
Sub-total			69.5	100.0%	4.3%
Community & social services			26.7		1.7%
Management			44.2		2.8%
Office admin and support		Operations, IT, et al	143.2		8.9%
Buildings & grounds			87		5.4%
Food preparation			152.7		9.5%
Transportation			7.3		0.5%
Sub-total			461.1		28.8%
Total			1,603.80	-	100.0%

Source: Nevada Department of Employment, Training and Rehabilitation 2018. Retrieved 2020.

HH Aides are an important component of the LTSS workforce. The American Community Survey (ACS) provides 2018 data on the demographic characteristics of aides working in the U.S., Nevada, urban Nevada counties, and non-urban Nevada counties (see Table 3.10). The ACS is a 1% sample of the population of the country and each state. ACS serves as a tool for estimating the numbers and characteristics of people working in specific industries and occupations. State samples are constructed to be representative, but results should be viewed with caution when samples have fewer than ten observations.

Before considering the ACS data on HH Aides in Nevada, we compare the demographic characteristics of all workers in the U.S. and Nevada. Compared with workers in the U.S., workers in Nevada earn somewhat lower wages and are less likely to be White, more likely to be Hispanic, and less likely to be college graduates or citizens.

Table 3.10: Demographic Characteristics and Annual Earnings of All Workers
2018

		Nevada			
Demographic	U.S.	Nevada	Clark County	Washoe County	Non-urban Counties
Average Age	43.2	42.9	42.7	42.2	45.2
Average Annual Income	$52,613	$48,423	$47,918	$51,508	$47,058
Female	48%	47%	47%	47%	47%
White	69%	54%	48%	69%	73%
Black	9%	7%	9%	2%	1%
Hispanic	14%	24%	27%	18%	14%
Less than high school education	6%	8%	8%	6%	6%
High school graduate	33%	39%	39%	33%	44%
Completed some college	25%	27%	26%	27%	31%
College graduate	36%	27%	27%	34%	19%
Citizen	86%	77%	73%	85%	92%
Legal permanent resident	8%	13%	15%	9%	4%
Immigrant	6%	10%	12%	6%	4%
ACS Survey Participant Totals	1,548,402	13,866	10,021	2,343	1,502

Source: American Community Survey (2018). Retrieved 2020.

Table 3.11 provides similar data on HH Aides and personal care workers. The Nevada sample size is 82, which suggests there could be wide variation in the numbers. Most individuals surveyed in Nevada live in Clark and Washoe Counties. As a result, the sample size in Nevada's non-urban counties is only eight. Therefore, we focus on the data reported for the state. The demographics of the HH aide and PCA occupations are presented for those working in LTSS industries. Aides have a very different demographic profile from the traditional workforce. They are primarily female, have a high school degree or some college, and are citizens.

On average, HH Aides and PCAs earn $20,642 in the U.S. and $18,877 in Nevada (ACS, 2018). The annual earnings reported for Nevada are barely above the Federal Poverty Level (FPL) for a single earner living in a two-person household.[17] These aides work, on average, 35 hours per week. On average, home health and PCAs earn $13.99 per hour in the U.S. and $12.53 per hour in Nevada.[18,19,20] The weekly hours and hourly wage data are based on sample sizes of 14,995 for the U.S. and 65 for the state of Nevada. These samples are smaller than the samples reported in Table 3.11 because some individuals did not answer the questions about earnings and hours.

Data from DETR (2020) combined PCAs into the HH Aide occupation for these industries which reduced the overall wage for 2019. Mean hourly wages average $11.93 in Nursing and Residential Care Facilities, $12.63 in Community Care Facilities for the Elderly, and $12.67 Home Health Care Services. This is consistent with survey evidence indicating that most HH Aides do not work full-time and that insufficient work hours are a source of job dissatisfaction among these aides.

[17] Individuals reporting data indicating an hourly wage below the federal minimum of $7.25 per hour or above $200 were removed from the sample before computing average hours worked and average hourly wages. This eliminated less than 1% of the sample.
[18] For comparison, the FPL for a single individual is $12,760 in 2020. It is $17,240 for a two-person household, and $21,720 for the three-person household.
[19] For half of these aides, educational attainment was completion of high school and approximately one-fourth also completed some college. For all U.S. workers, the average hourly wage for women whose educational attainment is high school completion was $17.67, and the average wage for women who also completed some college was $20.27.
[20] In 2015, the U.S. Department of Labor promulgated a ruling extending minimum wage and overtime protections to home care aids (Gupta & Samuels, 2014).

Table 3.11: Demographic Characteristics and Annual Earnings of Home Health and Personal Care Aides 2018					
		Nevada			
Demographic	U.S.	Nevada	Clark County	Washoe County	Non-urban Counties
Average Age	45	45	47	40	43
Average Annual Income	$20,642.00	$18,877.00	$20,779.00	$15,319.00	$12,200.00
Female	88%	84%	83%	81%	100%
White	48%	37%	29%	44%	75%
Black	24%	17%	22%	6%	0%
Hispanic	35%	41%	53%	13%	13%
Less than high school education	13%	12%	12%	13%	13%
High school graduate	51%	50%	52%	31%	75%
Completed some college	27%	23%	22%	31%	13%
College graduate	10%	15%	14%	25%	0%
Citizen	76%	71%	64%	81%	100%
Legal permanent resident	14%	23%	29%	13%	0%
Immigrant	10%	6%	7%	6%	0%
ACS Survey Participant Total	18,414	82	58	16	8

Source: American Community Survey (2018). Retrieved 2020.

Nevada occupational data for LTSS industries was recently posted for 2019. The major change is that PCAs are now combined with HH Aides. Table 3.12 shows the distribution by occupation for the home health care industry.

Comparing Table 3.12 with the national data in Table 3.6 shows that nationally there are more health care support staff (41.8%) than health care practitioners (22.3%). In Nevada, these occupation groups appear to be reversed, as health care support staff is 34.4% and health care practitioner staff is 44.7%. Business support staff is a little higher in Nevada (at 20.4%) than the national percentage (14.3%).

Table 3.12: Home Health Care Industry in Nevada 2019				
Occupation Group	Occupation Title	Employed	Percent of Occupation	Percent of Employment
Health care support	Home health aides	1,270	61.4%	21.5%
	Nursing assistants	730	37.1%	12.9%
	Other staff	30	2.3%	0.5%
Sub-total		1,970	-	34.4%
Health care practitioner	Registered nurses	1,300	51.6%	23%
	LPNs	410	16.3%	7.3%
	Occupational Therapists	130	5.2%	2.3%
	Physical Therapists	480	19%	8.5%
	Other Staff	200	7.9%	3.5%
Sub-total		2,520	100%	44.7%
Community & social services	-	180	-	3.2%
Management	-	270	-	4.8%
Office admin and support	-	700	-	12.4%
Sub-total	-	1,150	-	20.4%
Total		5,640		100%

Source: Nevada Department of Employment, Training and Rehabilitation. 2019 data. Retrieved 2020.

Data requested from DETR gives a picture of the occupational workforce for the *Services for Older Adults and People with Disabilities* (see Table 3.13). These services include adult day (AD) programs, senior centers, and other businesses. This is the largest workforce serving the senior adults. With the combining of PCAs into HH Aides, 84.3% of this workforce are HH Aides and 6.5% of the workers are in occupations with numbers too small to count (categorized as undetermined staff, e.g. rehabilitation counselors, healthcare social workers, and LPNs). Nationally, the distribution is 73.9% home health and PCAs. The business support staff percentage (13.1%) is very similar to the national percentage (12.1%).

Table 3.13: Services for Older Adults and People with Disabilities in Nevada 2019				
Occupation Group	Occupation Title	Employed	Percent of Occupation	Percent of Employment
Health care support	Home Health Aides	9,790	100%	84.30%
Health care practitioner	Registered nurses	50	45.50%	0.40%
-	Psychiatric technicians	60	54.50%	0.50%
Sub-total	-	110	100%	0.90%
Personal Care Services	-	110	-	0.90%
Social and human service	-	90	-	0.80%
Management	-	140	-	1.20%
Office admin and support	-	440	-	3.80%
Food preparation	-	90	-	0.80%
Transportation	-	100	-	0.90%
Undetermined staff	-	750	-	6.50%
Sub-total	-	1,520	-	13.10%
Total	-	11,620	-	100%

Source: Nevada Department of Employment, Training and Rehabilitation. 2019 data. Retrieved 2020.

Table 3.14 presents data for the *Continuing Care Retirement Communities and Assisted Living Facilities* in Nevada. This industry is for older adults and is separated from mental health and other types of residential care. The distribution of occupations in Nevada is similar to the national occupational model (Table 3.7). Table 3.14 shows almost half of the workers in this industry are in health care support in Nevada (51.0%), which is higher than the national percentage of 41.6%. However, business support staff (42.3%) is very close to the national level (39.3%).

Table 3.14: Continuing Care Retirement Communities and Assisted Living Facilities in Nevada 2018				
Occupation Group	Occupation Title	Employed	Percent of Occupation	Percent of Employment
-	Home health aides	1,670	81.1	41.3
-	Nursing assistants	380	18.4	9.4
-	Other staff	10	0.5	0.2
Sub-total	-	2.060	-	51.0
Health care practitioners	Registered nurses	40	57.1	1.0
	LPNs	30	42.9	0.7
Sub-total	-	70	100.0	1.7
Personal care and service	Recreation workers	100	50.0	2.5
	Other staff	100	50.0	2.5
Community & social services	-	90	-	0.8
Management	-	120	-	3.0
Office admin and support	-	360	-	8.9
Building and grounds	-	270	-	6.7
Food preparation	-	890	-	22.0
Transportation	-	70	-	1.7
Sub-total	-	1,710	-	42.3%
Total	-	4,040	-	100.0

Source: Nevada Department of Employment, Training and Rehabilitation. 2018 data. Retrieved 2020.

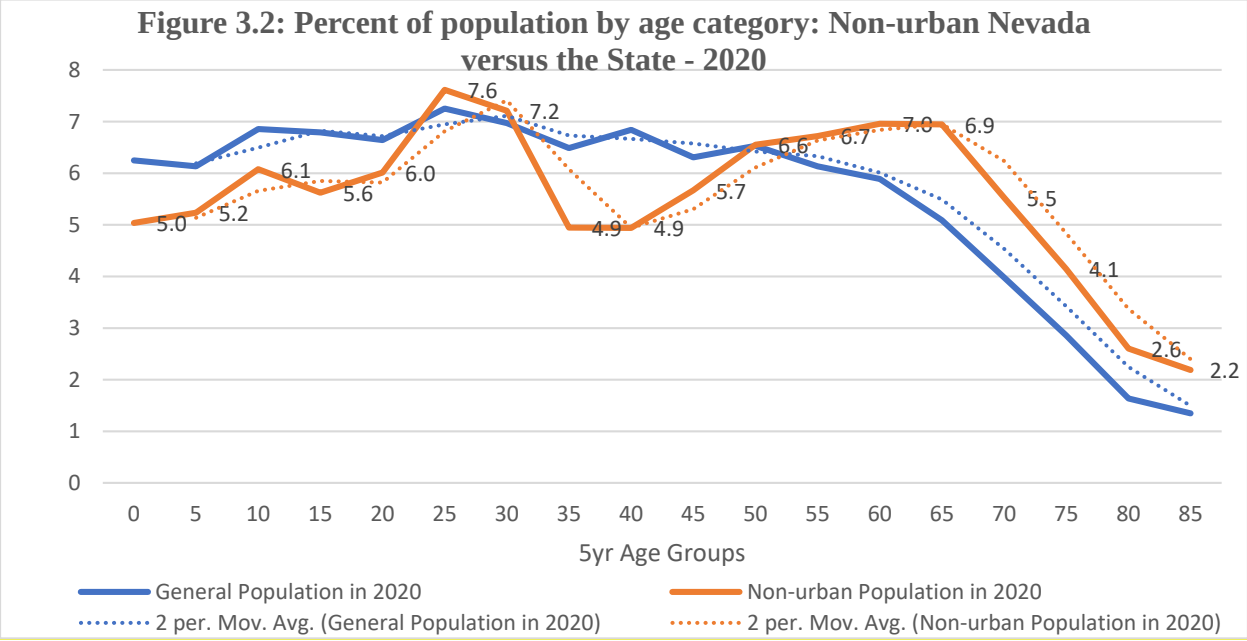
Table 3.15 estimates the non-urban workforce. There appears to be many industries in non-urban counties with numbers too small for the labor systems to count, which are listed in the undetermined county and not allocated to an urban county. This highlights the possible availability of staff, however until more is known about the numbers of businesses in these counties, the possibility of available staff may be limited. Note that undetermined staff from the previous table were counted in the number of undetermined county workers on this table.

Table 3.15: Non-Urban Workforce by County in Nevada 2019					
County	Home Health Care	Residential Care	Services for Seniors and Disabled	Employment	Percent of Employment
Carson City	-	233	362	595	21.2%
Churchill County	-	-	83	83	3%
Elko County	82	-	118	200	7.1%
Lyon County	-	-	17	17	0.6%
Nye County	-	57	-	57	2%
Undetermined County	337	573	942	1,852	66%
Total Employment	419	863	1,522	2,804	100%

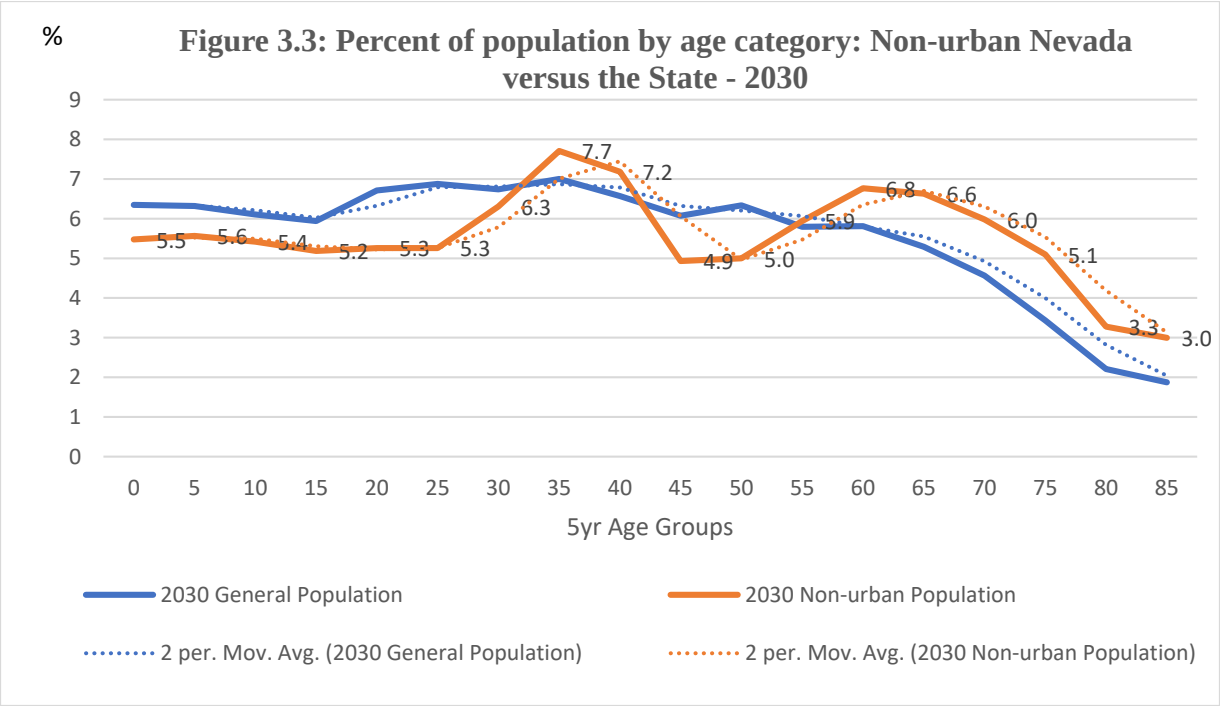
Source: Nevada Department of Employment, Training and Rehabilitation. 2019 data. Retrieved 2020.

Part III: Discussion and Implications for Workforce Issues in Nevada

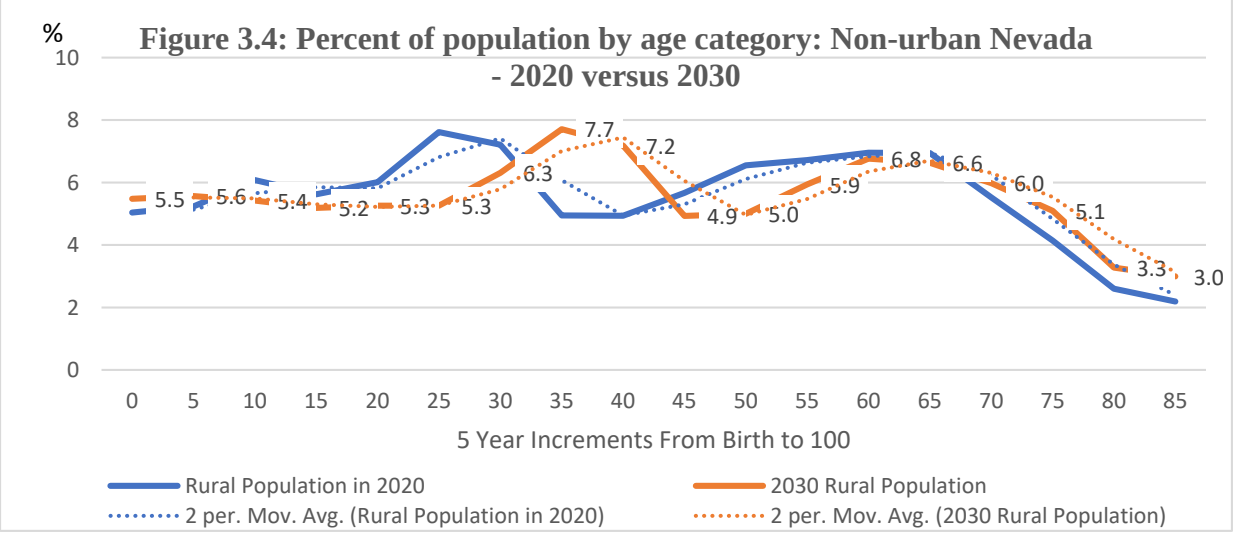
The population of Nevada will increase by almost 300,000 people by the year 2030. Non-urban Nevada will continue to increase by almost 1,000 people annually. Figures 3.2-3.4 explore changes from 2020 to 2030 for the state and non-urban populations. Figure 3.2 shows percentages of the population in five-year increments in blue for the general population and in orange for the non-urban population in 2020. The proportion of people who are older adults is higher in non-urban Nevada compared to the Nevada general population.



This pattern is expected to continue into 2030. Older adults will continue to constitute a larger percentage of the population in non-urban Nevada than in the state overall (see Figure 3.3).



In non-urban Nevada, older adults will constitute an increasing proportion of the population in non-urban Nevada from 2020 to 2030 (see Figure 3.4).



In summary, the non-urban Nevada population in 2020 is 351,771 and the urban Nevada population in 2019 is 2,819,343 (Nevada State Demographer, 2019). The non-urban population is projected to grow 3.2% to 363,140 by 2030. As this growth occurs, the percentage of people

age 45 to 64 is projected to decline from 62.5% to 48.6%. This decline is important because this age category includes many potential caregivers.

- The percentage of people age 65-74 is projected to increase from 22.8% to 27.1%.
- The percentage of people age 75 and older is projected to increase from 14.7% to 24.4%. This age category includes many potential care recipients.

Thus, the ratio of potential care recipients to potential care givers is expected to increase over the next ten years.

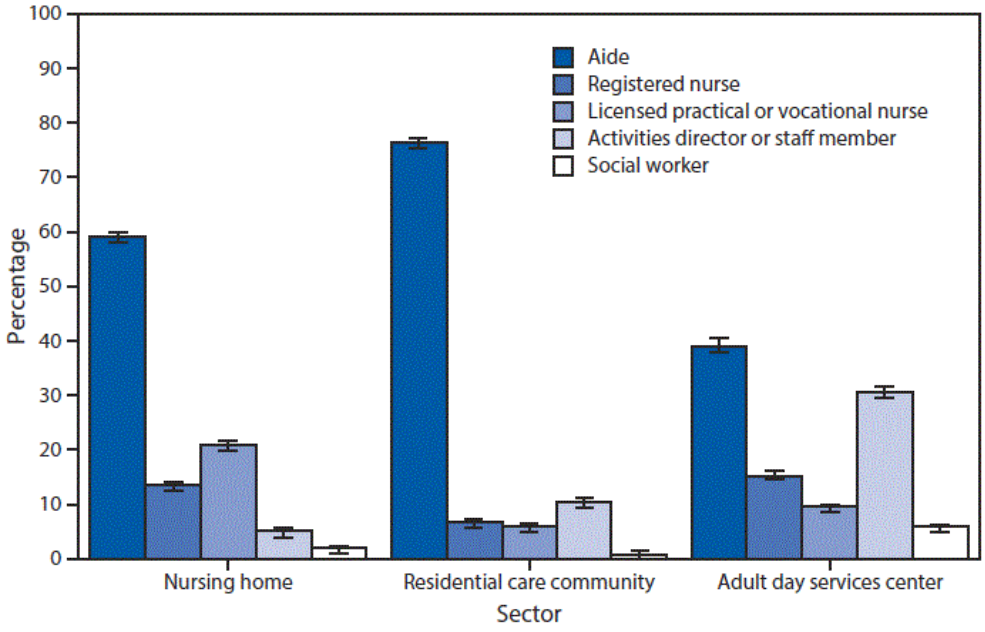
All LTSS industries, except nursing home facilities, are expected to continue to expand as the population of older adults increases (Watson, 2007). Several occupations are employed across the LTSS industries, such as registered nurses and PCAs and HH Aides. The variety of medical and nonmedical staff involved in these industries represent a wide spectrum of skills and education requirements, ranging from jobs requiring a bachelor's or master's degree to those requiring only a short period of on-the-job training.

The data from DETR suggest three staffing patterns:

- Home health care service workforces have the least varied occupational composition because this industry focuses on services performed in the home with minimal medical intervention.
- The reverse is true for nursing homes and continuing care facilities with few PCAs and a heavier concentration of a diverse medical staff.
- Services for older adults and people with disabilities are unique in their lower proportion of healthcare workers and much higher proportion of PCAs. A significant presence of community and social services such as counselors, social workers, educators, and food preparation staff also appear in services for older adults and people with disabilities.

Data from the National Study of Long-Term Care Providers (NSLTCP) survey of ALF and AD providers illustrates this pattern (see Figure 3.5). Additional detail is provided in Appendix Table A.3-1.

Figure 3.5: Percentage of employee weekly hours by occupation in Nursing Homes, Residential Care Communities, and Adult Day Services



Source: Rome et al., 2018

Nevada's population of individuals who need help with Activities of Daily Living (ADLs) and Instrumental Activities of Daily Living (IADLs) is expected to grow as the population grows. Therefore, demand for LTSS services and LTSS workers will also grow. The supply of these workers has been expanding more slowly than the population of potential LTSS customers. If this trend continues, the imbalance between the supply of workers and employer efforts to hire workers will increase, putting upward pressure on wages. This imbalance could be ameliorated by taking steps to increase the supply of workers. This problem could be tackled by increasing Medicaid reimbursement rates, expanding training programs or addressing issues that underlie worker turnover and LTSS worker decisions to pursue other career options. We focus on the PCA and HH Aide positions, which are a significant source of employment in LTSS industries.[21]

License Requirements for HH Aides in Nevada

According to the CFR Title 42, Vol. 3, 484, Nevada adheres to the federal minimum license requirements for HH Aides. These license requirements consist of two parts: training and competency. The initial training consists of 75 hours, which must include 16 hours of practical or clinical training. HH Aides also must complete 12 hours of continuing education training for each 12-month period. Second, the federal guidelines for competency mandate that HH Aides must not be evaluated as unsatisfactory in any task. The way in which competency is evaluated can vary by facility.

[21] It is important to note that home health care and personal care aide labor data are often combined.

HH Aide License Requirements Across All States

Requirements to attain an HH Aide license include the same two components in all states, although some states might require a competency test or more training hours. Nevada requires the federal minimum of 75 hours of training and does not require a competency test. Some states, such as Alaska and Maine, require training hours that exceed the federal minimum.

Alaska requires 140 hours of training, whereas Maine requires 180 hours of training. Both states also require that HH Aides pass a competency test and hold the title of Certified Nursing Assistant. Additional requirements to obtain an HH Aide certification could present a barrier to entry for those in this labor market.

Factors Contributing to Turnover Among Aides

Surveys cite low wages and benefits, unpleasant duties, and a lack of opportunity for advancement as factors that impede employer efforts to recruit and maintain adequate workforces. Usufzy (2020) interviewed home health care aides in southern Nevada. Survey respondents indicated

- It is difficult for these workers to work full-time (2,080 hours per year) due to scheduling challenges posed by client requirements and Medicaid reimbursement authorizations.
- Some workers work "off the clock" to meet client's needs due to constraints on billable hours.

Usufzy (2020) noted that some of these workers are represented by the Service Employees International Union (SEIU).

Stone and colleagues (2017) analyzed data from the 2007 National Home Health Aide Survey. These researchers report that insufficient work hours and on-the-job injuries are significant predictors of home health worker "intent to leave the job."

The issue of work hours is more complex for HH Aides than for workers in other types of low wage jobs. Data from the American Community Survey (2018) indicate that only half of home care aides reported they work full-time—that is, 35 or more hours per week. Aides must piece together schedules constrained by the number of hours of care each client is authorized to receive per day or per week. This authorization is driven by payer reimbursement criteria.

The Health and Retirement Survey (HRS) asks respondents to report the number of hours of paid assistance they receive per day. About 20% of the care recipients reported they receive one hour of care per day. Fewer than 40% of care recipients receive at least eight hours of care per day. This means that aides might work at multiple homes in a day with travel time between these homes (see Osterman, 2017). Nevada Medicaid reimburses HH and PC agencies fixed hourly rates for care delivered. NV DHCFP does not specifically reimburse agencies for travel time. However, federal law requires employers, including HH and Personal Care agencies, to pay employees for travel time required during the workday.

Osterman (2017) also highlights the importance of workplace injuries for aides. The Bureau of Labor Statistics (BLS) reports home care aides have relatively high rates of lost workdays due to injuries. The Centers for Disease Control and Prevention (CDC) has issued a report on preventing home care aide injuries.

Actions to Address Workforce Issues

Gifford et al. (2019) report that 30 states increased wages paid by Medicaid for members of the LTSS direct care workforce in fiscal years 2019 and/or 2020 (AL, AR, AZ, CA, CO, CT, DC, DE, HI, IL, LA, MA, MI, MT, NC, NH, NJ, NY, OH, OK, OR, PA, TN, TX, UT, VA, VT, WA, WI and WV). In addition, Nevada adopted an increase in the Medicaid reimbursement rate paid to Personal Care agencies, to take effect in 2020, from $4.25 to $4.36 per 15 minutes (which equates to an increase from $17.00 to $17.44 per hour). However, this reimbursement rate was decreased by 6% in the 2020 Special Session to $16.39.

Prior to 2020, the most recent sustained increase in the Personal Care reimbursement rate occurred in 2002. From December 2002 to December 2019, the Consumer Price Index (CPI) for urban consumers[22] increased from 180.9 to 256.974, which is an increase of 42% (Bureau of Labor Statistics [BLS], 2020a). During these years, the Nevada minimum wage for employers offering qualified health insurance increased by 41%. Thus, the Nevada minimum wage essentially kept pace with increases in the cost of living, whereas the Medicaid reimbursement rate for Personal Care remained unchanged (Office of Communications, 2020).

Current Nevada law specifies the Nevada minimum wage will increase by $0.75 each year until it reaches $12.00 per hour (or $11.00 per hour if the employer offers qualifying health insurance benefits; Office of the Labor Commissioner, 2020). If Medicaid reimbursement rates do not increase at the same pace, potential agency margins (equal to the reimbursement rate minus the Nevada minimum wage) will shrink.

The difference between the Medicaid reimbursement rate and the minimum wage is important for Personal Care Aides (PCAs) and their employers. This gap makes it possible for PCAs to earn wages that are above the state minimum wage, and while their employers earn sufficient revenue to pay for worker benefits and indirect expenses. We refer to this gap as the "potential margin" agencies could earn if wages paid to PCAs were equal to the minimum wage. This potential margin is expected to be split between the aides and the agencies that employ them.

- Agencies may offer PCA wages that exceed the minimum wage. This premium of actual PCA wages over the minimum wage may be an important strategy for attracting individuals into the PCA occupation.
- As actual PCA wages increase above the minimum wage, the margin earned by personal care agencies decreases. The actual margin earned by agencies is important because it is needed to cover items such as employee benefits, rent and utilities, office employee wages and benefits, and scheduling and billing systems.

[22] The Consumer Price Index is produced by the U.S. Bureau of Labor Statistics. Changes in this metric provide the standard method for measuring inflation.

Thus, the gap between the Medicaid reimbursement rate and the minimum wage is needed to provide sufficient compensation for PCAs to attract individuals into this profession and to cover agency non-wage expenses. If the Medicaid reimbursement rate is not sufficient to accomplish both of these goals, PC agencies may not be willing to accept Medicaid as a payer.

The availability of personal care services across the state is shaped by relationships among the Medicaid reimbursement rate, minimum wage, median PCA wage, willingness of individuals to pursue the occupation of PCA (instead of alternate occupations with similar levels of training requirements), and willingness of agencies to accept Medicaid reimbursement. Therefore, we examine available evidence on these relationships.

In the following discussion of Medicaid reimbursement rates, PCA wages, minimum wages, and other relevant variables, we consider a hypothetical agency that offers health insurance to employees and pays a wage equal to the median wage reported for Nevada by the PHI Workforce Data Center (PHI, 2019).

In 2002, when the Medicaid reimbursement rate was set at $17 per hour, the minimum wage was $5.15. The potential margin was $11.85. By the end of July 2020, the minimum wage was $8.00, the reimbursement rate was $16.39, and the potential margin was $8.39. From 2002 through 2020, the potential margin decreased by 29%.

Inflation also occurred during these years. To adjust for inflation, we restate these numbers in constant 2018 dollars. Since 2002, the inflation-adjusted potential margin between the Medicaid reimbursement rate and the minimum wage fell by 51%.

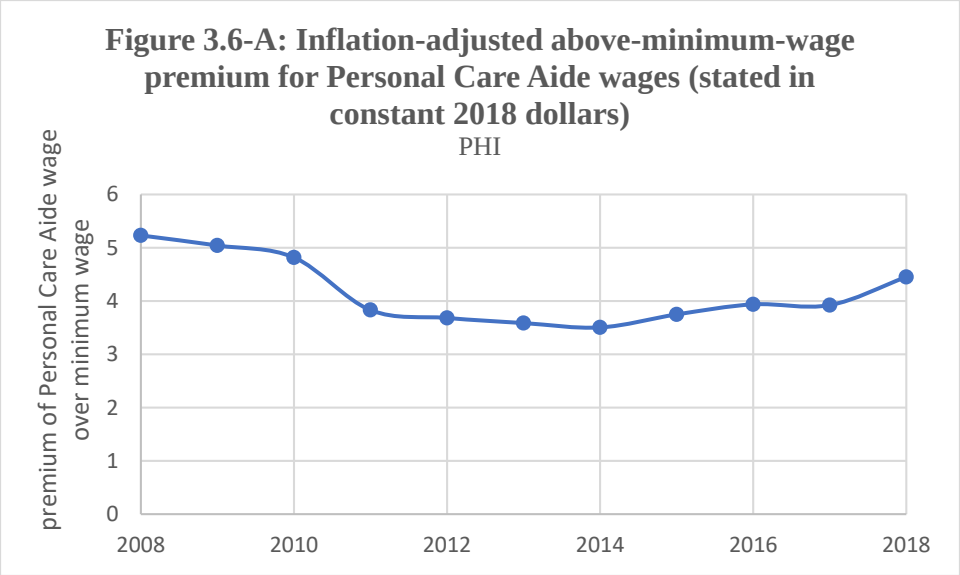
Current law mandates $0.75 annual increases in the minimum wage until it reaches $11 in the year 2024. If the reimbursement rate returns to the $17.44 rate specified in legislation prior to the 2020 Special Session, and remains at that level, the potential margin (not adjusted for inflation) between the reimbursement rate and the minimum wage will be equal to $6.44 in 2024.

Erosion of the potential margin raises two policy-relevant questions:

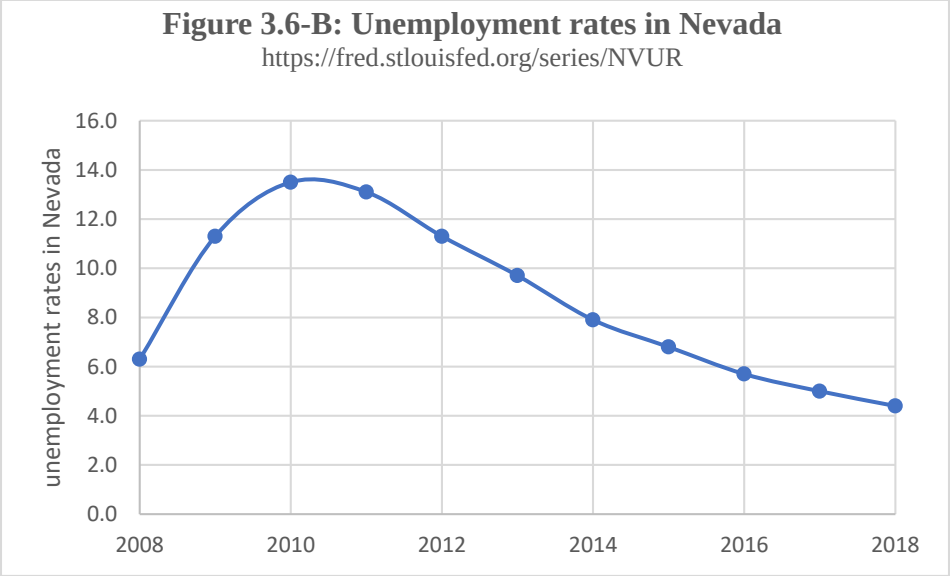
- How has the potential margin between the reimbursement rate and the minimum wage been split between PCAs and their employers?
- Are the current and predicted potential margins sufficient to cover employee benefits and agency indirect expenses?

Figures 3.6-A through 3.6-D address the first question. The PHI Workforce Data Center provides PCA wage data for the years 2008-2018 (PHI, 2019).

During the Great Recession years starting in 2008, the inflation-adjusted, above-minimum-wage premium earned by PCAs fell from $5.23 in 2008 to $3.50 in 2014 (stated in constant 2018 dollars). As unemployment continued to fall, however, the above-minimum-wage premium increased to $4.50 in 2018 (see Figure 3.76-A).



During these years, unemployment increased from 6% to 13.5% from 2008 to 2010. As the economy subsequently recovered, unemployment fell to 4.4% in 2018 (see Figure 3.6-B).

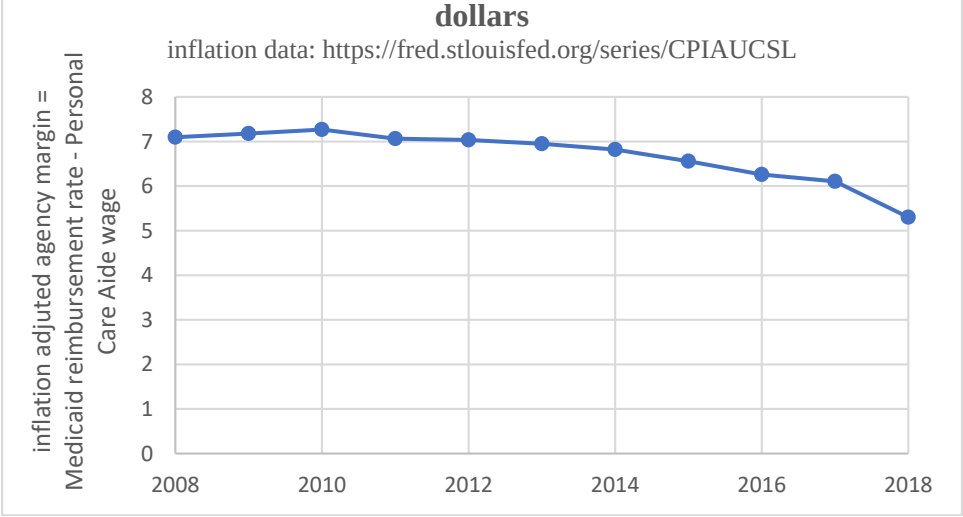


This pattern reflects data for one sequence of recession and recovery in one state. Therefore, the pattern should be viewed as suggestive evidence. This evidence suggests PCA wage movements are consistent with competitive market forces. When unemployment was relatively high, agencies did not appear to believe they needed to maintain the previous above-minimum-wage premium to facilitate hiring the desired number of PCAs. This is not unusual, given the decrease in competition for workers during recessions. When the unemployment rate falls, however, employers typically begin paying higher wages to attract workers. The data graphed in Figure 3.6-B indicates the above-minimum-wage premium increased as the economy began to recover. Although the inflation-adjusted above-minimum-wage premium for PCAs fell from 2008-2011,

it stabilized and increased slightly during subsequent years. Thus, the early decrease and subsequent increase in the above-minimum-wage premium is consistent with the operation of competitive market forces.

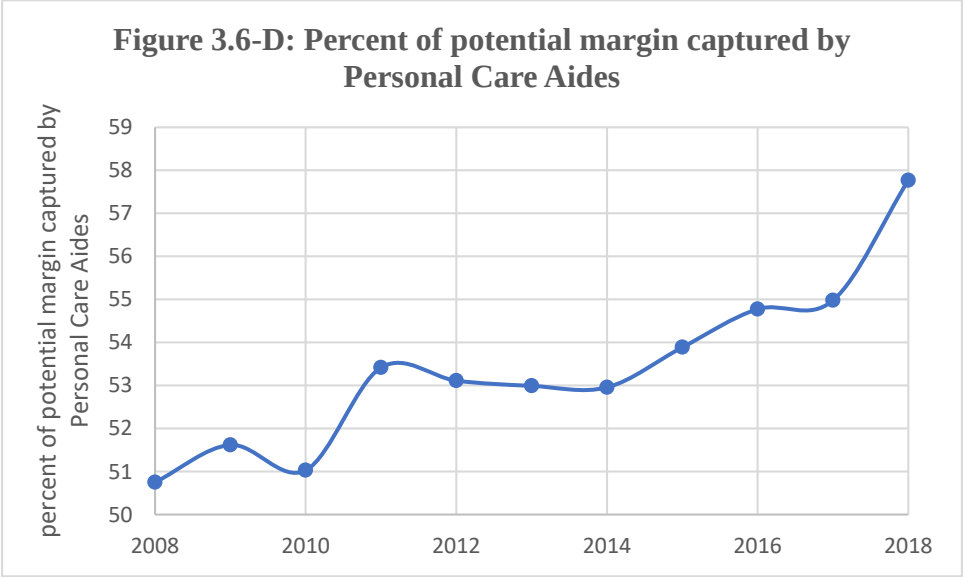
As the above-minimum-wage premium increased slightly, the potential margin decreased. Therefore, the margin earned by agencies decreased 25% from $7.09 in 2008 to $5.30 in 2018 (see Figure 3.6-C).

Figure 3.6-C: Inflation-adjusted agency margin: 2018 dollars



Relative to agencies, PCAs benefited from the increase in labor market competition. PCAs captured approximately 51% of the potential margin in 2008. By 2018, in contrast, PCAs captured nearly 58% of the potential margin (see Figure 3.6-D).

Figure 3.6-D: Percent of potential margin captured by Personal Care Aides



The margin of the Personal Care reimbursement rate over the minimum wage makes it possible for Personal Care agencies to cover administrative expenses incurred to assure compliance with regulatory requirements and labor laws, and complete billing and payroll activities. This margin will narrow if minimum wage increases are not accompanied by comparable increases in the Medicaid reimbursement rate. If agencies respond to shrinking margins by reducing or eliminating wage increases for PCAs, it will be more difficult to recruit and retain individuals to work as PCAs (Salmonson & Hicks, 2020). If they respond by reducing willingness to accept Medicaid-eligible clients, access to these services will be reduced.

Therefore, the second policy-relevant question is, if the Personal Care reimbursement rate is restored to $17, will agencies be able to break even under the current minimum wage, and will they be able to break even as the legislated minimum wage increases occur during the next several years?

The agency margin is needed to cover direct care expenses other than wages and indirect expenses such as caregiver recruitment and retention, marketing, and operating expenses. In addition, net revenue is used to compensate the business owners for time and resources invested in the business. We estimate whether the margin is currently sufficient to cover direct and indirect expenses using information reported in the Home Care Pulse (2020) snapshot of the Home Care Benchmarking Study.

We utilize expenses as a percent of revenues reported by companies with median levels of revenues. We use the following assumptions:

- The Medicaid reimbursement rate will be restored to $17.00 by the end of the year.
- PCA wages remain at the 2018 level ($11.70). This is a conservative assumption that maximizes the likelihood that the Medicaid reimbursement rate will be sufficient to cover expenses and yield a reasonable return on owner's time and invested resources. It is more likely that wages will rise, given the reported PCA shortage and the growing Nevada economy.
- Current law mandating increases in the Nevada minimum wage over the next 4 years will remain in effect.

This yields the following computation:

Personal Care Aide Agency Revenue and Costs for Clients with Medicaid LTSS Coverage	Estimated Dollars per Personal Care Aide hour	
Medicaid reimbursement rate (assuming the rate is increased from its current level to $17.00 per hour for 2021)		$17.00
Personal Care Aide wage		- $11.70
Agency Margin		**$ 5.30**
Other direct expenses for Aides other than wages including workers' compensation insurance, unemployment insurance, employer taxes, and reimbursements for travel and meals while PCAs are working	$ 1.79	
Caregiver recruitment and retention	$ 0.61	
Agency Margin minus other direct expenses and recruitment and retention		**$ 2.89**
Other agency expenses not yet considered:		
Operating costs	$ 4.55	
Health insurance for employees	Up to $2.83	
Aide travel time between clients	$0.40	

Implications of this Computation

- For each hour of care provided by a PCA, the agency is assumed to receive $17.00 from Medicaid. After the agency pays wages, non-wage direct care expenses, and recruitment/retention expenses, the agency has $2.89 left.
- From this, the agency must cover operating costs (which average $ 4.55 per hour). This computation indicates the Medicaid reimbursement rate provides sufficient funds to cover direct care costs, but it does not provide sufficient funds to cover total costs. This result is consistent with the August 2020 announcement that a large personal care agency plans to leave the State due to the financial outlook.

Three additional issues must be considered to assess the adequacy of the Medicaid reimbursement rate:

- According to Kaiser Family Foundation, the average cost of employer-sponsored health insurance is $7,188 for single-individual coverage, and the average worker contribution is $1,242 (Kaiser Family Foundation [KFF], 2019a). In this situation, the agency would pay $2.83 per hour for health insurance for full-time employees who elect to take-up the offer of health insurance. Anecdotal evidence suggests, however, not all PCAs take-up this offer. To the extent that some PCAs do not opt-in to the employer sponsored health

insurance plan, the hourly cost of health insurance would decrease. For example, if 50% of PCAs opt-in, the employer's cost to offer health insurance would average $1.41 per hour over all workers.

- Current law mandates annual increases of $0.75 in the minimum wage in each of the next four years. If the above-minimum-wage premium for PCAs remains constant, this would increase agency direct care (variable) costs by $3.00 per hour. If the agency and PCAs split the impact of this increase equally, the agency would incur costs of $1.50, and the above-minimum-wage premium earned by the PCAs would decrease by $1.50. This could exacerbate difficulties regarding recruitment and retention of PCAs.
- Under federal labor law, agencies must pay workers for travel required between clients, but Medicaid does not reimburse agencies for this time. One large agency states the cost for travel time is $0.40 per billable hour.

Additional Strategic Options

Some states tie wage increases to increased training. The following states implemented workforce development policies including recruiting, training, and credentialing: AR, AZ, CA, CT, KY, MA, MI, MN, MS, NY, OH, OR, PA, RI, TN, WA, and WI. For example, MN tied a higher reimbursement rate to completion of additional provider training. TN is developing additional training, collecting additional workforce data, helping providers improve recruitment and retention, and offering wage incentives to complete additional training.

Other states are considering strategies to support family members providing care that substitutes for paid home health and home care services. GA implemented family caregiving as a waiver-reimbursed service, and NC plans to implement a similar strategy.

Nevada reimburses family members who provide care, if they are not Legally Responsible Individuals (typically parents and spouses of the care recipients).[23]

The Nevada Division of Health Care Financing and Policy (NV DHCFP) website indicates it plans to post information about online training necessary to be employed as an aide. Currently, the College of Southern Nevada in urban Clark offers a certificate in home health care, and they are the only provider in the state to provide this training aside from employers whose primary service is personal care.

Four additional sources provide useful perspectives on caregiver issues:

- Healthypeople.gov (2020) uses the National Health and Aging Trends Study (NHATS) to establish objectives for the aging population, including two that directly address caregiver issues:
    - Person-centered care planning that includes caregivers, and

[23] Federal policy prohibits state Medicaid programs from paying "legally responsible individuals" (LRI), such as parents of young people or children of older adults, to provide LTSS.

    - Fair pay and compensation standards for formal and informal caregivers.

- Ross et al. (2014) recommend redesigning the role of aides to include higher levels of training and greater responsibilities. Shifting responsibilities from licensed healthcare providers to aides, where appropriate, would reduce the labor cost of providing care.[24] Assigning increased responsibilities to PCAs is likely to require increased aide training, which might support wage increases. However, wages for aides are likely to remain below wages paid to licensed healthcare providers.
- Emerging technologies could potentially increase LTSS worker efficiency, thereby reducing or altering the necessary skill for PCAs. For example, Sockolow and Zakeri (2013) conclude that EHR implementation in home care improved clinician's time-to-completion of documentation. Other technologies could potentially support redesign of LTSS worker tasks and responsibilities and necessitate changes in training for aides, as discussed in Chapter 2.
- PHI (2020) summarizes promising developments:

> *Recent developments highlight the potential of quality training and advanced roles. A 2016 evaluation report of the federally funded Personal and Home Care Aide State Training (PHCAST) initiative found that this six-state program led to low attrition rates and high levels of satisfaction among direct care aides who participated. In New York City, an 18-month pilot program for advanced training among home health aides found that clients served by aides with advanced training were admitted to the ER at a rate eight percent lower than those admitted in the previous year (when clients weren't paired with aides with advanced training). Similarly, a multi-year training initiative in New York City led to increased retention and job satisfaction among home health aides who took part in the program. And in June 2016, New York State passed a bill that created an advanced role for home health aides, allowing them to perform tasks such as administering medication and injecting insulin upon completing training and demonstrating competency.*

[24] See for example, Board of Health regulation LCB File No. R109-18, effective January 30, 2019, on Aide duties.

APPENDIX 3

Staffing in Nevada (see Lendon et al., 2019)

Table A.3-1: Staffing for Adult Day, Home Health and Residential Care Communities in Nevada 2016			
Selected Characteristic	AD	HH	RCC
Service Provided			
Social worker	38	91.4	31.7
Mental health or counseling	28.1		23.4
Therapeutic	60.7		41.1
Skilled nursing	81.5	100	32.4
Pharmacy or pharmacist	26.8	7.9	60.7
Hospice	9.8	100	49.6
Dietary and nutritional	73.2		51.3
Transportation services for medical or dental appointments	81.7		72.8
Employee hours per resident or participant per day			
Registered nurse	0.28		0.01
Licensed practical nurse or licensed vocational nurse	0.27		0.02
Aide	0.61		1.59
Social worker	0.04		0.01
Activities staff	0.28		0.17
Nursing and social work employee FTEs			
Registered nurse	17.8	55.8	1.8
Licensed practical nurse or licensed vocational nurse	16.2	20.5	5.1
Aide	63.7	19.2	93
Social worker	2.3	4.5	0.2
Registered nurse	91.5	100	6.8
Licensed practical nurse or licensed vocational nurse	63.4	77.9	11.9
Aide	81.7	95	69.7
Social worker	18.3	71.4	
Activities staff	90.2		27.2
Number of People Served			
Category 1	39.3	32.8	79.4
Category 2	53.6	42	14.9
Category 3		25.2	5.7

Metropolitan Statistical Area Status			
Metropolitan	100	6.4	95.9
Micropolitan or neither	0	3.6	4.1
Summary Statistics			
Number of providers	20	100	200
Number of beds or licensed maximum capacity	1,600		6,200
Average capacity	90		27
Average number of people served	49		23
Medicare-certified		100	
Medicaid-certified	100	57.1	54.3
Chain-affiliated	35.8		49.9
Number of nursing and social work staff employee FTEs	87	1020	1,329
Number of service users	1,300	37,300	5,300

Source: Long-Term Care Providers and Services Users in the United States—State Estimates Supplement: National Study of Long-Term Care Providers, 2015–2016. https://www.cdc.gov/nchs/data/nsltcp/2016_CombinedNSLTCPStateTables_opt.pdf

CHAPTER 4: DEMAND

KEY POINTS

- Nationwide data indicates that the people who utilize Assisted Living Facilities (ALFs), Adult Day (AD), and Respite Care (RC) services are a subset of the people who report difficulties with Activities of Daily Living (ADL) and/or Instrumental Activities of Daily Living (IADL). Four of Nevada's non-urban counties (Douglas, Elko, Lyon, Nye) are estimated to have at least 1,000 people who report difficulties with IADL. This number is 250 or less in seven of Nevada's non-urban counties (Esmeralda, Eureka, Lander, Lincoln, Mineral, Pershing, Story).
- On average, people who utilize Adult Day (AD) services are younger than people who utilize ALFs. Therefore, as a population ages, people may move through a sequence of services. Demand for Residential Care Communities (RCCs) is likely to grow more slowly in the next decade than demand for Adult Day, Home Health or Personal Care services, but the growth in demand for RCCs may be more sustained as baby boomers continue to age into the category of individuals who are age 85 or older.
- Medicaid is an important payer for Long-Term Services and Supports (LTSS). Medicaid coverage has two important limitations.
    - First, coverage for services provided under waivers is constrained by the number of available slots. Nevada Medicaid maintains waitlists for these services.
    - Second, although Division of Health Care Financing and Policy (DHCFP) covers specific services provided in ALFs, federal policy prevents it from covering the room and board portion of ALF charges.
- States are taking two types of actions to address the challenge posed by lack of coverage for the room and board portion of Assisted Living Facility (ALF) charges:
    - Some states are implementing managed care programs for LTSS (known as MLTSS).
    - Some states are exploring opportunities for partnerships between Medicaid programs and Housing programs to develop strategies for offering subsidized housing along with Home Health, and/or Personal Care services in a combined package, or offering licensed assisted living in a facility that offers subsidized housing for low-income residents.

This chapter includes two sections. The first section focuses on the demand for LTSS, and the second focuses on payment for LTSS. The section on demand includes subsections that address

- Utilization rates in Nevada compared with the U.S.,
- County-level estimates of the numbers of Nevadans who need assistance,
- Characteristics of individuals who utilize LTSS by service type,
- Estimates of the numbers of Nevadans who are likely to utilize Assisted Living Facilities (ALFs), and
- The durations of ALF stays for those who do utilize ALFs.

LTSS Utilization

Utilization in Nevada and in the U.S.

The proportions of individuals age 65 or older using AD services, and individuals age 85 or older using AD services, are lower in Nevada than in the U.S. The difference between the U.S. and Nevada use rates is statistically significant for all older adults (at least 65 years old), and for the subset of adults who are at least 85 years old (see Figures 4.1a and 4.1b).

Figure 4-1a: Use rate of adult day services center participants aged 65 and over: United States, 2016

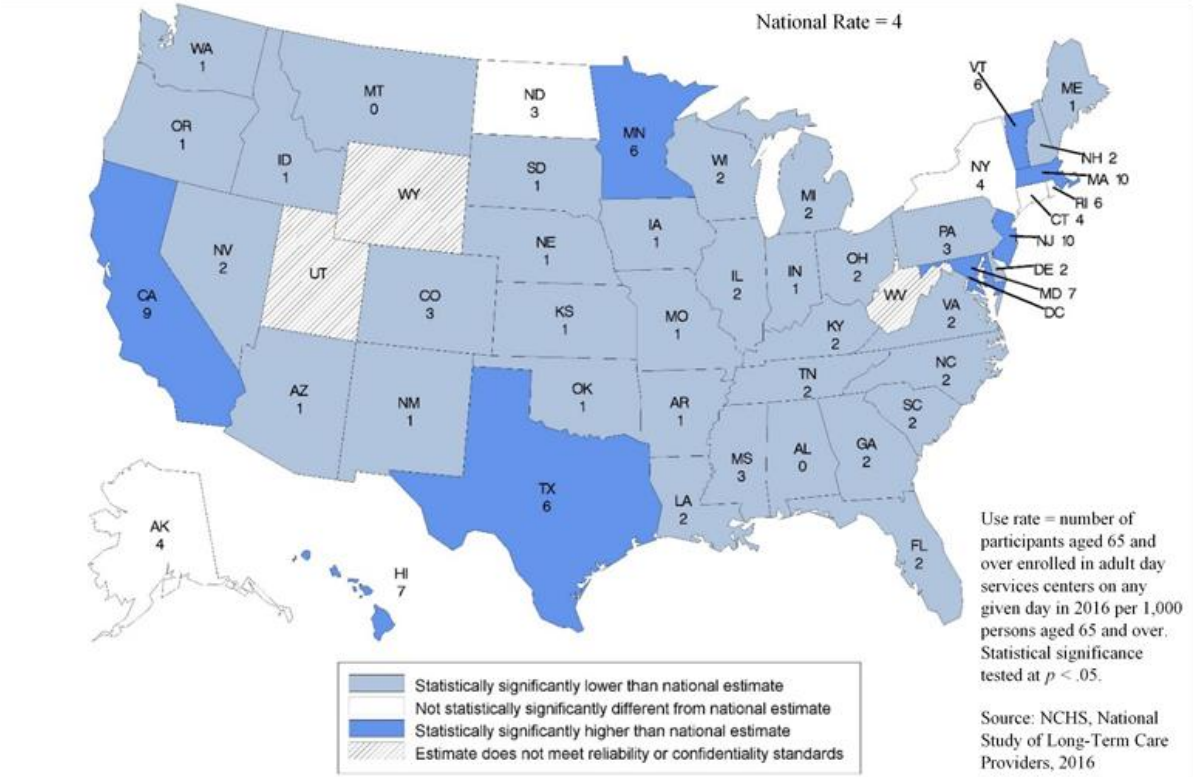
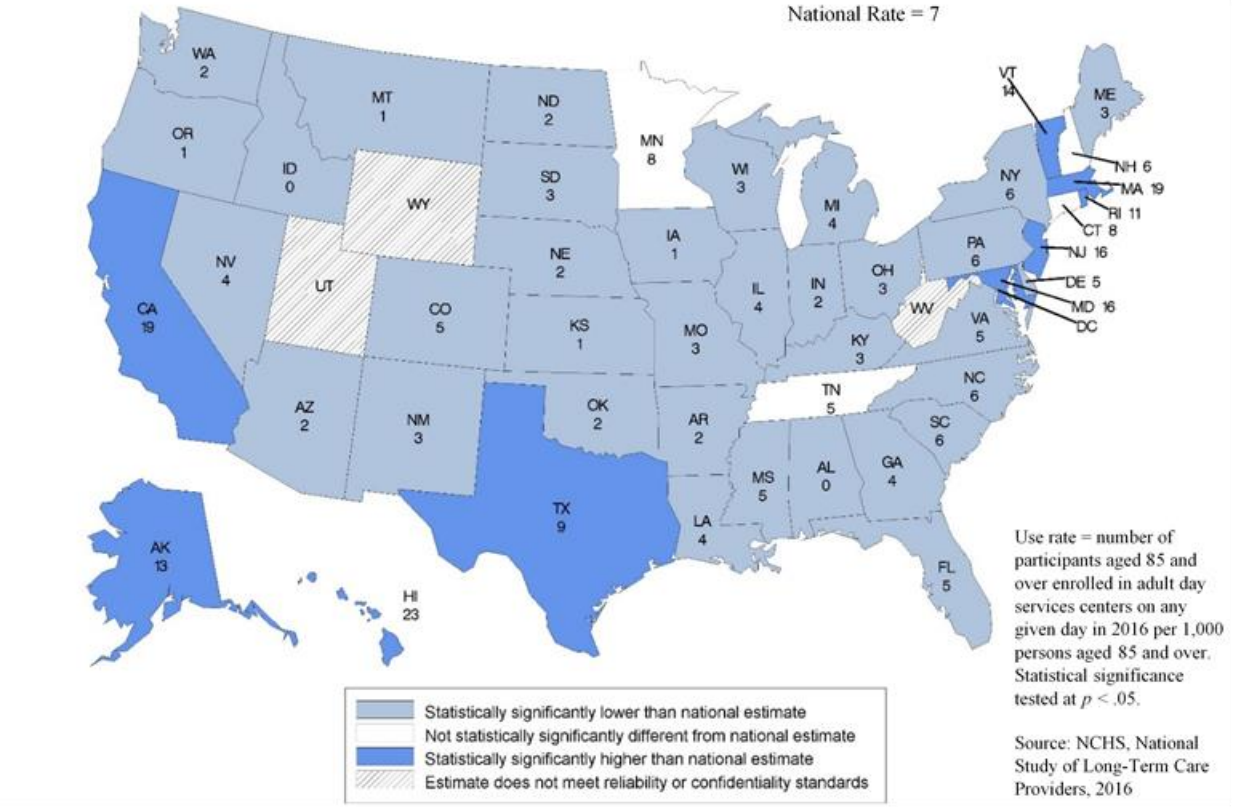
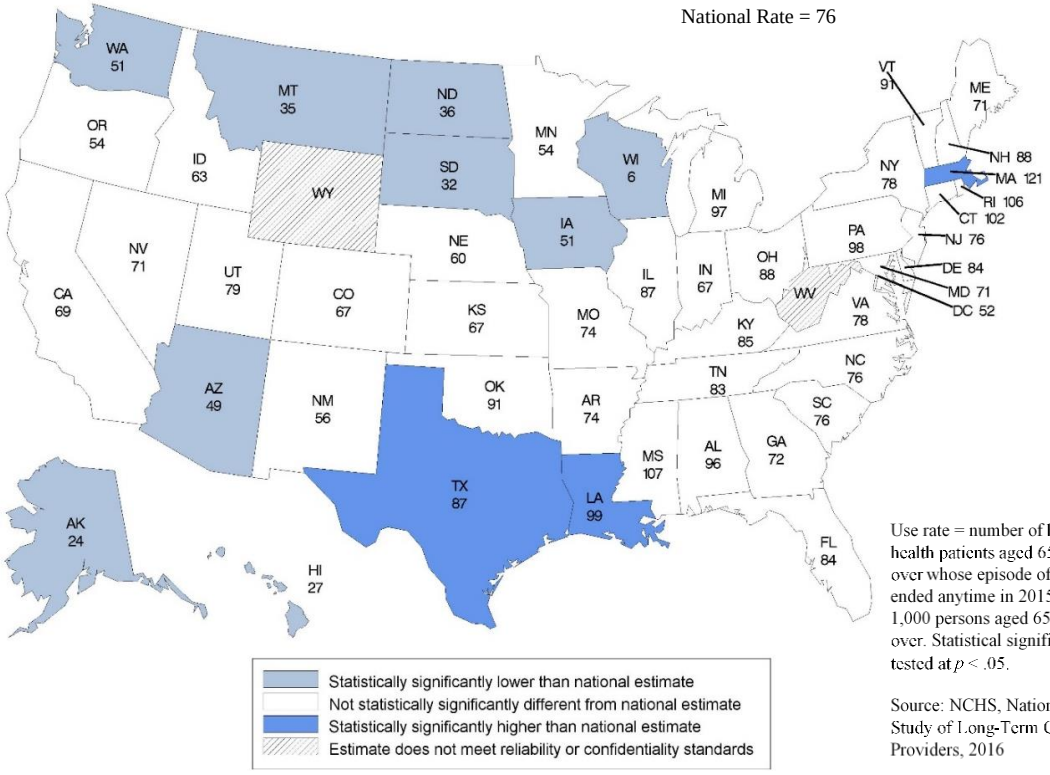


Figure 4-1b: Use rate of adult day services center participants aged 85 and over: United States, 2016



The proportions of adults age 65 or older, and adults age 85 or older, utilizing HH services in Nevada are not different from the corresponding proportions of U.S. residents using these services (see Figures 4.2a and 4.2b).

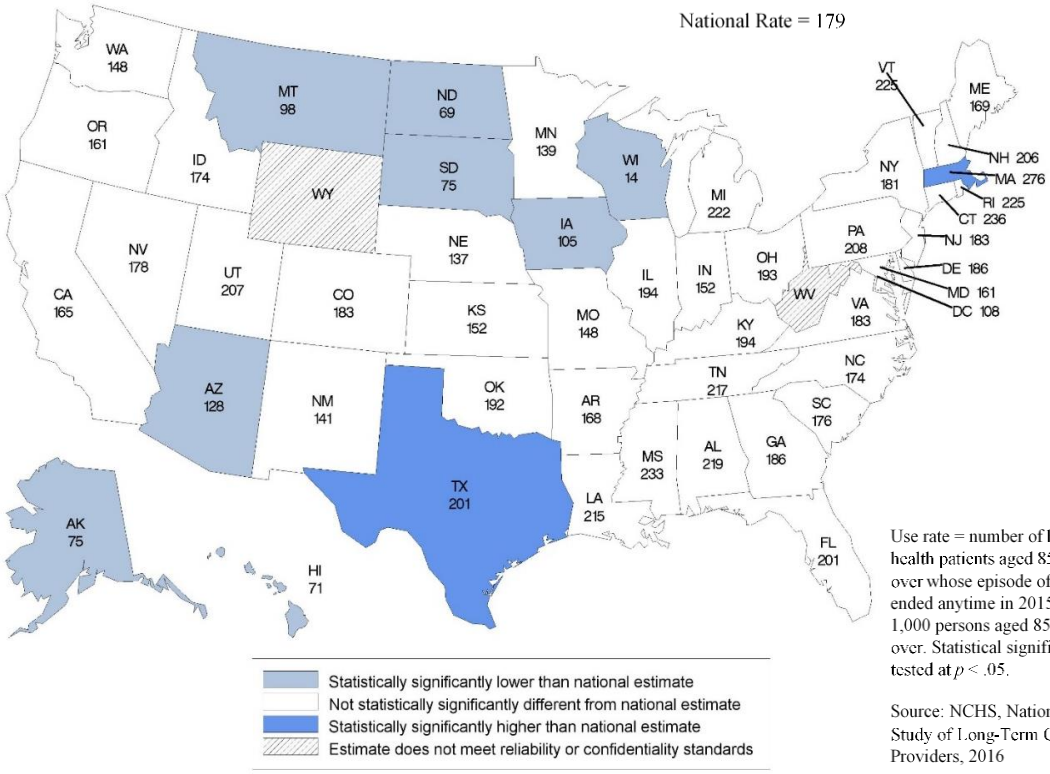
Figure 4-2a: Use rate of home health patients aged 65 and over discharged in calendar year: United States, 2015



Use rate = number of home health patients aged 65 and over whose episode of care ended anytime in 2015 per 1,000 persons aged 65 and over. Statistical significance tested at $p < .05$.

Source: NCHS, National Study of Long-Term Care Providers, 2016

Figure 4-2b: Use rate of home health patients aged 85 and over discharged in calendar year: United States, 2015



Use rate = number of home health patients aged 85 and over whose episode of care ended anytime in 2015 per 1,000 persons aged 85 and over. Statistical significance tested at $p < .05$.

Source: NCHS, National Study of Long-Term Care Providers, 2016

Utilization rates for Nursing Facilities (NF) are significantly lower in Nevada than in the U.S. for both adults at least age 65 and adults at least age 85 (see Figures 4.3a and 4.3b).

Figure 4-3a: Use rate of nursing home residents aged 65 and over: United States, 2016

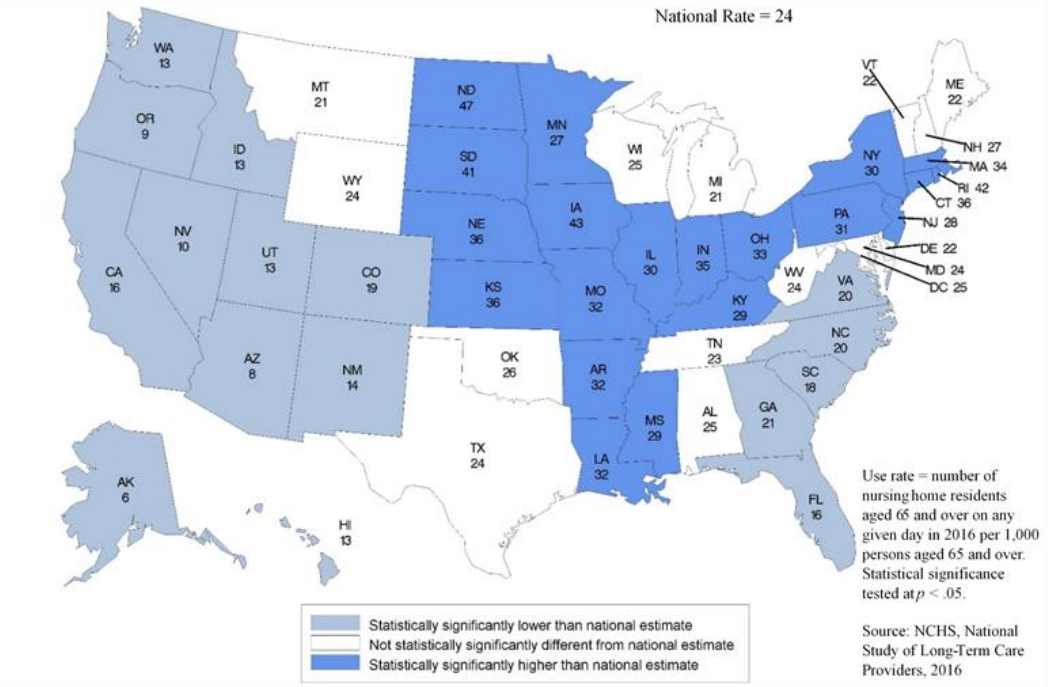
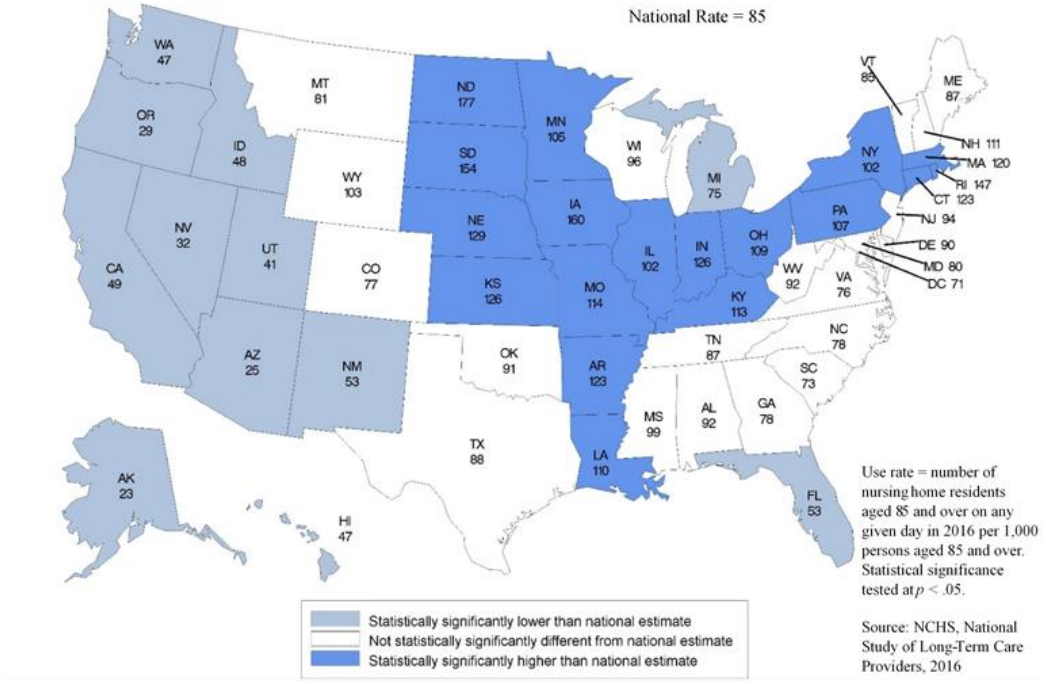


Figure 4-3b: Use rate of nursing home residents aged 85 and over: United States, 2016



The proportions of adults at least age 65 living in Residential Care Communities (RCC) are significantly lower in Nevada than in the U.S. However, the Nevada and U.S. proportions are comparable for the subset who are at least 85 years old (see Figures 4.4a and 4.4b).

Figure 4-4a: Use rate of residential care residents aged 65 and over: United States, 2016

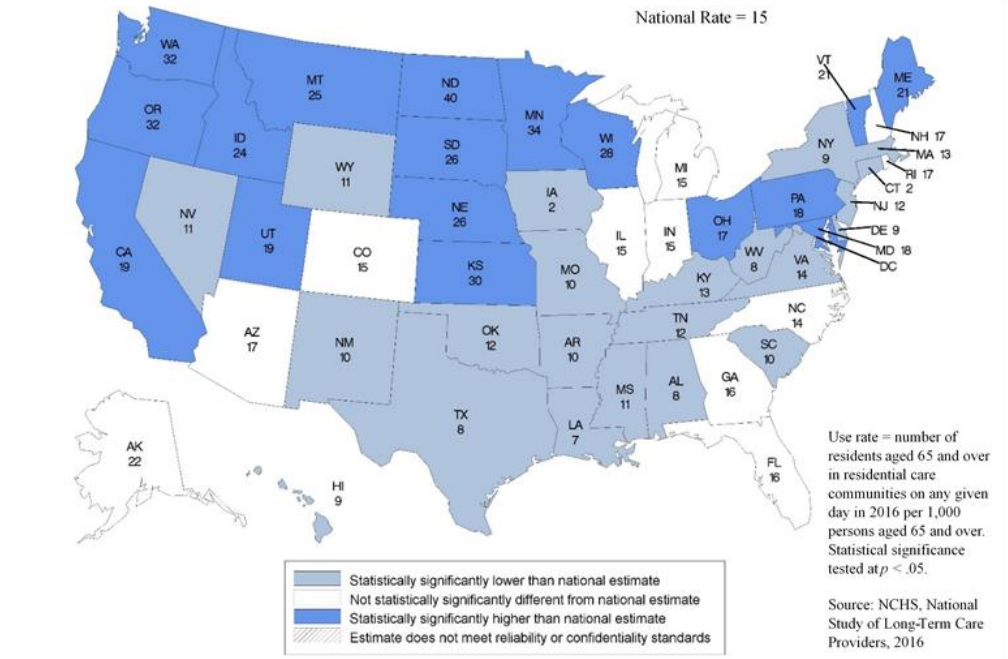
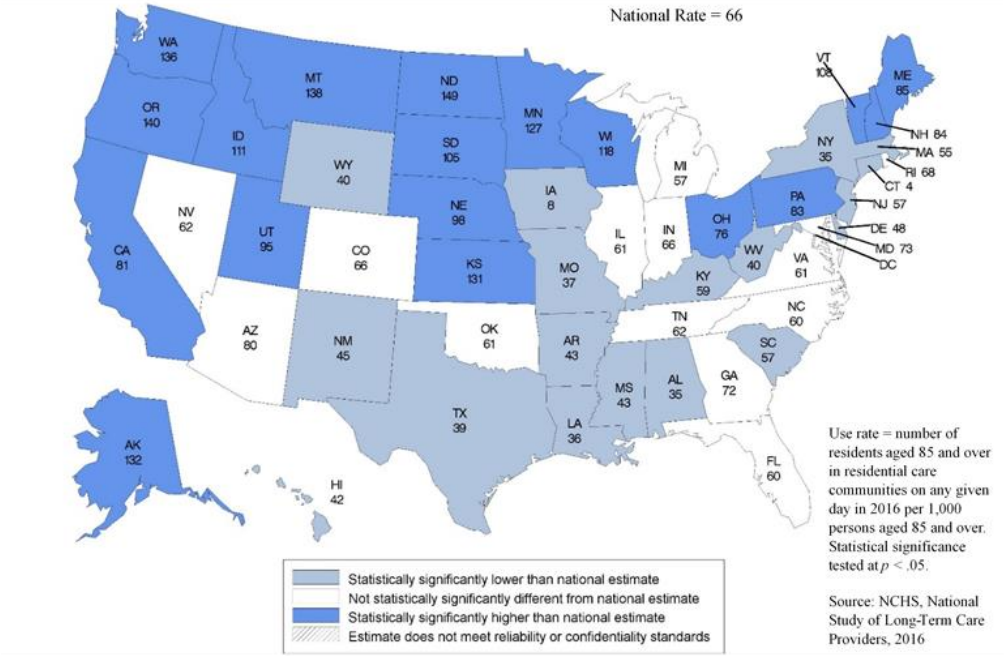


Figure 4-4b: Use rate of residential care residents aged 85 and over: United States, 2016



These maps illustrate three points:

- Utilization of HH services is similar in Nevada and in the U.S. for all older adults and for those who are at least 85 years old.
- Utilization rates for AD and LTSS stays in NF are significantly lower in Nevada than in the U.S. for all older adults and for those who are at least 85 years old.
- The utilization rate for ALFs is significantly lower in Nevada than in the U.S. for all older adults, but the two rates are comparable for those who are at least 85 years old.

These results suggest that Nevadans utilize the package of LTSS services at a lower rate than individuals living in the U.S. The difference in the two rates could reflect differences in the availability and affordability of services or it could reflect differences in the proportions of individuals needing assistance or differences in preferences regarding LTSS.

Estimated Number of People Needing Assistance with ADLs and IADLs in Nevada

Table 4.1 presents county-level estimates of numbers of people currently needing assistance with ADLs and IADLs. These estimates were constructed using data from the American Community Survey (ACS; 2018) and the National Health Interview Survey (NHIS) (2018). The NHIS provides data on proportions of individuals who self-report needing assistance with ADLs and IADLs by age category. Table 4.1 was generated by applying these proportions to the estimated numbers of people in each age category living in each of Nevada's non-urban counties. Additional details, including estimates by age category (adults age 18-64 and adults at least age 65) are provided in Appendix Tables A.4-1 through A.4-6.

The last two columns of Table 4.1 provide county-level estimates of the numbers of people needing assistance who have incomes below the FPL. Income is an important factor shaping demand for ALFs because Medicaid covers assistance with ADLs and IADLs for eligible individuals, but it does not cover ALF charges for room and board.

Table 4.1: Adults Needing Assistance with ADLs and IADLs in Non-Urban Counties in Nevada Nevada, 2018						
		Adults Needing Assistance with ADLs and IADLs			Adults Below Poverty Needing Assistance with ADLs and IADLs	
County	Total Population	ADLs	IADLs	Population Below Poverty Level	ADLs	IADLs
Churchill	18612	506	906	2316	118	241
Douglas	39664	1276	2261	3344	161	328
Elko	38012	805	1474	3702	170	311
Esmeralda	789	25	44	51	5	8
Eureka	1396	39	70	141	19	30
Humboldt	12322	280	510	1285	69	125
Lander	4150	104	188	436	22	40
Lincoln	4325	129	229	200	8	15
Lyon	41824	1165	2082	4555	245	416
Mineral	3680	114	202	718	42	75
Nye	36439	1229	2167	5361	331	557
Pershing	5505	131	237	442	31	62
Storey	3348	109	193	216	9	17
White Pine	7749	201	361	601	35	60

Source: American Community Survey 5-year Population Estimates (2018) and National Health Interview Survey (2019)

The estimates presented in Table 4.1 should be viewed as order-of-magnitude approximations, rather than precise estimates. Estimates may vary slightly across data sources due to variations in the specific questions across data-collection instruments, sampling variation, or variations in methods used to estimate state and county population data between census years. In addition, variations may stem from relatively small populations in some Nevada counties.

Table 4.2 groups counties by the estimated numbers of people needing assistance with ADLs (using the estimates from Table 4.1). Some, but not all, of these individuals will utilize HH, AD, ALF, and RC services. The relatively small numbers of people needing assistance with ADLs in some Nevada counties pose a challenge for potential service providers.

Table 4.2: Estimated Population Needing Assistance with ADLs in Non-Urban Counties in Nevada Nevada, 2018	
County	Estimated Population Needing Assistance with ADLs
Counties with 1000+ People Needing Assistance with ADLs	
Lyon	1,165
Nye	1,229
Douglas	1,276
Elko	1,276
Counties with 200-1000 People Needing Assistance with ADLs	
White Pine	201
Humboldt	280
Churchill	506
Counties with 100-150 People Needing Assistance with ADLs	
Lander	104
Storey	109
Mineral	114
Lincoln	129
Pershing	131
Counties with 0-50 People Needing Assistance with ADLs	
Esmeralda	25
Eureka	39

Source: American Community Survey 5-Year Population Estimates (2018) and National Health Interview Survey (2018)

The American Community Survey (2018) also provides estimates of proportions of individuals experiencing six specific difficulties: cognitive, ambulatory, independent living, self-care, vision, and hearing. These estimates are available for each of the two urban Nevada counties (Clark and Washoe) and for non-urban counties grouped together. They are also available by age category. Table 4.3 details these proportions for individuals younger than age 65 and for individuals age 65 or older. The proportions experiencing specific difficulties differ across the two age groups. Within each age group, the proportions of individuals experiencing each difficulty are similar in Nevada and in the U.S., as well as in Nevada's non-urban counties and in the state overall.

Table 4.3: Proportions of Individuals Experiencing Difficulties 2018					
			Nevada Counties		
Category of Difficulty	U.S.	Nevada	Clark	Washoe	Non-Urban Counties
Individuals Age 65 and Older					
Cognitive difficulty	10%	8%	8%	8%	9%
Ambulatory difficulty	23%	22%	23%	21%	21%
Independent living difficulty	17%	13%	13%	12%	13%
Self-care difficulty	11%	8%	8%	8%	8%
Vision difficulty	6%	6%	6%	4%	8%
Hearing difficulty	15%	16%	15%	15%	19%
American Community Survey Sample Size	593703	5268	3551	841	876
Individuals Age 65 and Younger					
Cognitive difficulty	5%	4%	4%	3%	4%
Ambulatory difficulty	5%	6%	6%	4%	7%
Independent living difficulty	4%	4%	4%	3%	4%
Self-care difficulty	2%	2%	2%	1%	2%
Vision difficulty	2%	2%	2%	2%	3%
Hearing difficulty	2%	2%	2%	2%	4%
American Community Survey Sample Size	1968888	17690	12775	2872	2043

Source: U.S. Census (2018)

A large proportion of ADL and IADL assistance is provided by family members, so demand for HH, ADL, AD, and RC Services is affected by the proportions and numbers of elders who live alone. Of people with self-care difficulties, individuals who live alone are more likely to utilize ALFs than individuals who live with family members. Table 4.4 provides estimates of the numbers and percentages of household heads who are at least age 65 and living alone. These percentages range from 7.8% in Elko to 24.2% in Lincoln County.

Table 4.4: Household Heads Age 65+ and Living Alone 2018			
County	Total Households	Percentage of Household Heads Age 65+ and Living Alone	Number of Household Heads Age 65+ and Living Alone
Churchill	9819	10.40%	1021
Douglas	20579	12.40%	2552
Elko	17688	7.80%	1380
Esmeralda	454	17.80%	81
Eureka	750	16.50%	124
Humboldt	6271	9.70%	608
Lander	2087	9.20%	192
Lincoln	2041	24.20%	494
Lyon	20528	12.60%	2587
Mineral	1938	16.60%	322
Nye	18668	16.50%	3080
Pershing	1933	11.90%	230
Storey	1598	15.30%	244
White Pine	3529	14.30%	505

Source: U.S. Census (2018)

Individuals needing help with ADLs and IADLs include both older adults and adults with physical disabilities. Table 4.5 provides ACS estimates of numbers of people with a self-care difficulty, by county and by age category. The variable "self-care difficulty" is defined by ACS to include individuals who have difficulty bathing and dressing. From Table 4.3, 8% of older adults have a self-care difficulty, whereas only 2% of younger adults report this difficulty.

Table 4.5: County Estimates of Population Needing Assistance with Self Care 2018			
County	Age	County Population	Population Needing Assistance with Self-Care*
Churchill	18-64	14,166	24
	65 and over	4,446	103
Douglas	18-64	27,053	346
	65 and over	12,611	291
Elko	18-64	32,535	176
	65 and over	5,477	225
Esmeralda	18-64	520	3
	65 and over	269	12
Eureka	18-64	1,113	0
	65 and over	283	0
Humboldt	18-64	10,239	66
	65 and over	2,083	97
Lander	18-64	3,328	56
	65 and over	1,225	0
Lincoln	18-64	3,100	23
	65 and over	1,225	43
Lyon	18-64	30,887	856
	65 and over	10,937	459
Mineral	18-64	2,581	19
	65 and over	1,099	48
Nye	18-64	23,795	631
	65 and over	12,644	406
Pershing	18-64	4,444	20
	65 and over	1,061	3
Storey	18-64	2,172	79
	65 and over	1,176	128
White Pine	18-64	6,162	68
	65 and over	1,587	48
Total	18-64	162,095	2367
	65 and over	56,123	1863
Total All Ages		218,218	4230

Source: American Community Survey (2018)

*County Level ACS Self Care Difficulty Data- Defined as: Having difficulty bathing or dressing. Source: U.S. Census Bureau, 2018 American Community Survey 5-Year Estimates

The proportions of older people needing assistance are larger than the proportions of younger people needing assistance in each county. In some counties, however, the number of younger people needing assistance is larger than the number of older people needing assistance. This can occur because the number of younger people is larger, in each county, than the number of older people. In Douglas County, for example, the number of younger adults (18-64) with a self-care difficulty is 346, and the number of older adults (65 and over) with this difficulty is 291.

Talley and Crews (2007) provide a useful perspective on the importance of this point for service capacity planning:

> *One of the miracles of the 20th century was the increase in life expectancy among people with disabilities. For instance, first-year survival rates of children with Down Syndrome increased from 50% during 1942 to 1952 to 91% during 1980 to 1996, and people with this disability are now living into old age. Similarly, prior to World War II, the average life expectancy for someone with a spinal cord injury was 14 months. Today people with spinal cord injuries can expect to live relatively long lives. For most of our history, parents outlived their disabled children; that is no longer the case.*

The preceding subsection documents three important issues:

- The numbers of individuals who need assistance with ADLs and/or IADLs in Nevada's non-urban counties range from 25 in Esmeralda County to 1,276 in Douglas and Elko Counties.
- Some of these individuals have incomes below the FPL. This is an important factor affecting ALF utilization because Medicaid cannot pay for the room and board portion of ALF charges.
- The proportions of individuals with self-care difficulties who are age 65 or older (versus adults younger than 65) varies significantly across Nevada's non-urban counties.

Characteristics of Individuals who Utilize LTSS Services by Service Type

The preceding section focused on numbers of individuals who need assistance with ADLs and IADLs. Some of these individuals will use RCC, AD, HH, and NF services, whereas others will not. In this section, we focus on characteristics of individuals who utilize each of these services. We utilize data from the National Study of Long-Term Care Providers (NSLTCP). The NSLTCP reports data on LTSS providers, including Residential Care Communities (RCC), Adult Day (AD) services, and Home Health (HH) agencies. In this survey, people who live in RCC facilities are described as "persons who cannot live independently but generally do not require the skilled care provided by nursing homes." The NSLTCP survey results provide the following information about individuals utilizing these services.

The age distributions of LTSS users vary across service types (see Table 4.6). AD and HH services are utilized by younger adults (average ages of Nevada LTSS recipients were 62 and 70, respectively), whereas RCCs were utilized by older adults (average age is 80). People younger than age 65 constitute 7% of people living in RCCs, 45% of people utilizing AD services, and 20% of people served by HH agencies. At the other end of the age spectrum, people age 85 or

older account for 49% of people living in RCCs, 13% of people utilizing AD services, and 19% of people served by HH agencies. For each type of service, the age distribution is similar in Nevada and in the U.S. (Harris-Kojetin et al., 2019; Lendon et al., 2019).

Table 4.6a: Age Distributions of LTSS Users: U.S. and Nevada
Percent of Service Users by Age Category

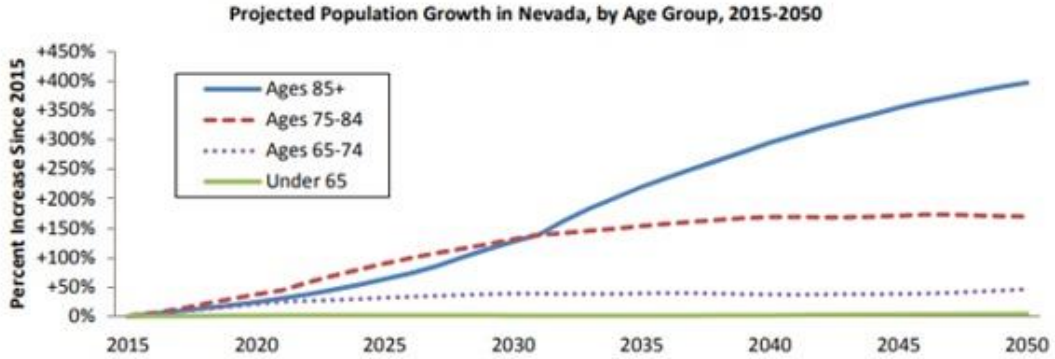
	Residential Care Community		Adult Day Services		Home Health Agency		Nursing Home	
Age	U.S.	NV	U.S.	NV	U.S.	NV	U.S.	NV
<65	7	7	37	45	18	20	17	24
65-74	11	11	20	15	27	32	18	24
75-84	30	33	26	27	30	29	27	28
85	52	49	16	13	25	19	39	24
Total	100	100	100	100	100	100	100	100
Average age*	80	80	64	62	72	70	75	70

Source: Lendon, et. al, 2019 and HCHS, Feb 2019

*Average age is computed using 40, 70, 80, and 88 as the approximate midpoints of the age intervals.

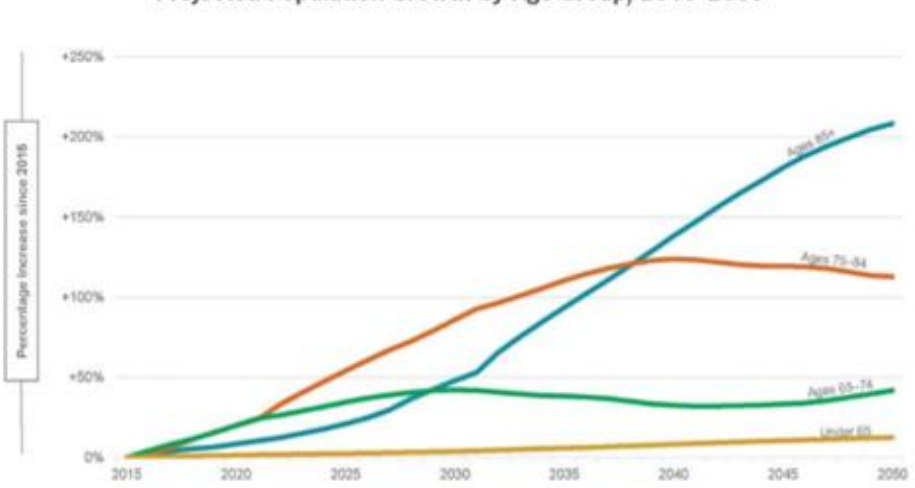
The difference in the age profiles of individuals using the three types of home and community-based services (HCBS) is important for facility and program planning. Figures 4.5 and 4.6 illustrate the projected growth in the numbers of individuals in each age category in the U.S. and in Nevada. As illustrated in these figures, the projections for Nevada mirror projections for the nation as a whole. These growth curves imply that demand for RCCs will grow more slowly in the next decade than demand for either AD or HH services, but the growth in demand for RCCs may be more sustained as the baby boomers continue to age into the 85+ category.

Figure 4-5: Projected population growth in Nevada by age group, 2015-2050



Source: Across the States 2018: profile of long-term services and supports in Nevada. AARP Public Policy Institute

Figure 4-6: Projected population growth in the U.S. by age group, 2015-2050



Source: Across the States 2018. AARP Public Policy Institute

Data provided by the Carson Valley Adult Day Club (personal communication, August 24, 2020) illustrates the sequence of services that may be utilized by individual LTSS users. Of the 44 clients who utilized the Club in the years 2017-2019, but do not continue to utilize the Club:

- 7 now receive home care,
- 12 reside in facilities providing Memory Care,
- 6 reside in Skilled Nursing Facilities, and
- 19 passed away.

These population projections also indicate a long-term reduction in the ratio of potential informal caregivers (under age 65) to potential care recipients (age 65 and older). The implied reduction in informal caregiving services could lead to an increase in demand for formal LTSS if families turn to formal LTSS when informal caregiving is not available (see Figures 4.5 and 4.6).
The gender distribution of LTSS users is similar nationwide and in Nevada. More women than men use these services, and the gender-differential is greater for RCC facilities than for all other services (see Table 4.6b).

Table 4.6b: Gender Distributions of LTSS Users: U.S. and Nevada
Percent of Service Users by Gender

	Residential Care Community		Adult Day Services		Home Health Agency		Nursing Home	
Gender	U.S.	NV	U.S.	NV	U.S.	NV	U.S.	NV
Men	29	31	42	38	39	42	35	43
Women	71	70	58	62	61	59	65	57

Source: National Study of Long Term Care Providers (2016), National Health Interview Survey (2016)

In the nation and in Nevada, at least two-thirds of users in RCC, HH agencies, and NF services are non-Hispanic and White. Individuals utilizing AD services are more diverse: Only about 40% of these individuals are non-Hispanic and White (see Table 4.6c).

Table 4.6c indicates that utilization rates differ by race and ethnicity. Caucasians account for a disproportionate share of ALF residents (RCC residents): non-Hispanic Whites account for 81% of RCC residents, while they account for only 60% of the U.S population (KFF, 2018).

Table 4.6c: Race/Ethnic Distributions of LTSS Users: U.S. and Nevada
Percent of Service Users by Gender

	Residential Care Community		Adult Day Services		Home Health Agency		Nursing Home	
Race and Ethnicity	U.S.	NV	U.S.	NV	U.S.	NV	U.S.	NV
Hispanic	3	3	23	26	7	11	5	6
Non-Hispanic white	81	78	42	31	76	67	75	69
Non-Hispanic black	4	2	15	20	13	13	14	11
Non-Hispanic other	12	5	20	23	4	8	5	13

Source: National Study of Long Term Care Providers (2016), National Health Interview Survey (2016)

In Nevada and the U.S., approximately 30% to 40% of individuals utilizing RCC, AD services, or HH agencies have dementia. The prevalence of each of the following conditions is at least 20% among residents of RCCs: arthritis, depression, heart disease, and high blood pressure. In Nevada, these prevalence numbers range from 27% (depression) to 47% (high blood pressure). For individuals utilizing services provided by HH agencies, the Nevada prevalence of these conditions range from 38% (depression) to 88% (high blood pressure) (see Table 4.6d).

Table 4.6d: Medical Conditions of LTSS Users: U.S. and Nevada Percent of Service Users								
	Residential Care Community		Adult Day Services		Home Health Agency		Nursing Home	
Medical Conditions	U.S.	NV	U.S.	NV	U.S.	NV	U.S.	NV
Alzheimer disease or other dementias	42	39	31	35	32	30	48	35
Arthritis	42	36	38	26	60	58	26	11
Asthma	7	6	8	7	24	27	-	-
Chronic kidney disease	8	6	7	4	47	48	-	-
COPD	14	15	10	9	32	36	-	-
Depression	31	27	28	21	39	38	46	32
Diabetes	18	12	31	33	45	46	32	31
Heart disease	34	32	27	20	55	51	38	28
High blood pressure/ hypertension	51	47	50	41	89	88	72	65
Osteoporosis	24	18	21	6	15	12	12	5
Diagnosed with intellectual or developmental disability (IDD)	-	-	28	25	-	-	-	-
Diagnosed with severe mental illness	-	-	9	13	-	-	-	-

Source: National Study of Long Term Care Providers (2016), National Health Interview Survey (2018)

Prevalence rates for assistance with ADLs are similar in Nevada and the U.S. The proportion of individuals needing assistance with ADLs is lowest among AD clients and highest among HH and NF clients (see Table 4.6e). For example, approximately 90% of HH clients and NF residents need help with bathing, dressing, transferring, and walking. In contrast, the proportion of RCC residents needing help with these activities ranges from 33% to 58%, and the proportion of AD clients needing help with these activities ranges from 18% to 48%.

Table 4.6e: ADL Assistance for LTSS Users: U.S. and Nevada

Percent of Service Users

	Residential Care Community		Adult Day Services		Home Health Agency		Nursing Home	
Activity of Daily Living	U.S.	NV	U.S.	NV	U.S.	NV	U.S.	NV
Eating	19	17	23	22	61	65	60	65
Bathing	64	57	39	35	97	95	97	96
Dressing	48	50	36	38	92	89	93	93
Toileting	40	40	34	43	81	79	89	92
Transferring	29	33	29	18	91	89	87	90
Walking	57	58	46	48	95	93	92	94

Source: National Study of Long Term Care Providers (2016), National Health Interview Survey (2018)

In Nevada, 14% of HH agency clients and 13% of RCC residents had an emergency department visit during the care episode ongoing at the time of the survey, but only 7% of AD services had an emergency department visit (see Table 4.6f). The health conditions of individuals utilizing RCC and AD services listed in Table 4.6d and the incidence of hospital stays and ER visits suggest that proximity of ALF and AD facilities to health care providers may be an important consideration in program design.

Table 4.6f: Adverse Events Experienced by LTSS Users: U.S. and Nevada

Percent of Service Users

	Residential Care Community		Adult Day Services		Home Health Agency		Nursing Home	
Adverse Events	U.S.	NV	U.S.	NV	U.S.	NV	U.S.	NV
Overnight Hospital Stay	8	6	4	4	16	15	14	NA
Emergency Room Visit	14	13	7	7	15	14	--	NA
Fall	22	NA	8	NA	--	NA	16	NA

Source: National Study of Long Term Care Providers (2016), National Health Interview Survey (2018)

--- data not reported because missing cases 10% or higher

Finally, an AARP study makes an additional point that is important for LTSS resource planning: Accessing facility-based AD programs can be challenging for people living in sparsely populated areas who are not able to drive. This is likely to affect people living in households with low incomes, older adults, and people with physical disabilities.

ALF Episodes: Durations of ALF Stays

Table 4.7 details the durations of ALF stays. The length of time people live in ALFs is an essential detail for understanding ALF occupancy. This analysis utilizes data from the National Health and Aging Trends Study (NHATS). NHATS reports data from annual in-person surveys of adults age 65 or older. The sample was constructed to be representative of the U.S. population. Individuals are interviewed repeatedly; hence it is possible to "follow" individuals through a series of years. Currently available data includes eight survey rounds, from 2011 through 2018.

The NHATS data includes 5,090 individuals who met two criteria:

- The individual was interviewed in the first round, and he or she did not drop out of the survey while living in the ALF (unless death occurred before the eighth survey round).
- The individual was not living in an ALF on the day of the initial survey.

Of these 5,090 individuals, 169 entered an ALF in years 2-4 of the survey. Of these, 25% lived in an ALF for one year, 21% lived in an ALF for two years, 15% utilized ALF services for three years, and the remaining 38% stayed four years or more. These data do not indicate whether these individuals lived in the same ALF for the entire duration of their stays, or whether they lived in a sequence of different ALFs.

Table 4.7: Durations of Assisted Living Facility (ALF) Episodes
United States, 2018

Number of Years	Percent of all individuals	Percent of individuals who entered an ALF
0	97%	-
1	0.80%	25%
2	0.70%	21%
3	0.50%	15%
At least 4	1.30%	38%
Sum	100%	100%

Source: Project team analysis of NHATS data.

Multivariate Estimates of Characteristics of ALF Users and Estimates of Demand by County

The descriptive statistics presented in the previous subsections provide a series of single-variable snapshots of characteristics of individuals who need assistance with ADLs and /or IADLs. In this sub-section we estimate a multivariate regression using data from the National Health and Aging Trends Survey (NHATS), and we use the results to develop an estimate of the number of

individuals in Nevada's non-urban counties who will utilize ALF services. This analysis controls for non-urban Nevada versus U.S. differences in individual characteristics. We use the regression results to estimate the demand for ALF services in non-urban Nevada that would occur if utilization patterns in non-urban Nevada were similar to utilization patterns in the U.S.

We estimated a Probit regression using de-identified individual-level data from the nationally representative NHATS survey. This regression estimates the impacts of demographic characteristics and needs for assistance with specific types of difficulties on the probability that an individual will utilize ALF services. The dependent variable in the regression is a binary variable with the value one (1) if the survey respondent was living in an ALF on the day of an annual survey, and it is zero (0) otherwise. The independent variables measured marital status, race/ethnicity, five-year age categories, education, income, whether the individuals lived alone in the initial observation year, and whether the individuals experienced any of five types of difficulties during the preceding year (cognitive, ambulatory, self-care, vision, or hearing). The regression results indicate the following demographic and health condition variables were statistically significant predictors that the individual would live in an ALF:

- People with cognitive impairment, stair difficulty, and vision difficulty, at the time of the previous survey, were more significantly likely to live in an ALF during the subsequent year's survey, than people who did not have these difficulties.
- People with more years of education were significantly more likely to live in an ALF than people with fewer years of education.
- The probability of living in an ALF increases significantly with age, and the impact of additional years increases with age.
- Blacks were less likely to live in an ALF than White non-Hispanics.
- People who lived alone at the time of the preceding survey were more likely to live in an ALF during the current survey than people who lived in larger households.

The regression results are detailed in the Appendix in Table A.4-7.

We used the coefficients from this regression, along with ACS (2018) data on demographic characteristics of individuals living in non-urban Nevada, to compute an estimate of the percentage of older adults living in non-urban Nevada who would live in an ALF at any one moment in time. This computation indicates that 3.13% of older adults living in non-urban Nevada would live in an ALF if utilization patterns in non-urban Nevada were similar to utilization patterns in the U.S. This estimate adjusts for differences in observable demographic characteristics and self-reported difficulties between non-urban Nevada and the U.S. The results provide an estimate of potential demand for ALF services, if the services were available.

In summary, this subsection reports data and analyses with the following implications for program planning:

- The average age of AD clients in Nevada is 62, and the average age of ALF residents is 80. This implies that individuals may move through a sequence of services as they age. From a program planning perspective, this suggests that demand for AD may be

relatively high in the near-term, but demand may shift toward ALF services as the baby boomers age.

- White non-Hispanics are more likely to utilize ALFs than Blacks, even after controlling for education, age, other demographic characteristics and difficulties experienced by each individual. This suggests that a portfolio of services may be required to provide LTSS for the broad population.
- Many AD clients and ALF residents have chronic health conditions, and 13% of Nevada's ALF residents had an emergency room visit while residing in an ALF. This suggests that proximity to health care providers may be an important consideration when planning AD programs and ALFs.
- National data indicate that 25% of ALF residents stay for one year, 36% stay for 2 or 3 years, and 38% stay for 4 years or longer. From a program planning perspective, this suggests that program planners may need to build excess capacity if they want to be able to respond quickly when individuals request space in an ALF. This issue may be particularly relevant for small facilities.
- Analysis of data from a large national survey indicates that 3.13% of older adults living in non-urban Nevada would utilize ALFs if utilization patterns among Nevada non-urban county residents were the same as nationwide utilization patterns.

Payers

Community-dwelling individuals needing help with ADLs and/or IADLs incur relatively high health care costs. Lewin Group analyzed data from the 2006 Medical Expenditures Panel Survey and concluded that these individuals accounted for 5% of community-dwelling U.S. residents,[25] and they accounted for 23% of healthcare expenditures (Alecxih et al., 2010).

In 2013, national LTSS expenditures totaled $310 billion. These expenditures included RCC, NF, HH, HCBS, as well as relevant ambulance services and relevant non-Medicare post-acute care. As shown in Figure 1.2 (in Chapter 1: Introduction), Medicaid paid for 57% of these expenditures. Other public programs, including Medicare, paid for 16%, and private insurance paid for 4%. Individuals paid for 23% of the LTSS expenditures out-of-pocket (Hado & Komisar, 2019).

The relative roles of these payers vary across the types of LTSS services. Medicaid is an important source of payment for AD and NF, but it plays a much smaller role in paying for HH and RCC (see Table 4.8). Nevada Medicaid is a payer for 60% of people utilizing AD and NF services, but only 9% of people utilizing RCC and 6% of people utilizing HH (Lendon et al., 2019). The low proportion of RCC residents for whom Medicaid paid for some or all of the services is consistent with the positive correlation between income and RCC utilization reported in the first section of this chapter. This correlation is consistent with the fact that Medicaid can pay for the services provided to eligible RCC residents, but it cannot pay for the room and board portion of RCC charges.

Table 4.8: Medicaid Service Users
Percent of Service Users Utilizing Medicaid as Payment Method

	Residential Care Community		Adult Day Services		Home Health Agency		Nursing Home	
Payment Method	U.S.	NV	U.S.	NV	U.S.	NV	U.S.	NV
Some or all services paid by Medicaid in last 30 days	17	9	66	59	10	6	62	59

Source: National Study of Long Term Care Providdders (2016), National Health Interview Survey (2018)

Nevada Medicaid Program

The Nevada Medicaid program is administered by Nevada DHCFP. LTSS is an important component of this program. It is estimated that half of Americans age 65 or older will use LTSS during their lifetimes (Favreault & Dey, 2016), and LTSS expenditures accounted for 21% of

[25] The Lewin Group concluded that 5% of community-dwelling U.S. residents, of all ages, need help with ADLs. To place this number in the context of results reported in the first section of this report, our analysis, indicated that 2.9% of adults under age 65 need assistance with ADLs, and 15.5% of older adults need assistance. The U.S. Census indicates that ratio of the number of adults age 18-64 to the number of older adults was 3.72 in 2019. Using this ratio, the weighted percentage of adults needing assistance with ADLs was 5.7%. In a separate analysis, we concluded that 5.7% of older adults utilize ALF nationwide.

Nevada Medicaid expenditures in FY 2016. Nationwide, LTSS accounted for 30% of Medicaid expenditures (Eiken et al., 2018; Favreault & Dey, 2016).

Populations Using LTSS Services

State Medicaid programs cover LTSS waiver services for four categories of eligible individuals:

- Older Adults and People with Physical Disabilities,
- People with Developmental Disabilities,
- People using Behavioral Health Services, and
- Other populations.

As shown in Table 4.9, 53% of Nevada LTSS expenditures covered services for older adults and people with physical disabilities, 26% covered services for people using Behavioral Health Services, and 15% covered services for People with Developmental Disabilities (Eiken et al., 2018, Table 57).

Table 4.9: Nevada LTSS Expenditures FY 2016

Long Term Service Category	LTSS Expenditures per Nevada Resident	Percent of Total LTSS Expenditures
Older Adults & People with Physical Disabilities	$125.31	53%
People with Developmental Disabilities	$35.61	15%
Behavioral Health Services	$60.95	26%
Other/Multiple Populations	$15.49	7%
Total LTSS	$237.36	100%

Data includes full-benefit enrollees who participated in Medicaid for any length of time during the federal fiscal year. Enrollees were identified as having full benefits if for each month they were enrolled in Medicaid they also received full benefits or received Medicaid benefits through an alternative package of benchmark equivalent coverage.

Source: Eiken et. al., Medicaid Expenditures for Long-Term Services and Supports in FY 2016, (2018)

Federal Framework for LTSS Delivered in Institutional and HCBS Settings

Medicaid initially covered LTSS delivered in institutional settings. Starting in 1975, states could provide Personal Care to help with ADLs as a State Plan benefit. This Personal Care could be provided in or outside the home. Because this assistance was offered as a State Plan benefit, states were required to offer this benefit to all individuals eligible for Medicaid coverage. Starting in 1981, states could apply for waivers under section 1915(c) of the Social Security Act, to cover HCBS services for individuals who qualified for nursing facility level-of-care. These waiver applications were required to show that switching from institutional to HCBS services would be at least budget neutral. To achieve budget neutrality, states were permitted to target waivers to specific areas of the state or specific groups. By 2015, nationwide Medicaid expenditures for HCBS accounted for more than half (51%) of LTSS expenditures. This process of increasing the role of HCBS is known as "rebalancing."

DHCFP coverage of LTSS Institutional and HCBS care

DHCFP includes the following services in LTSS Institutional and HCBS care (http://dhcfp.nv.gov/Pgms/LTSS/LTSSHome/):

- Facilities Services Unit
    - Nursing Facilities
    - Intermediate Care Facilities for Individuals with Intellectual Disabilities (ICF/IID)
    - Hospice Services
- Home and Community Based Services
    - Personal Care Services
    - Intermediary Services Organization
    - Home Health
    - Private Duty Nursing
    - Waiver for the Frail Elderly (FE)
    - Waiver for Individuals with Intellectual Disabilities and Related Conditions (ID)
    - Waiver for Persons with Physical Disabilities (PD)
    - 1915(i) St Plan Option - Adult Day Health Care and Habilitation
    - Katie Beckett Eligibility Option

Current federal policy specifies that states ***must*** cover institutional care and HH services for individuals who qualify for an institutional level-of-care, and states ***may*** offer HCBS benefits to these individuals and to other groups, such as individuals who are likely to need an NF level-of-care in the future.

The DHCFP details the eligibility requirements for each waiver, and the services offered:

Waiver for the Frail Elderly (FE)

This waiver serves recipients age 65 or older who demonstrate a need for waiver services (http://dhcfp.nv.gov/Pgms/LTSS/LTSSWaiverFrailElderly/), as determined by the Division for Health Care Financing and Policy (DHCFP) and the Aging and Disability Services Division (ADSD), and who maintain the required Level of Care (LOC) (admission into a Nursing Facility within 30 days if waiver services or other supports were not available). The following services are offered in this waiver:

- Case Management
- Homemaker Services
- Chore Services
- Respite
- Personal Emergency Response System (PERS)
- Adult Day Care Services
- Adult Companion Services
- Adult Residential Care
- Augmented Personal Care (provided in residential care settings)

Waiver for Individuals with Intellectual Disabilities and Related Conditions (ID)

This waiver serves recipients of all ages who have a documented intellectual disability or related condition (http://dhcfp.nv.gov/Pgms/LTSS/LTSSWaiverRelatedCondition/), such as Autism or Down Syndrome, as determined by the Division of Health Care Financing and Policy (DHCFP) and the Aging and Disability Division (ADSD), and who maintain the required Level of Care (LOC) (admission into an Intermediate Care Facility/Intellectual Disability (ICF/ID) within 30 days if waiver services or other supports were not available). Service Coordination is provided by ADSD staff for all ID recipients. The following services are offered in this waiver:

- Jobs and Day Training Services (Day Habilitation, Prevocational Services, Supported Employment, Career Planning)
- Residential Support Services (intermittent or residential)
- Residential Support Management
- Behavioral Consultation, Training and Intervention
- Counseling (individual and group)
- Non-Medical Transportation
- Nursing Services
- Nutrition Counseling

Waiver for Persons with Physical Disabilities (PD)

This waiver serves recipients of all ages who have a documented physical disability (http://dhcfp.nv.gov/Pgms/LTSS/LTSSWaiverPhysicalDisabilities/), as determined by the Division of Health Care Financing and Policy (DHCFP) and the Aging and Disability Services Division (ADSD), and who maintain the required Level of Care (LOC) (admission into a Nursing Facility within 30 days if waiver services or other supports were not available). The following services are offered in this waiver:

- Case Management
- Homemaker Services
- Chore Services
- Respite
- Environmental Accessibility Adaptations
- Specialized Medical Equipment and Supplies
- Personal Emergency Response System (PERS)
- Assisted Living Services
- Home Delivered Meals
- Attendant Care Services

LTSS Delivery Strategies: Institutional Care versus HCBS

States are shifting toward increased use of HCBS rather than institutional care. This "rebalancing" reflects three factors:

1. Evidence indicates that beneficiaries prefer HCBS over institutional care (Associated Press & NORC, 2016).

2. States are responding to the 1999 Supreme Court decision in *Olmstead v L.C.* The Court ruled that "unjustified segregation of people with disabilities is a form of unlawful discrimination under the Americans with Disabilities Act (ADA)" ("Serving people with disabilities," 2018).
3. State experience and published evidence indicates HCBS services reduce total cost by reducing or postponing more costly institutional care (Newcomer et al., 2016).

In Nevada, Medicaid LTSS expenditures totaled $697,653 in FY 2016. HCBS accounted for 57% of these expenditures (Table 4.10).

Table 4.10: Medicaid LTSS Expenditures in Nevada FY2016 (in thousands)

LTSS Expenditures	2016 (Thousands)
Institutional Care LTSS	$302,245
Home and Community Based LTSS	$395,408
Total LTSS	$697,653

Source: Eiken, et al., Medicaid Expenditures for Long-Term Services and Supports in FY2016 (2018)

Nationwide statistics indicate, however, that HCBS utilization varies substantially across eligibility categories (Eiken, 2017). In Table 4.11, we focus on LTSS expenditures for Older Adults and People with Physical Disabilities, and for People with Developmental Disabilities. Of the Nevada Medicaid expenditures for Older Adults and People with Physical Disabilities, institutional stays accounted for 55% of expenditures, while institutional care accounted for only 22% of expenditures for People with Developmental Disabilities.

Table 4.11: Medicaid LTSS service utilization varies by eligibility category

Category	People with Developmental Disabilities	Older Adults and Adults with Physical Disabilities
Institutional Care LTSS	22%	55%
HCBS	78%	45%

Source: Eiken et. al, (2018)

HCBS utilization also varies across age categories. Nationwide data indicates that younger adults are more likely to use HCBS (versus Institutional Care) for LTSS than older adults. Of LTSS beneficiaries age 21-64, 77% utilized HCBS services exclusively (and did not utilize institutional care). Of LTSS beneficiaries age 65 or older, however, only 48% utilized HCBS services exclusively.

Table 4.12: Medicaid LTSS HCBS Utilization Rates by Age Category Percent of beneficiaries using Institutional Care vs HCBS by Age Category		
Category	Age 21-64	Age 65 or Older
Institutional Care LTSS only	18%	46%%
HCBS only	77%	48%%
Both HCBS and Institutional Care LTSS	4%	6%%
Source: Eiken, 2017.		

Home and Community-Based Services (HCBS) Settings Final Rule

The HCBS Settings Final Rule, typically referred to as the "Federal Settings Rule," or "Settings Rule" was finalized in 2014. The CMS summary of key provisions in this regulation states the purpose of the regulation:

> *This final rule establishes requirements for the qualities of settings that are eligible for reimbursement for the Medicaid home and community-based services (HCBS) provided under sections 1915(c), 1915(i) and 1915(k) of the Medicaid statute*. (CMS.gov, 2014)

This regulation is designed to structure state Medicaid program efforts to comply with the Supreme Court *Olmstead* decision. Although this regulation *only applies to entities seeking Medicaid reimbursement for HCBS*, states have the additional responsibility under *Olmstead* to ensure that all persons with disabilities have opportunities to be served in the most integrated setting appropriate for their needs.

The CMS summary of key provisions also states that qualifying HCBS settings must have the following characteristics:

- *"Integrated in and supports full access to the greater community,*
- *Is selected by the individual from among setting options,*
- *Ensures individual rights of privacy, dignity, respect, and freedom from coercion and restraint,*
- *Optimizes autonomy and independence in making life choices, and*
- *Facilitates choice regarding services and who provides them."*

When HCBS are delivered in a provider-owned or controlled home and community-based residential settings, the setting must also meet the following requirements:

- "*The individual has a lease or other legally enforceable agreement providing similar protections,*
- *The individual has privacy in their unit including lockable doors, choice of roommates and freedom to furnish or decorate the unit,*
- *The individual controls his/her own schedule including access to food at any time,*
- *The individual can have visitors at any time, and*

- *The setting is physically accessible."*

A CMS letter to State Medicaid Directors (Traylor, 2019) specifies three types of residential or non-residential settings that are presumed to have the qualities of an institution (rather than an HCBS setting):

- "*Settings that are located in a building that is also a publicly or privately operated facility that provides inpatient institutional treatment,*
- *Settings that are in a building located on the grounds of, or immediately adjacent to, a public institution, and*
- *Any other settings that have the effect of isolating individuals receiving Medicaid home and community-based services (HCBS) from the broader community of individuals not receiving Medicaid HCBS.*"

CMS describes factors to be considered when evaluating whether a setting isolates individuals receiving Medicaid HCBS from the broader community of individuals not receiving HCBS:

- "*Due to the design or model of service provision in the setting, individuals have limited, if any, opportunities*[26] *for interaction in and with the broader community, including with individuals not receiving Medicaid-funded HCBS;*
- *The setting restricts beneficiary choice to receive services or to engage in activities outside of the setting; or*
- *The setting is physically located separate and apart from the broader community and does not facilitate beneficiary opportunities to access the broader community and participate in community services, consistent with a beneficiary's person-centered service plan."*

To address concerns about application of these factors in non-urban areas, CMS states:

> *With respect to determining whether a rural* [non-urban] *setting may be isolating to HCBS beneficiaries, states should compare the access that individuals living in the same geographical area (but who are not receiving Medicaid HCBS) have to engage in the community*.

CMS also states:

> *CMS is collaborating with federal partners in the Administration for Community Living (ACL) to develop a comprehensive set of promising practices. In the meantime, CMS offers the following for state and provider consideration:*

[26] "Opportunities," as well as identified supports to provide access to and participation in the broader community, should be reflected in both individuals' person-centered service plans and the policies and practices of the setting in accordance with 42 CFR 441.301(c)(1)-(3) and (4)(vi)(F), 42 CFR 441.530(a)(1)(vi)(F) and 441.540, and 42 CFR 441.710(a)(1)(vi)(F) and 441.725.

- *Increasing technical assistance to assist states to transform the long-term services and supports (LTSS) systems to fully implement person-centered thinking, planning, and practices.*
- *Increasing engagement with the broader community by:*
    - *Developing partnerships and alliances with generic, community-based entities that result in inclusion of HCBS beneficiaries in the broader community available to all community members; and/or*
    - *Establishing a community-based advisory group to help identify and design new models and strategies for the setting to expand its individualized service offerings and increase greater access to activities in the broader community.*
- *Implementing a broad range of services and supports, programming, and multiple daily activities to facilitate access to the broader community that allows for each individual to be able to select from an array of individual and/or group options and control his or her own schedule. Such activities should:*
    - *Promote skills development and facilitate training and educational opportunities among HCBS beneficiaries designed to attain and expand opportunities for 4 community-based integration (including volunteering, social and recreational activities, and competitive, integrated employment),*
    - *Expose beneficiaries to community activities and situations comparable to those in which individuals not receiving HCBS routinely engage,*
    - *Encourage families and friends to participate regularly in activities with the beneficiary onsite as well as in the broader community, and/or*
    - *Promote greater HCBS beneficiary independence and autonomy.*
- *Implementing organizational changes that:*
    - *Assure the required level of support, including appropriate staffing, and adequate transportation options to offer both group and individualized options that facilitate optimal community engagement based on individual preferences (as articulated in beneficiary person-centered service plans); and/or*
    - *Decentralize staff structures to promote greater flexibility and encourage staffing focused on individuals' access to and participation in the broader community rather than centralized insular staff models focused around a specific facility/site.*
- *Expanding strategies for increasing beneficiary access to transportation, including through existing public transportation, friends/family, and volunteer organizations to activities in the broader community. This could include providing transportation in a way that promotes ease of access and optimizes individuals' ability to select their own options and make decisions about their services and supports.*

CMS offers the following information about HCBS delivered to individuals living in private homes (non-residential services):

> *Individual, privately-owned homes (privately-owned or rented homes and apartments in which the individual receiving Medicaid-funded HCBS lives independently or with family*

members, friends, or roommates) are presumed to be in compliance with the regulatory criteria of a home and community-based setting. CMS is clarifying that states are not responsible for confirming this presumption for purposes of ensuring compliance with the regulation. States should, however, include private residences as part of their overall quality assurance framework when implementing monitoring processes for ongoing compliance with the federal HCBS requirements, as well as any oversight provisions articulated in their approved HCBS waivers or state plan amendments (such as activities to ensure the health and welfare of individuals). Also, settings where the beneficiary lives in a private residence owned by an unrelated caregiver (who is paid for providing HCBS services to the individual), are considered provider-owned or -controlled settings and should be evaluated as such.

CMS is clarifying that states are responsible for ensuring compliance with the home and community-based settings criteria for those settings in which Medicaid beneficiaries receive HCBS. If Medicaid is only funding non-residential HCBS for an individual, then the state is not responsible for ensuring compliance with the settings criteria for the setting in which that individual resides. However, a state may decide to require beneficiaries receiving Medicaid-funded non-residential HCBS to live in settings that meet the federal home and community-based settings criteria, even if the individual does not receive HCBS in the setting.

The Federal Settings Rule does not automatically block provision of assisted living or adult day programs in a nursing home or hospital, but the proposal could raise questions subject to heightened scrutiny. Some scrutinized proposals obtain CMS approval. For example, a NF in Fallon, Nevada offers assisted living with Medicaid-waiver clients living in the facility.

In summary, the Federal Settings Rule does not appear to hinder creation of a combined license for entities providing ALF, AD, and/or RC services if all services offered under a combined license meet the criteria to be categorized as non-institutional HCBS services.

Eligibility for LTSS

The DHCFP website articulates the goal of the Long Term Services and Support (LTSS) Unit of Nevada Medicaid: *"to support those individuals who need ongoing care due to age, physical or intellectual disability or chronic illness"* (http://dhcfp.nv.gov/Pgms/LTSS/LTSSHome/). Eligibility criteria for Medicaid LTSS include both financial and functional criteria. Individuals must have low income and assets, and they must require a Level-of-Care that meets Medicaid criteria. In addition, federal regulations mandate that an individual receiving Supplemental Security Income (SSI) benefits is automatically eligible for Medicaid LTSS benefits offered under the state plan, if he or she meets State Plan criteria including prior authorization and medical necessity (MACPAC, n.d.).

Older adults and adults age 18-64 who have an impairment that impedes their ability to do gainful work are eligible for SSI. Nevada is one of 43 states in which individuals eligible for

Supplemental Security Income (SSI) are automatically eligible for Medicaid LTSS. Individuals are eligible for SSI if their incomes are at or below 74% of the Federal Poverty Level (FPL) and they have minimal assets (less than $2,000 for an individual and $3,000 for a couple).

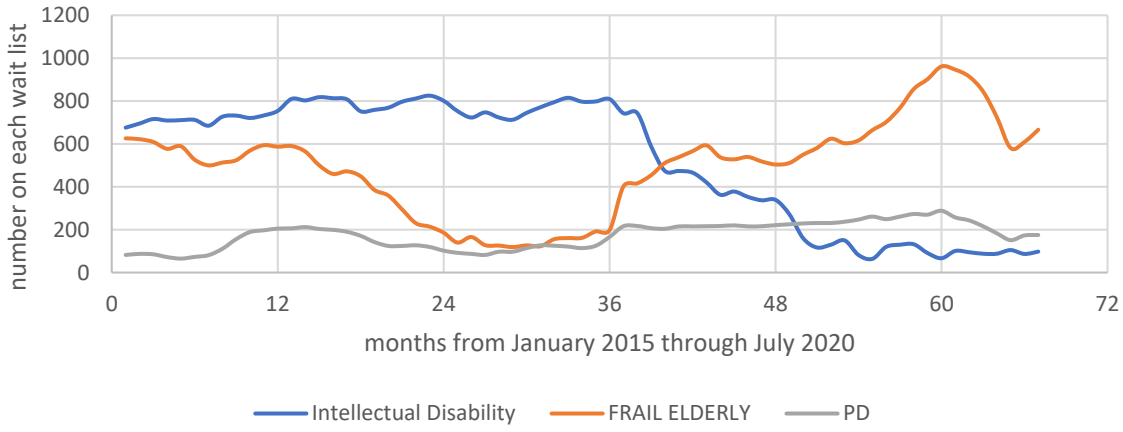
In 2019, the FPL was $12,490 for an individual, and the FPL increased by $4,420 for each additional family member. This implies that the income ceiling for SSI eligibility for an individual living in a single-person family was $9,242.60. Nevada also utilizes the Special Income Level option. Under this option, states can "provide Medicaid benefits to people who require at least 30 days of NF or other institutional care and have incomes up to 300 percent of the SSI benefit rate (which was about 222 percent FPL in 2019)" (MACPAC, 2019; see Appendix Table A.4-8 for financial eligibility criteria by state).

Individuals utilizing Medicaid LTSS may be required to contribute to the cost of care. This contribution is equal to the individual's monthly income minus a personal needs allowance. In 2015, the nationwide median monthly personal needs allowance was $50 for those receiving institutional care and $1,962 for community-based care. This implies that community living expenses, including food and housing, were estimated to average $1,912 per month (KFF, 2016).

Wait Lists

Individuals meeting LTSS eligibility criteria and seeking waiver-based HCBS services may be placed on waiting lists. The numbers of individuals on wait lists for waivers serving individuals with Intellectual Disabilities, individuals who are Frail Elderly and Adults with Physical Disabilities are graphed in Figure 4.8. The numbers of people on wait lists for waivers serving individuals with Intellectual Disabilities and Frail Elderly individuals were similar at the beginning of January 2015. During the next 2.5 years, the number of people on the Frail Elderly wait list decreased substantially, while the number of people on the Intellectual Disability wait list remained steady. By June of 2017, 713 people were on the Intellectual Disability wait list, and 119 were on the Frail Elderly wait list. At that point, the initial trend reversed direction. The number of Frail Elderly on a wait list began to climb, while the number on the Intellectual Disability list decreased. In December of 2019, 67 people were on the Intellectual Disability wait list, while 961 were on the Frail Elderly wait list. By July 2020, however, this number dropped to 666. The number of people on the wait list for Adults with Physical Disabilities ranged from 65 to 288.

Figure 4.8: Numbers of individuals on each wait list, by month from January 2015 through July 2020.



Availability of Covered Services

Although states must cover NF and HH for adults, coverage of other LTSS is optional. Therefore, Medicaid benefit packages vary substantially across states (KFF, 2016). Nevada Medicaid coverage includes the three services addressed in AB122: Assisted Living, Adult Day program and Respite Care services. However, it should be noted that in order to be eligible for these services, individuals must be on the Frail/Elderly Waiver. Access to the waiver for Nevada residents depends on level of need, position on the wait list, and the availability of providers by geographic area.

Table 4.13 shows the number of claims paid in years 2015-2019 per 100 county people living in the provider's county. The results document the uneven distribution of services relative to population across the state.

- ALF providers reimbursed by Medicaid were located in Carson City, Churchill, Clark, Douglas, Lyon, Pershing, and Washoe Counties. The average annual number of patients for whom Medicaid paid ALF claims was highest in Carson City with 1.41 Medicaid patients per 100 county residents. The comparable numbers for the other counties with ALF providers ranged from 0.01 or 0.02 in Clark, Douglas, and Pershing Counties to 0.06 in Washoe County and 0.14 in Churchill County.

- AD providers reimbursed by Medicaid were located in Clark, Douglas, Elko, and Washoe Counties. The number of patients for whom Medicaid paid claims ranged from 0.01 in Elko and Washoe Counties to 0.06 in Douglas County and -0.08 in Clark County.

- RC providers reimbursed by Medicaid were located in Carson City, Clark, Nye, and Washoe Counties. The number of patients for whom Medicaid paid claims was highest in

Carson City with 0.02 such patients per 100 county residents. In the other three counties, the comparable number was only 0.002 or 0.001.

- Home Health claims were paid to providers operating in 15 of Nevada's counties. No claims were paid in Eureka and Esmeralda counties. In addition, the range of procedures with paid claims varies by county, as detailed in Appendix Table A.4-9. More types of procedures were provided by HH agencies based in Clark County and Carson City than by agencies based in other counties.

Table 4.13: Average Annual Number of Patients per 100 County Residents
Nevada, 2015-2019

County	ALF	AD	RC
Carson City	1.41	-	0.02
Churchill	0.14	-	-
Clark	0.02	0.08	0
Douglas	0.02	0.06	-
Elko	-	0.01	-
Lyon	0.05	-	-
Nye	-	-	0
Pershing	0.01	-	-
Washoe	0.06	0.01	0

Source: Project team computation based on data provided by Nevada Medicaid.

When LTSS are not provided in a non-urban county, residents of that county may forego utilizing the service, or they may travel to (or move to) a county with entities providing that service. To assess the frequency of such moves, Table 4.14 provides county-of ALF information for recipients living in a specific county. Each row in Table 4.14 shows the residence county of ALF clients prior to their move to the ALF. Each cell in the row shows the average annual number of individuals for whom Medicaid reimbursed ALF providers in each provider-county for the years 2015-2019. For example, Medicaid paid claims for an average of 38 individuals who lived in Carson City prior to moving to an ALF in Carson City. Medicaid also paid claims for four individuals who lived in Carson City prior to moving to an ALF in Lyon County. Similarly, Medicaid also paid an average of 34 claims per year for individuals living in a Carson City ALF, and whose prior residence was located in Churchill County.

Medicaid paid claims for Carson City ALF services on behalf of individuals who formerly resided in nine counties, including Clark County. Fewer individuals moved from other counties to obtain Medicaid-reimbursed ALF services in Clark or Washoe Counties.

Table 4.14a: Average annual number of ALF claims paid 2015-2019 by county of service recipient (prior to moving to ALF) and county of ALF provider Nevada, 2020						
County in which service recipient resided prior to moving to ALF	Carson City	Clark	Churchill	Douglas	Lyon	Washoe
Carson City	38	1	1	2	4	4
Churchill	34	-	29	-	4	3
Douglas	12	-	-	7	1	1
Lyon	19	-	1	-	17	-
Mineral	1	-	-	-	1	-
Nye	2	4	-	-	-	-
Pershing	1	-	1	-	-	-
Clark	423	478	-	-	-	1
Washoe	246	1	3	-	3	250

Numbers rounded to nearest whole number. Claims not shown if the average annual number rounded to zero.

Source: Project team computation based on data provided by Nevada Medicaid.

Table 4.14b provides county-level information for individuals receiving HCBS and for low-acuity NF patients. HCBS is expected to be a substitute for NF care for low-acuity NF patients. This table provides average daily net payments for the two groups of recipients for counties in which each service is provided. Where HCBS services are available in non-urban counties, HCBS daily payments are lower than NF daily payments for low-acuity patients.

Table 4.14b: Daily Payments for Low-Acuity Patients

	HCBS					Nursing Facilities				
Provider County Claim	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
CARSON CITY	$39.00	$35.00	$35.00	$40.00	$44.00	$79.00	$83.00	$94.00	$89.00	$106.00
CHURCHILL	$39.00	$38.00	$40.00	$47.00	$45.00	$85.00	$82.00	$88.00	$108.00	$127.00
DOUGLAS	$36.00	$38.00	$53.00	$39.00	$52.00	$77.00	$81.00	$87.00	$85.00	$94.00
ELKO	$30.00	$35.00	$36.00	$16.00	$24.00	$74.00	$70.00	$78.00	$89.00	$92.00
HUMBOLDT	NA	NA	NA	$36.00	$43.00	$187.00	$186.00	$190.00	$208.00	$241.00
LANDER	NA	NA	NA	NA	NA	$215.00	$247.00	$249.00	$242.00	$258.00
LINCOLN	NA	NA	NA	NA	NA	$201.00	$206.00	$207.00	$253.00	$230.00
LYON	$40.00	$42.00	$43.00	$49.00	$57.00	$203.00	$210.00	$217.00	$217.00	$235.00
MINERAL	NA	NA	NA	NA	NA	$199.00	$207.00	$214.00	$227.00	$292.00
NYE	$5.00	NA	NA	NA	NA	$81.00	$111.00	$111.00	$106.00	$114.00
OUT OF STATE	$47.00	$60.00	NA	NA	NA	$273.00	$272.00	$266.00	$274.00	$271.00
PERSHING	NA	NA	NA	NA	$69.00	$211.00	$222.00	$222.00	$237.00	$263.00
RURAL CLARK	NA	NA	NA	NA	NA	$78.00	$77.00	$87.00	$111.00	$115.00
STOREY	NA	NA	$17.00	$49.00	$33.00	NA	NA	NA	NA	NA
URBAN CLARK	$38.00	$37.00	$38.00	$40.00	$42.00	$120.00	$125.00	$134.00	$137.00	$140.00
URBAN WASHOE	$31.00	$32.00	$35.00	$37.00	$41.00	$80.00	$85.00	$96.00	$100.00	$106.00
WASHOE	$81.00	$97.00	NA	NA	NA	NA	NA	NA	NA	NA
WHITE PINE	NA	NA	NA	NA	NA	$69.00	$58.00	$68.00	$77.00	$94.00

Source: Nevada Department of Health and Human Services Office of Analytics

NA = data unavailable

Rates

Table 4.15 provides county-level information about paid Medicaid claims for ALF, AD, and RC for each county with paid claims for providers in that county. During the years 2015-2019,

- Medicaid paid ALF claims for patients in Carson City, Churchill, Clark, Douglas, Lyon, Pershing, and Washoe. Some of these counties were not shown in Table 4.14 because the average annual number of claims rounded to zero. They are included in Table 4.15 because this table reports total numbers of patients. The largest number of Medicaid-reimbursed patients obtained ALF services in Carson City. Net pay to the ALF ranges from $41 to $52 per patient-day, if we do not consider Pershing County in which Medicaid reimbursed an RC provider for one client.
- Medicaid paid AD claims in Clark, Douglas, Elko, and Washoe Counties. Net pay per day ranged from $26 to $81.
- Medicaid paid RC claims in Carson City, and in Clark, Nye and Washoe Counties. Net pay per day ranged from $22 to $37, if we do not count Nye County, in which Medicaid reimbursed an RC provider for only one client.

Medicaid paid RC claims to providers in Carson City, Nye, Urban Clark, and Urban Washoe Counties. Net payments per day vary depending on the numbers and types of services performed. These payments ranged from $21 to $34.

Table 4.15: Medicaid Patients, Days and Payments Nevada, 2015-2019						
Item	ALF	AD	RC	ALF	AD	RC
	Carson City			Nye		
Patients	790	-	9	-	-	1
Days of service	12,874	-	1,024	-	-	77
days per patient	16	-	109	-	-	77
net payment	$600,156	-	$22,760	-	-	$406
net pay per patient	$759	-	$2,421	-	-	$406
net pay per day	$47	-	$27	-	-	$5
	Churchill			Pershing		
Patients	36	-	-	1	-	-
Days of service	7,848	-	-	148	-	-
days per patient	216	-	-	148	-	-
net payment	$334,548	-	-	$10,212	-	-
net pay per patient	$9,191	-	-	$10,212	-	-
net pay per day	$43	-	-	$69	-	-
	Clark			Washoe		
Patients	496	1,947	57	266	54	5
Days of service	125,761	223,391	7,579	64,562	1,979	347
days per patient	254	115	134	243	37	72
net payment	$6,534,260	$12,726,365	$162,282	$3,004,075	$498,300	$11,740
net pay per patient	$13,174	$6,536	$2,867	$11,311	$9,228	$2,446
net pay per day	$52	$54	$22	$47	$26	34
	Douglas			Lyon		
Patients	11	29	-	30	-	-
Days of service	2,618	535	-	8,228	-	-
days per patient	247	19	-	274	-	-
net payment	$106,170	$29,902	-	$361,225	-	-
net pay per patient	$10,016	$1,049	-	$12,041	-	-
net pay per day	$41	$81	-	$44	-	-
	Elko			-	-	-
Patients	-	5	-	-	-	-
Days of service	-	431	-	-	-	-
days per patient	-	96	-	-	-	-
net payment	-	$21,150	-	-	-	-
net pay per patient	-	$4,700	-	-	-	-
net pay per day	-	$48	-	-	-	-

Source: Project team computation based on data provided by Nevada Medicaid

Provider reimbursement rates paid by DHCFP are posted online at http://dhcfp.nv.gov/Resources/Rates/FeeSchedules/. Rates for selected LTSS services are shown in Table 4.16. Among services reimbursed using per diem rates, AD services are reimbursed at $42 per day, Unskilled RC is reimbursed at $65 per day, and rates for Assisted Living range from $23 to $83 dollars per day, depending on the level of care required for the ALF resident. Among services reimbursed on hourly or 15-minute rates, home health services are reimbursed at higher rates when the services are delivered in non-urban areas. In addition, the non-urban reimbursement rate for Nursing care in the home delivered by Registered Nurses (RNs) is reduced from the base rate for non-urban care when individualized services are provided to more than one patient in the same setting. However, reimbursement rates for Assisted Living Facilities, Adult Day Centers and Personal Care services are the same in urban and non-urban counties.

Table 4.16: Nevada Medicaid Reimbursement Rates for Selected LTSS

Nevada, 2019

Services with Per Diem Rates			Services with Hourly or Per-Service Rates		
Service	Level	Daily Rate Dollars	Service	Level	Rate (Dollars); per hour unless otherwise specified
Provider Type 29: Home Health Agencies and Private Duty Nursing					
Contracted services per day	rural	350	Non-emergency transport case worker	-	0.28
Contracted services per day	urban	300	Home health care professional-service of patient 15 min	rural	16.36
	-	-	Home health care professional-service of patient 15 min	urban	14.03
	-	-	Home health care professional: services of speech-language pathologists - 15 min	rural	16.36
	-	-	Home health care professional: services of speech-language pathologists - 15 min	urban	14.03
	-	-	Home health respiratory therapy in evaluation	rural	65.45
	-	-	Home health respiratory therapy in evaluation	urban	56.1
	-	-	Home health aide or certified nursing assistant (CNA)	rural	35.38
	-	-	Home health aide or certified nursing assistant (CNA)	urban	30.32
	-	-	Nursing care in home RN	rural TT	55.31
	-	-	Nursing care in home RN	rural	73.75
	-	-	Nursing care in home RN	urbanTT	48
	-	-	Nursing care in home RN	urban	64
	-	-	Nursing care in home LPN	rural TT	36.75
	-	-	Nursing care in home LPN	rural	49
	-	-	Nursing care in home LPN	urbanTT	31.69
	-	-	Nursing care in home LPN	urban	42.25
	-	-	LPN/LVN services 15 min	rural	17
	-	-	LPN/LVN services 15 min	urban	16.25
Provider Type 30 and 83: Personal Care Services					
	-	-	Non-emergency transport case worker	-	0.28
	-	-	Personal care services per 15 min	-	4.39
Provider Type 38: Waiver for Individuals with Intellectual Disabilities and Related Conditions					
	-	-	Nursing care in home RN	-	36.73 - 64.28
	-	-	Nursing care in the home LPN	-	27.28 -47.76
	-	-	LPN/LVN services 15 min	-	8.84 -15.48
Provider Type 39: Adult Day Health Center					
	-	-	Emergency response system installation & test	-	40
Provider Type 48: HCBS Waiver for the Frail Elderly					
Adult day care per diem	-	57.20	Adult daycare services 15min	-	2.38
Adult day care per diem	-	42	Adult daycare services 15min	-	1.75
	-	-	Chore services 15 min	-	3.75
	-	-	Homemaker services 15 min	-	3.75
Unskilled respite care per diem	-	65	Unskilled respite care 15 min	-	2.5
	-	-	Emergency response system installation & test	-	45
	-	-	Adult companion care 15 min	-	2
Provider Type 57 and 59: Waiver for Elderly in Adult Residential Care or Assisted Living Waiver					
Attendant Care per diem or Assist living waiver per diem		23.00-83.00	Case Management	-	15.84-25.75

Source: Provided by Nevada Department of Health Care Financing and Policy

TT indicates individualized services provided to more than one patient in the same setting (https://www.hcpcsdata.com/Modifiers/T).

Medicare

Medicare coverage focuses on acute care and post-acute services; hence Medicare offers only limited coverage for LTSS. Medicare covers HH services for enrollees who are homebound. It does not cover Personal Care services. NF care is only covered for a maximum of 100 days following a qualified hospital stay. Individuals who are covered by both Medicare and Medicaid are known as "dual eligibles" or "duals." Coordination of services covered by the two programs is important because substantial proportions of ALF residents, AD participants, and RC clients have medical diagnoses in addition to their difficulties with ADLs and IADLs. As shown above in Table 4.6f, 6% of ALF residents in Nevada have hospital inpatient stays each year and 13% have hospital emergency room visits. Major diagnosis codes associated with these visits are detailed in Appendix Table A.4-10.

Private Insurance and Self-Pay

Self-pay individuals typically pay amounts equal to billed charges, though private LTSS insurance companies may negotiate discounts. Both private insurers and self-pay individuals typically pay higher rates than Medicaid. Average charges for LTSS services range from $1,733 per month for AD Health Care to $4,290 per month for a full time HH aide (Genworth, 2019). As shown in Table 4.17, ALF charges lie between these two numbers at $3,400 per month (Genworth, 2019). This reflects the fact that it is more efficient to provide LTSS to clients living in close proximity, than to provide the same services to individuals living in widely scattered individual homes or apartments. Average charges for these LTSS services vary across the state, but the variations are small (see Table 4.17).

Table 4.17: Genworth 2019 Cost of Care
Nevada, 2019

	Monthly Charges			
Service	Nevada	Carson City	Las Vegas	Reno
Home Health Aide (44 hrs / week)	$4,290.00	$4,767.00	$4,242.00	$4,957.00
Adult Day Health Care (5 days/ week)	$1,733.00	NA	$1,733.00	$1,560.00
Residential Care Facility, Private Room	$3,400.00	$3,645.00	$3,300.00	$3,250.00
Nursing Home, Semi-Private Room	$7,604.00	$9,095.00	$7,498.00	$9,437.00
Nursing Home, Private Room	$9,277.00	$9,520.00	$8,821.00	$10,615.00

Source: Genworth 2019 Cost of Care
NA in place for unavailable data.

The Genworth information on monthly charges is consistent with information provided by the Carson Valley Adult Day Club (Carson Valley Adult Day Club, Personal Communication, August 24, 2020), for several facilities in Douglas County, Carson City and Mineral County.

Charges are $3700 per month in these ALFs, $6200 per month in these Memory Care facilities, and $8700 per month in these Skilled Nursing Facilities. The daily charge for the Adult Day Club, which is open 5 hours per day, is $45 per day.

Some of these expenditures would be covered by long-term care insurance; however, the proportion of adults who buy this insurance is low. In Nevada, there were 25 long-term care insurance policies in effect per 1,000 people age 40 or older. This is the lowest number for any state in the U.S. The average number of policies in effect per 1,000 of these adults nationwide is 50. This number is 164 in the top-performing state (Houser et al., 2018).

The low prevalence of long-term care insurance in Nevada implies relatively strong reliance on self-payment for individuals who are not eligible for Medicaid. Therefore, the affordability issue has two components. For individuals eligible for Medicaid LTSS coverage, the key question is whether they can afford the room and board portion of ALF charges. For individuals with higher incomes, who are not eligible for Medicaid LTSS, the question is whether they an afford the full monthly ALF charge. In 2013, half of all Medicare beneficiaries, including seniors and younger adults with disabilities, had incomes below $23,500 (Houser et al., 2018). The average monthly charge for a private room in a Residential Care Facility in Nevada shown in Table 4.17 implies an annual charge of $40,800.

Johnson and Wang (2019) used data from the University of Michigan Health and Retirement Survey (HRS) to analyze the ability of community-dwelling adults not eligible for Medicaid to pay for these services. The HRS surveys a nationally representative sample of 20,000 people living in the U.S., funded by the National Institute on Aging and the Social Security Administration. The study authors concluded that approximately three-fourths of non-Medicaid-eligible adults could pay for two years of moderate paid home care if they liquidated all of their assets, and 58% could fund two years of extensive care (Johnson & Wang, 2019). Moderate care was defined to equal 90 hours of care per month, which is the median level of care reported in that data. Smaller proportions of individuals needing a higher level of care would be able to finance at least two years of care (see Table 4.18).

Table 4.18: Ability of Community-Dwelling Adults to Pay for Home Care
U.S., 2019

Population	Moderate Level	Extensive Level
Older Adults	74%	58%
Older Adults with Significant Disabilities	57%	40%

Source: Johnson, et.al, 2019

*Older adults at least age 65 and not eligible for Medicaid able to finance at least two years of care (along with normal living expenses) by liquidating all assets except the value of the primary residence

Policy Initiatives

As states work to expand the role of HCBS, states are also working to address two barriers to increasing HCBS utilization: workforce limitations and limited availability of affordable

housing, including affordable room and board charges in ALFs. Recent state actions to address workforce limitations are discussed in Chapter 3. State efforts to address housing issues are discussed here.

The housing issue is straightforward: Medicaid, which pays for LTSS services delivered in ALFs, does not pay for room and board in these facilities. However, lack of affordable assisted living facilities may hinder continuing efforts to adjust the balance between institutional care and HCBS for Medicaid recipients. In addition, increasing recognition of the importance of social determinants of health highlights the relationships among housing, and utilization of health and health care.

States are increasingly considering strategies to address the affordability issue created by the federal policy that prevents Medicaid programs from paying for the room and board portion of assisted living charges. Three types of additional policy initiatives are discussed at the national level, to address the ALF affordability issue created by the federal policy that prohibits state Medicaid programs from paying directly for housing.

First, CMS approved North Carolina's Section 1115 Waiver application in 2019. Under this Waiver, NC Medicaid will create Healthy Opportunities pilot programs. For the first time, these pilot programs may use Medicaid funds to pay for non-medical services, including payments for short term (up to six months) housing (post-hospital discharge) for individuals at risk of homelessness. NC will be required to ensure that federal expenditures under the waiver do not exceed federal expenditures projected to occur in the absence of the waiver. A KFF report on this waiver explains:

> *… This waiver allows the state to use Medicaid to pay directly for non-medical interventions that target the social determinants of health, although the program scope is restricted by its limited funding.* (Hinton et al., 2019)

Second, states are implementing managed care programs to administer LTSS. Although states have used managed care extensively for other benefits, LTSS was not traditionally included in managed care contracts. However, states are moving toward inclusion of LTSS in managed care contracts or creation of new managed care contracts that focus on LTSS (known as Managed LTSS or MLTSS). MLTSS programs were operating in 27states (Reinhard et al., 2020).

Nevada does not utilize MLTSS. Section 37 of SB514, which was signed into law following the 2015 session, states:

> *37. The sums appropriated to the Nevada Medicaid and Health Care Financing and Policy Administration and the Desert Regional Center, Rural [Non-Urban] Regional Center and Sierra Regional Center within the Aging and Disability Services Division of the Department of Health and Human Services by section 20 of this act may be transferred among the accounts for the purpose of implementing a managed care*

> *program for the waiver population with the approval of the Interim Finance Committee upon the recommendation of the Governor. Before submitting to the Centers for Medicare and Medicaid Services an amendment to the State Plan for Medicaid established pursuant to NRS 422.271 to implement a program of managed care for the waiver population, the Department of Health and Human Services, on behalf of the Division of Health Care Financing and Policy and the Aging and Disability Services Division, shall submit to the Interim Finance Committee an analysis of the fiscal impact of transitioning to and implementing such a program.*

The State hired a vendor to complete the analysis, but the State has not moved forward with implementation due to many factors. Moving to a MLTSS delivery model includes a thoughtful implementation, including numerous steps set forth by the Centers for Medicare and Medicaid Services. The State continues to consider MLTSS; however, at the time of this report, the State does not have plans to move forward without further analysis.

Most of the MLTSS states used risk-based capitated managed care models, but two states use managed fee-for-service models. Of the states that have implemented MLTSS, use of MLTSS is mandatory for Seniors and Persons with Physical Disabilities in 15 states. It is only mandatory for Persons with I/DD in six states (Gifford et al., 2017; Gifford et al., 2019).

This shift toward MLTSS offers two types of potential benefits: improved coordination of care, and increased program design flexibility to address social determinants of health. Though both issues are important for LTSS users, we focus on the second issue here. Managed care may offer a strategy for addressing the housing affordability issue for some Medicaid beneficiaries. For example, footnote 2 in the KFF report on the NC Healthy Opportunities Waiver states:

> *Under federal Medicaid managed care rules, Medicaid MCOs may have flexibility to pay for non-medical services through "in-lieu-of" authority …. "In-lieu-of" services are a substitute for covered services and may qualify as a covered service for the purposes of capitation rate setting.*
>
> *Some Medicaid managed care organizations … are testing ways to provide rental assistance. For example, Health Plan of San Mateo in California pairs health care services with ongoing housing assistance for over 120 people to avoid nursing home care costs. As of 2017, the plan's costs for these members had fallen by 50 percent. (Bailey, 2020)*

Paradise and Ross (2017) describe the framework for MCO decisions about paying for housing. Medicaid managed care organizations (MCOs) receive capitated payments from the Medicaid program. Under this payment structure, the MCO receives a fixed amount ($X) each month for each Medicaid beneficiary enrolled in the MCO plan. This $X that the MCO receives per-member-per-month is known as a pmpm payment. This payment structure creates an incentive for the MCO to invest in programs that generate reductions in average pmpm health-care expenditures. MCOs can use some of the capitated funds to pay for activities that are covered in

the Medicaid State Plan. Some states permit MCOs to use funds "saved" by these activities for "reinvestment strategies" that cover some costs of activities not covered in the State Plan. In most states, the MCOs must obtain prior state approval to use capitated funding for activities that are not covered in the State Plan (Burt et al., 2014; Paradise & Ross, 2017). Suppose, for example, that NF stays are covered in the State Plan for eligible individuals meeting specific criteria, and MLTSS pays for room and board for individuals staying in an ALF. If the ALF stays substitute for NF stays, or postpone NF stays, this policy might generate sufficient savings in NF reimbursements to cover the ALF room and board payments. If this occurs, the room and board payments would be permitted. If the room and board payments are not "at least budget-neutral," they will not be permitted.

MLTSS also pose challenges for state regulators. Capitated Medicaid MLTSS contracts create incentives for firms to under-provide care. Quality reporting and monitoring are widely viewed as important tools for countering this incentive. A recent report from the federal Governmental Accountability Office (GAO, 2017) concludes that more oversight is needed to assure access and quality in MLTSS programs.

Third, state Medicaid programs are exploring options for addressing the issue of ALF affordability by collaborating with Housing and Urban Development (HUD) programs. Authors of a recent Health Affairs Blog post (Katch & Bailey, 2020) argue that Medicaid programs should collaborate with state and federal agencies administering affordable housing programs and healthcare stakeholders should advocate for investing increased resources in affordable housing programs. They argue that this approach is better than the alternate strategy under which Medicaid would pay for housing for specific types of beneficiaries for two reasons: (i) Medicaid programs should focus their limited resources on healthcare, and (ii) Medicaid lacks administrative capacity and expertise to run housing programs (Katch & Bailey, 2020).

Several states have explored options and strategies for developing useful collaborations:

- During 2017-2018, the Medicaid Innovation Accelerator Program (IAP) provided assistance to eight states (AK, MA, MI, MN, NB, TX, UT, VA) working to develop public and private partnerships between state Medicaid programs and housing systems. The goal was to strengthen community integration for Medicaid beneficiaries receiving LTSS ("Community Integration," 2019).
- In 2015, the federal Housing and Urban Development's (HUD's) Rental Assistance Demonstration (RAD) program provided a $3.4 million loan for an ALF (Kimura, 2015).
- The Chicago Housing Authority remodeled a vacant building to create 74 independent-living units for seniors eligible for housing assistance and 119 assisted living units, that will be administered by the Illinois Housing Development Authority (Esposito, 2020). The larger policy question raised by this type of initiative focuses on the extent to which LTSS services delivered in senior housing substitutes for services delivered in an ALF environment.

Consistent with these efforts, the IRS issued Private Letter Rulings with details on criteria for determining whether Low-Income Housing Tax Credit (LIHTC) bonds can be used to finance specific types of ALFs (Johnson, 2017).

Two sources of additional information include:

- Information about initiatives in CA, NY, and TN that is summarized in a Center for Health Care Strategies (CHCS) Blog, ensuring stable housing for Medicare-Medicaid enrollees with long-term care needs. These efforts were part of a project focused on service coordination for dual eligible, which as funded by The SCAN Foundation and The Commonwealth Fund (Archibald & Kruse, 2016).
- Information about efforts to build collaborations between entities that deliver housing and health services that is provided in a 2016 Urban Institute Report (Spillman et al., 2016).

Four points LTSS financing are important for program planning:

- Medicaid is the major payer for LTSS, but Medicaid only paid for 9% of residents in ALFs in Nevada. Medicaid is a payer for 17% of ALF residents nationwide.
- Medicaid reimbursements for ALF, AD, and RC do not occur in all counties.
- The low participation of Medicaid in ALF payments could reflect the fact that Medicaid cannot pay for the room and board portions of ALF charges. It is also consistent with the observed positive correlation between income and the likelihood of living in an ALF.
- The incidence of long-term care insurance is low. This implies that individuals who are not eligible for Medicaid LTSS must pay full ALF charges out-of-pocket. Data indicates that annual charges average approximately $40,000 in Nevada.
- The Settings Rule does not appear to block consideration allowing providers to offer ALF, AD, and RC services under a single combined license.
- Analysts, providers, and policymakers are examining options to make it possible for low income individuals to receive housing and food subsidies from state and federal housing agencies *and* receive Medicaid coverage of LTSS.

APPENDIX 4

First Demand Estimation Strategy

The estimates of demand for assistance with ADLs and IADLs were constructed in a series of steps using data from the American Community Survey (2018) and from the 2019 National Health Information Survey (NHIS). County-level estimates are constructed for Nevada's non-urban counties. The steps are described below.

Step 1: Detail county population estimates by age category. The age categories 54-74 and 75+ are relevant for services provided to seniors, and the age categories 18-44 and 45-64 are relevant for services provided to adults under age 65 with physical disabilities. However, the ACS uses five-year age categories, such as 15-19 and 20-24. To construct estimates for the age group 18-44, we added 40% of the population in age category 15-19 to the estimates for the age categories that encompass ages 20-44. The proportion of county residents at least age 65 varies from 14% in Elko County to 35% in Storey County. Percentage changes in the number of people age 65-74 varies from negative 6% in Lander County to positive 30% in Humboldt County.

Table A.4-1: Adult Population of Nevada Non-urban Counties by Age

Age	ACS 2018	Margin of Error	Percent of County Population	Percent Change 2015-2018
Churchill				
18-44*	7,687	581	41%	-4%
45-64	6,479	546	35%	0%
65-74	2,708	155	15%	11%
75+	1,738	295	9%	3%
Total	18,612	1,577		0%
Douglas				
18-44*	12,428	540	31%	-1%
45-64	14,625	778	37%	-3%
65-74	7,672	79	19%	15%
75+	4,939	350	12%	12%
Total	39,664	1,747		3%
Elko				
18-44*	19,253	215	51%	0%
45-64	13,282	711	35%	-1%
65-74	3,493	114	9%	14%
75+	1,984	262	5%	26%
Total	38,012	1,302		2%

Esmeralda				
18-44*	262	125	33%	-26%
45-64	258	114	33%	-8%
65-74	181	59	23%	10%
75+	88	50	11%	-34%
Total	789	348		-15%
Eureka				
18-44*	445	235	32%	-12%
45-64	668	303	48%	25%
65-74	147	73	11%	-5%
75+	136	114	10%	53%
Total	1,396	725		8%
Humboldt				
18-44*	5,838	442	47%	-1%
45-64	4,401	370	36%	-7%
65-74	1,325	88	11%	30%
75+	758	186	6%	14%
Total	12,322	1,086		0%
Lander				
18-44*	1,752	568	42%	-2%
45-64	1,576	440	38%	-8%
65-74	505	175	12%	-6%
75+	317	185	8%	13%
Total	4,150	1,368		-4%
Lincoln				
18-44*	1,710	488	40%	-6%
45-64	1,390	468	32%	20%
65-74	731	202	17%	21%
75+	494	232	11%	24%
Total	4,325	1,390		9%
Lyon				
18-44*	16,049	378	38%	4%
45-64	14,838	677	35%	0%
65-74	7,079	151	17%	14%
75+	3,858	364	9%	9%
Total	41,824	1,570		5%

Mineral				
18-44*	1,226	386	33%	-7%
45-64	1,355	425	37%	-6%
65-74	672	198	18%	18%
75+	427	156	12%	-8%
Total	3,680	1,165		-3%
Nye				
18-44*	10,879	709	30%	6%
45-64	12,916	944	35%	-2%
65-74	7,714	194	21%	10%
75+	4,930	447	14%	14%
Total	36,439	2,294		5%
Pershing				
18-44*	2,434	364	44%	-9%
45-64	2,010	334	37%	6%
65-74	706	108	13%	6%
75+	355	159	6%	15%
Total	5,505	965		-1%
Storey				
18-44*	951	298	28%	27%
45-64	1,221	349	36%	-27%
65-74	779	145	23%	12%
75+	397	163	12%	16%
Total	3,348	955		-3%
White Pine				
18-44*	3,523	363	45%	4%
45-64	2,639	315	34%	-8%
65-74	875	39	11%	7%
75+	712	135	9%	7%
Total	7,749	852		0%

Source: U.S. Census Bureau, 2015 & 2018 American Community Survey 5-Year Estimates

*Age Category for 18-44 includes a (2/5) proportion of the ACS 15-19 age category to estimate population for Ages 18 & 19

Step 2: Estimate the number of people needing assistance with ADLs by county and by age category. We applied the ADL prevalence of "needs assistance with ADLs" to the population estimates. The ADL prevalence information is detailed below in Table A.4-2. County estimates of the numbers of individuals needing assistance with ADLS and IADLs are detailed in Table A.4.3. The ratio of county residents age 18-64 to residents age 65 or older ranges from 2.5 in Nye County to 6.3 in Elko County.

The number of people needing assistance with ADLs ranges from 25 in Esmeralda County to 1,276 in Douglas County. The ratio of younger adults (age 18-64) needing assistance with ADLs to older adults (age 65 or older) ranges from 0.40 in Nye County to 1.20 in Elko County. For individuals needing assistance with IADLs, the comparable ratio ranges from 0.48 to 1.40. Thus, there are more older adults needing assistance with ADLs and IADLs, than younger adults, in some counties, whereas the situation is reversed in other counties (Adams et al., 2013).

Table A.4-2: Prevalence of Needing Assistance with ADLs and IADLS

Age Categories	Percent of Population Needing Assistance with ADLs*	Margin of Error	Percent of Population Needing Assistance with IADLs**	Margin of Error
18-44 years	0.90%	0.07	1.70%	0.09
45-64 years	2.00%	0.11	4.00%	0.16
65-74 years	3.90%	0.26	6.60%	0.33
75 years and over	11.60%	0.52	19.40%	0.64

Source: Adams et. al, 2018

*Limitations in ADLs is determined by responses to the question: Because of a physical, mental, or emotional problem, does [person] need the help of other persons with personal care needs, such as eating, bathing, dressing, or getting around inside the home?

**Limitations in IADLs is determined by responses to the question: Because of a physical, mental, or emotional problem, does [person] need the help of other persons in handling routine needs, such as everyday household chores, doing necessary business, shopping, or getting around for other purposes.

Step 3: Construct county estimates of the numbers of individuals needing assistance with ADLs and IADLs with incomes less than 100% of the FPL. The estimated number of people needing assistance with ADLs and living with income below the FPL varies from five in Esmeralda County to 331 in Nye County.

Table A.4-3: County Estimates of Adult Population Needing ADL and IADL Assistance

Age	Total Population (2018)	Population Needing ADL Assistance	Population Needing IADL Assistance
Churchill			
18-44*	7,687	69	131
45-64	6,479	130	259
65-74	2,708	106	179
75+	1,738	202	337
Total	18,612	506	906
Douglas			
18-44*	12,428	112	211
45-64	14,625	293	585
65-74	7,672	299	506
75+	4,939	573	958
Total	39,664	1,276	2,261
Elko			
18-44*	19,253	173	327
45-64	13,282	266	531
65-74	3,493	136	231
75+	1,984	230	385
Total	38,012	805	1,474
Esmeralda			
18-44*	262	2	4
45-64	258	5	10
65-74	181	7	12
75+	88	10	17
Total	789	25	44

Eureka			
18-44*	445	4	8
45-64	668	13	27
65-74	147	6	10
75+	136	16	26
Total	1,396	39	70
Humboldt			
18-44*	5,838	53	99
45-64	4,401	88	176
65-74	1,325	52	87
75+	758	88	147
Total	12,322	280	510
Lander			
18-44*	1,752	16	30
45-64	1,576	32	63
65-74	505	20	33
75+	317	37	61
Total	4,150	104	188
Lincoln			
18-44*	1,710	15	29
45-64	1,390	28	56
65-74	731	29	48
75+	494	57	96
Total	4,325	129	229
Lyon			
18-44*	16,049	144	273
45-64	14,838	297	594
65-74	7,079	276	467
75+	3,858	448	748
Total	41,824	1,165	2,082

Mineral			
18-44*	1,226	11	21
45-64	1,355	27	54
65-74	672	26	44
75+	427	50	83
Total	3,680	114	202
Nye			
18-44*	10,879	98	185
45-64	12,916	258	517
65-74	7,714	301	509
75+	4,930	572	956
Total	36,439	1,229	2,167
Pershing			
18-44*	2,434	22	41
45-64	2,010	40	80
65-74	706	28	47
75+	355	41	69
Total	5,505	131	237
Storey			
18-44*	951	9	16
45-64	1,221	24	49
65-74	779	30	51
75+	397	46	77
Total	3,348	109	193
White Pine			
18-44*	3,523	32	60
45-64	2,639	53	106
65-74	875	34	58
75+	712	83	138
Total	7,749	201	361

Source: U.S. Census Bureau, 2015 & 2018 American Community Survey 5-Year Estimates

*Age Category for 18-44 includes a (2/5) proportion of the ACS 15-19 age category to estimate population for Ages 18 & 19

Table A.4-4: County Estimates of Poverty Population Needing Assistance with ADLs and IADLs						
County	Age	Population for whom poverty status has been determined	Percent Below Poverty Level	Est. Population Below 100% Federal Poverty LEvel	ADLs	IADLs
Churchill	18-64	13,695	13%	1,779	52	101
	65 and over	4,373	12.30%	537	83	140
Douglas	18-64	26,747	10%	2,665	77	152
	65 and over	12,570	5.40%	679	105	177
Elko	18-64	31,794	10.10%	3,208	93	183
	65 and over	5,359	9.20%	494	77	128
Esmeralda	18-64	511	4.70%	24	1	1
	65 and over	269	10%	27	4	7
Eureka	18-64	1,106	2.40%	26	1	1
	65 and over	283	40.60%	115	18	30
Humboldt	18-64	9,993	10.30%	1,030	30	59
	65 and over	2,058	12.40%	255	40	66
Lander	18-64	3,226	11.10%	359	10	20
	65 and over	800	9.60%	77	12	20
Lincoln	18-64	2,600	7.10%	184	5	10
	65 and over	1,200	1.30%	16	2	4
Lyon	18-64	30,545	12%	3,658	106	209
	65 and over	10,897	8.20%	897	139	233
Mineral	18-64	4,376	21.50%	549	16	31
	65 and over	1,069	15.80%	169	26	44
Nye	18-64	23,201	17.10%	3,968	115	226
	65 and over	12,586	11.10%	1,393	216	362
Pershing	18-64	2,671	9.70%	259	8	15
	65 and over	948	19.30%	183	28	48
Storey	18-64	2,154	9.10%	195	6	11
	65 and over	1,176	1.80%	21	3	5

White Pine	18-64	4,746	9.70%	461	13	26
	65 and over	1,529	9.20%	140	22	36
Total	18-64	157,365		18,365	533	1047
	65 and over	55,117		5,003	775	1301
Total All Ages		212,482		23,368	1,308	2,348

Source: U.S. Census Bureau (2015) and American Community Survey 5-Year Estimates (2018)

Step 4: Table A.4.5 details the results by age category, type of assistance (ADL or IADL) and poverty status.

Table A.4-5: Non-Urban County Estimates of Population Needing Assistance with ADLs and IADLs

County	Age	Total Population	Estimated Population Needing Assistance with		Population below Poverty Level	Estimated Population in Poverty Needing Assistance with	
			ADLs	IADLs		ADLs	IADLs
Churchill	18-64	14,166	199	348	1,779	52	101
	65 and over	4,446	307	516	537	83	140
	Total	18,612	506	906	2,316	118	241
Douglas	18-64	27,053	404	796	2,665	77	152
	65 and over	12,611	872	1,465	679	105	177
	Total	39,664	1,276	2,261	3,344	161	328
Elko	18-64	32,535	439	859	3,208	93	183
	65 and over	9,656	366	615	494	77	128
	Total	38,012	1,276	1,474	3,702	170	311
Esmeralda	18-64	520	8	15	24	1	1
	65 and over	269	17	29	27	4	7
	Total	789	25	44	51	5	8
Eureka	18-64	1,113	17	34	26	1	1
	65 and over	283	22	36	115	18	30
	Total	1,396	39	70	141	19	30

Humboldt	18-64	10,239	141	275	1,030	30	59
	65 and over	2,083	140	235	255	40	66
	Total	12,322	280	510	1,285	69	125
Lander	18-64	3,328	47	93	359	10	20
	65 and over	822	56	95	77	12	20
	Total	4,150	104	188	436	22	40
Lincoln	18-64	3,100	43	85	184	5	10
	65 and over	822	86	144	16	2	4
	Total	4,150	129	229	200	8	15
Lyon	18-64	30,887	441	866	3,658	106	209
	65 and over	10,937	724	1,216	897	139	233
	Total	41,824	1,165	2,082	4,555	245	416
Mineral	18-64	2,581	38	75	549	16	31
	65 and over	1,099	76	127	169	26	44
	Total	3,680	114	202	718	42	75
Nye	18-64	23,795	356	702	3,968	115	226
	65 and over	12,644	873	1,466	1,393	216	362
	Total	36,439	1,229	2,167	5,361	331	557
Pershing	18-64	4,444	62	122	259	8	15
	65 and over	1,061	69	115	183	28	48
	Total	5,505	131	237	442	31	62
Storey	18-64	2,172	33	65	195	6	11
	65 and over	1,176	76	128	21	3	5
	Total	3,348	109	193	216	9	17
White Pine	18-64	6,162	84	165	461	13	26
	65 and over	1,587	117	196	140	22	36
	Total	7,749	201	361	601	35	60

Sources: U.S. Census Bureau American Community Survey 5-Year Estimates (2018), Centers for Disease Control and Prevention: National Health Interview Survey (NHIS) 2018, U.S. Census Bureau, 2018 American Community Survey 5-Year Estimates

Step 5: Compare the estimates constructed using data on individuals needing assistance with ADLs to estimates based on answers to the question of whether the survey respondent has difficulty with self-care, which is defined as difficulty with bathing or dressing. In most counties, but not all, the number of people indicating they have difficulty with self-care is smaller than the number indicating they need assistance with ADLs (see Table A.4-6).

Table A.4-6: County Population Estimates Needing Assistance with ADLs and Self Care

County	Age	Total Population (2018)	Population Needing Assistance with Self-Care	Population Needing Assistance with ADLs
Churchill	18-64	14166	24	348
	65 and over	4446	103	307
Douglas	18-64	27053	346	404
	65 and over	12611	291	872
Elko	18-64	32535	176	439
	65 and over	5477	225	366
Esmeralda	18-64	520	3	8
	65 and over	269	12	17
Eureka	18-64	1113	0	17
	65 and over	283	0	22
Humboldt	18-64	10239	66	141
	65 and over	2083	97	140
Lander	18-64	3328	56	47
	65 and over	1225	0	56
Lincoln	18-64	3100	23	43
	65 and over	1225	43	86
Lyon	18-64	30887	856	441
	65 and over	10937	459	724
Mineral	18-64	2581	19	38
	65 and over	1099	48	76
Nye	18-64	23795	631	356
	65 and over	12644	406	873

Pershing	18-64	4444	20	62
	65 and over	1061	3	69
Storey	18-64	2172	79	33
	65 and over	1176	128	76
White Pine	18-64	6162	68	84
	65 and over	1587	48	117
Total	18-64	162095	2367	2462
	65 and over	56123	1863	3800
Total All Ages		218218	4230	6263

Sources: U.S. Census Bureau American Community Survey 5-Year Estimates (2018)

Table A.4-7: Associations Between Individual Characteristics and the Probability of Living in an ALF and the Length of Stay

Independent Variable	Probit regression: dependent variable is binary variable indicating if respondent lives in ALF at the time of NHATS survey		Poisson regression: dependent variable is number of years ALF resident remains in ALF	
	Marginal Probability	Standard Error	Coefficient	Standard Error
Difficulties previous year				
Cognitive impairment	0.008**	-0.0031	-0.353	-0.276
Stair difficulty	0.017***	-0.0039	-0.118	-0.326
Self-care difficulty	0.005	-0.0033	-0.862***	-0.331
Vision difficulty	0.009*	-0.0051	-1.209*	-0.619
Hearing difficulty	-0.040**	-0.0181	-	-
Educational Attainment (omitted variable is less than high school degree)				
High school	0.012*	-0.0064	-0.397	-0.45
Some college	0.025***	-0.0062	0.169	-0.426
College Degree	0.034***	-0.0065	0.516	-0.447
Education not reported	0.022***	-0.0041	2.233***	-0.55
Age (omitted variable is Age 65-69)				
Age	Age at date of survey	-	Age at entry to ALF	-
Age 70-74	0.006	-0.0038	-1.576	-1.072
Age 75-79	0.012***	-0.0046	-0.788	-1.002
Age 80-84	0.040***	-0.0054	-1.28	-0.984
Age 85-89	0.068***	-0.0068	-1.35	-0.988
Age >=90	0.104***	-0.0092	-2.167**	-0.997
Race/ethnicity (omitted variable is White, non-Hispanic)				
Black	-0.028***	-0.0061	-0.115	-0.464
Other	-0.014	-0.0083	-1.347*	-0.733
Other demographic characteristics				
Married	-0.001	-0.0053	-0.495	-0.403
Living alone	0.0623***	-0.0043	-0.201	-0.374
Log income	-0.001	-0.002	-0.13	-0.142
Observations	42,313		204	

Source: Team analysis of NHATS survey data.

Methodology Detail for Table A.4-7

1. We use a Probit regression to estimate the probability that an individual will live an Assisted Living Facility (ALF) in the next year. We estimate the association between socio-economic and health characteristics and ALF status using a Probit model. The marginal effects of each of the independent variables are shown in Table A.4-7. For example Black respondents are 2.8 percentage point less likely to be in ALF than White respondents. Respondents who are older than 90 years are 10.4 percentage points more likely to be in an ALF than respondents who are between 65 and 70.
   Then we take the estimated (national) parameters to predict the probability of Nevada residents (65 and older) be in an ALF. We use ACS data for information on independent variables. The predicted probability distribution is shown in Table 7.5. Our model suggests that on an average a senior Nevada resident has a 3.1% chance of being in an ALF in any given year.

2. Next, we analyze average number of years spent in ALF. In NHATS data 97% of individuals do not spend any time in ALF. On the other hand, 0.2% of individuals spent seven years in ALF. We analyze average number of years spent in ALF for those who began living in an ALF during the survey years. We use a Poisson regression to predict expected number of years in ALF. The marginal effects of covariates are shown in Table A.4-7.
   We then the estimated (national) parameters to predict the expected number of years of Nevada residents (65 and older) be in an ALF, conditional on going to an ALF. We use ACS data for information on independent variables. Our model suggests that on an average a senior Nevada resident will spend about 1.94 years in an ALF, if they begin living in an ALF.

Table A.4-8: Financial Eligibility Criteria for Medicaid Waivers, by State 2015 Values are a percent of the maximum monthly Supplemental Security Income (SSI) and Federal Benefit Rate (FBR)				
State	I/DD	Aged (>=65)	Aged/Disabled	Physically Disabled
AK	300%	300%	-	300%
AL	300%	-	300%	300%
AR	300%	300%	-	300%
CA	100%	-	100%	100%
CO	300%	-	300%	-
CT	300%	-	300%	300%
DC	300%	-	300%	-
DE	250%	-	-	-
FL	300%	-	300%	300%
GA	300%	-	300%	-
HI	100%	-	-	-
IA	300%	300%	-	300%
ID	300%	-	300%	-
IL	100%	100%	100%	100%
IN	300%	-	300%	-
KS	300%	300%	-	300%
KY	300%	-	300%	300%
LA	300%	-	300%	-
MA	300%	300%	-	-
MD	300%	300%	100%	300%
ME	300%	-	300%	-
MI	100%	-	300%	-
MN	300%	300%	-	300%
MO	100%	-	100%	100%
MS	300%	-	300%	300%
MT	100%	-	100%	-
NC	100%	-	100%	-
ND	100%	-	100%	100%
NE	100%	-	100%	-
NH	100%	100%	-	-
NJ	300%	-	300%	-
NM	300%	-	300%	-
NV	300%	300%	-	300%

NY	100%	-	100%	-
OH	300%	-	300%	-
OK	300%	300%	300%	-
OR	300%	-	300%	-
PA	300%	300%	-	-
SC	300%	-	300%	300%
SD	300%	300%	-	-
TN	300%	-	300%	-
TX	300%	-	-	-
UT	300%	300%	300%	300%
VA	300%	-	300%	300%
WA	300%	-	300%	-
WI	300%	-	300%	-
WV	300%	-	300%	-
WY	300%	-	300%	-

Source: Ng et al., 2016

Source: KCMU and UCSF analysis of Medicaid 1915(c) Waiver Policy Survey.

Notes: I/DD - Intellectual/Developmental Disability. In 2015, 300% of the SSI FBR was $2,199 per month. Arizona, Rhode Island, and Vermont are excluded from the table because the states did not operate any 1915(c) waivers in 2015 (all HCBS were provided through an 1115 waiver.) A dash indicates that there was no operational 1915(c) waiver for the target enrollment group. Arizona, Rhode Island, and Vermont do not have 1915(c) waivers.

Table A.4-9: Home Health Procedures by Provider County CY 15 - 19

Code	Procedure Name	Clark	Carson City	Elko	Washoe	Douglas
G0145	Cx/vag cyto thin layer w auto scrn/man rescrn	yes	no	no	no	no
G0151	Phys therapist svc in HH/hospice settings	yes	yes	yes	yes	no
G0152	Occupat therapist HH/hospice settings	yes	yes	yes	yes	no
G0153	Speech path in HH/hospice settings	yes	yes	yes	yes	no
G0154	Skill nurse svc HH/nurse hospice settings	yes	yes	yes	yes	no
G0155	Social worker svc in HH/hospice settings	yes	yes	no	yes	yes
G0156	HH/hospice aide svc HH/hospice settings	yes	yes	yes	yes	yes
G0157	Qual PT asst svc HH/hospice settings	yes	yes	yes	yes	no
G0158	Qual OT asst svc HH/hospice settings	yes	yes	no	yes	no
G0159	Qual PT svc in HH/hospice settings	yes	yes	no	no	no
G0160	Qual OT svc in HH/hospice settings	yes	yes	no	no	no
G0161	Qual speech-lang path svc HH/hospice	yes	no	yes	no	yes
G0162	RN skill svc del E&M POC in HH/Hospice	yes	yes	no	no	no
G0163	RN/LPN skill svc obs & assess pt HH/HOSP	yes	yes	yes	no	no
G0164	Lic nurse skill svc trn&ed pt/fam HH/HOSP	yes	yes	no	no	no
G0299	DIR SNS of RN in HH or HOSP setting	yes	yes	yes	no	yes
G0300	DIR SNS of LPN in HH or HOSP setting	yes	yes	yes	no	no
G0493	Skill svc RN for obs & assess pt cond	yes	yes	yes	no	no
G0494	Skill svc LPN obs & assess pt cond	yes	yes	yes	no	no
G0495	Skill svc RN trn/ed of pt/fam HH or HOSP	yes	yes	no	no	no
G0496	Skill svc LPN trn/ed of pt/fam HH/HOSP	yes	yes	yes	no	yes
Q5001	Hospice/HH care in patient's home/residence	yes	yes	no	no	no
Q5002	Hospice/HH in assisted living facility	yes	yes	yes	no	no
Q5009	Hospice/HH care in place NOS	yes	no	yes	no	no
S9122	Home health aide/cert nurse asst in the home	yes	no	no	no	no
S9123	Nursing care, in the home by RN	yes	no	no	no	no
S9124	Nursing care, in the home by LPN	yes	no	no	no	no
S9470	Nutritional counseling, dietitian visit	yes	no	no	no	no
T1003	LPN/LVN services	no	yes	no	no	no

Source: Nevada Department of Healthcare Financing and Policy

Table A.4-10: MDC for hospital admissions during episode of LTSS, by LTSS service

Average annual number of patients admitted 2015-2019

MDC Code	Major Diagnostic Category	RC	HH	ALF	AD
1	Nervous	271	619	62	151
4	Respiratory	293	747	62	126
5	Circulatory	324	896	58	182
6	Digestive	167	473	32	92
8	Musculoskeletal	229	639	48	105
10	Metabolic	101	331	15	58
11	Kidney	271	499	49	94
18	Infections	326	732	80	109
19	Mental	78	310	31	862

Source: Statewide data provided by Nevada DHCFP.

Source: Data was provided for 25 MDC codes. We computed the average number of admits for each LTSS service. We deleted data for any MDC code with below-average numbers of admits across all four LTSS services.

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A Feasibility Study of a Combined License for Assisted Living Facilities, Adult Day, and Respite Care Services in Non-Urban Nevada:

Response to AB122 Part II

(Chapters 5-8)

Final Report
September 30, 2020

Sources for Cover Images:
https://www.thegreenhouseproject.org/about/tour-green-house
https://www.ourvillageofhope.com/the-village-of-hope

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CHAPTER 5: STAKEHOLDER INTERVIEWS

KEY POINTS

- To inform our understanding of the current landscape of services across the state, as well as the strengths, gaps and needs, we conducted in-depth interviews with 14 aging services professionals from across Nevada, with an emphasis on those serving Nevada's rural and frontier (non-urban) communities.
- Common strengths identified in aging and disability services (i.e., Long-Term Supports and Services) available in non-urban Nevada include informal support from family and neighbors; the local senior center; and the local hospital.
- Common gaps identified in aging and disability services (i.e., Long-Term Supports and Services) available in rural Nevada include human resources/staffing shortages; financial resources (low income); lack of transportation; lack of adult day/respite programs; and lack of caregiver education and resources.
- In light of the gaps identified through the interviews, three common coping strategies were reported, including elders receive assistance from family, friends, and neighbors; elders are dropped off and abandoned at the local hospital; and elders are forced to move to another county or urban area to receive needed services. Additionally, several professionals expressed concern that many elders and their families simply may not be coping.
- When asked about the benefits and barriers of a combined-service model: Three themes emerged regarding the perceived benefits, including avoiding displacement by receiving services locally; opportunities to provide education locally and build capacity for family caregivers; and opportunities for engagement, meaning and purpose for elders ("someplace to go"). However, four strong themes emerged regarding perceived barriers to the idea, including human resources/staffing shortage; out-of-pocket costs (assisted living is "unaffordable" for most and generally "not covered by Medicaid"); strict licensing, regulations, and policies; and stigma.
- Overall, there was one theme that was very clear and very strong among respondents when asked what they believe are the "biggest needs" among elders and people living with disabilities in their communities. The biggest need identified was affordable or free respite support, whether in-home or through an adult day program.
- These major themes are all well-aligned with what we have learned about the service needs in rural communities and the general desire among older adults to 'age-in-place' or remain in their own homes, while receiving needed support services, for as long as possible.

The Internal Working Group conducted 14 in-depth interviews with aging and healthcare services professionals representing Nevada's non-urban communities. The purpose of these interviews was to provide a more humanistic, qualitative perspective of rural stakeholders in order to complement the more quantitative data in other chapters. The interviews were completed via Zoom to adhere to travel and social distancing restrictions imposed by COVID-19, instead of as a series of onsite focus groups with diverse stakeholders across non-urban Nevada. Each

interview lasted approximately one hour and was recorded and transcribed. The open-ended interview questions explored the following topics:

- Strengths and gaps in aging and disability services in non-urban Nevada,
- Strategies for coping with identified gaps,
- Benefits and barriers to the proposed combined service delivery model of assisted living, adult day (AD), and respite care (RC),
- Ideas regarding known best practices and/or potential innovations, and
- "Biggest needs" in aging and disability services in non-urban Nevada (i.e., a summary question).

Between May and August 2020, we interviewed 14 aging service professionals, representing the following organizations and communities:

- Neighborhood Network of Northern Nevada (N4), Sparks
- Northeastern Nevada Regional Hospital, Elko
- Carson Valley Adult Day Club, Gardnerville
- Age- and Dementia-Friendly Winnemucca
- Mount Grant General Hospital, Hawthorne
- Family Care Partner, Pahrump
- August Services LLC, Pahrump
- UNR Sanford Center for Aging, Reno
- Alzheimer's Association of Northern Nevada, Carson City
- William Bee Ririe Hospital, Ely
- Pahrump Veterans Affairs (VA) Clinic, Pahrump
- Alzheimer's Association of Northern Nevada, Reno
- AARP Nevada, Las Vegas
- Nevada Rural Counties RSVP, Inc., Pahrump

Although the focus of this report is on non-urban Nevada, we thought that it was important to include the perspectives from urban stakeholder agencies given their previous experience with challenges related to aging and disability services in Nevada.

Select quotes from these aging-service professionals interviewed for this report are included verbatim to illustrate the major themes that emerged. When the interviews were complete, we coded the transcripts to identify key points and commonalities, established interrater reliability, and conducted a thematic analysis. The findings reported in this chapter reflect the strongest common themes from the interviews, except for responses to the question about "known best practices and innovations." That question produced a range of individual responses with little common ground. Responses to that particular question are shared as a list of ideas and not as common themes. For the other questions, the strongest common themes are noted, and are followed by a selection of corresponding quotes from the interviewed stakeholders to provide greater context and meaning.

Q1: From your perspective, what are some important strengths and gaps in aging and disability services in Nevada's rural communities?

Respondents identified the following common strengths:

- informal support from family and neighbors;
- the local senior center; and
- the local hospital.

They also identified the following common gaps:

- human resources/staffing shortages;
- financial resources (low income);
- lack of transportation;
- lack of adult day/respite programs; and
- lack of caregiver education and resources.

Strengths in Long-Term Supports and Services

Informal Support from Family and Neighbors

- "Looking through that rural lens, I would say that overall there is just such a commitment to being really community-centered and being resourceful. I think across the board, no matter what, there are organizations doing amazing things with very little. And there is more of an organic relationship-building culture within rural communities that we don't have quite so much in the urban areas…"
- "What we see is communities relying on one another; family members taking care of older generations; friends and neighbors and really a reliance on the resources that they know are available and that sense of support from other community members. Or they just don't get those needs met."
- "I think one of the biggest strengths is the community itself. In my experience, at least each of the areas has a really dedicated group of individuals across multiple organizations that are working to make changes in the community and really working to advocate for each rural or frontier community based on their needs."

The Local Senior Center

- "One of the things we have is the senior center and they are amazing when it comes to meals, whether it's eating at the senior center or providing Meals on Wheels. They are just a great asset to our elderly who just don't have their nutritional needs met in their home. And then the other thing that they do is, many times for a lot of our seniors, that's their social life and so they end up spending the whole day there and they are playing games and putting puzzles together and attending groups ...."
- "One of the strengths that we have is that we do have a senior center in almost all of our rural areas. So, we at least have a kind of a focal point in many of our rural areas. So that's something that could be built upon."

- "With the pandemic, you know, it's not happened for several months now so you know they're staying at home. But we used to take a lot of our [skilled nursing] residents, once a week, down to the senior center for Wednesday Bingo and lunch, and that was a big social activity, and we would take five-to-six residents down there on a weekly basis… just a place for those folks to mingle and socialize."

The Local Hospital

- "So, we fill out probably eight applications a week for low-income housing, eight-to-ten a week, and we're paying for their medications or we're finding resources to get their power turned on, so catching up on their power bills and so the hospital will pay. I'll call and say, 'Hey, can I pay this and get their power turned back on?' because they're behind in their bills, and I'll put that on my corporate card to just to get them electricity and then hopefully they can keep up with their electricity after that."
- "We have worked out different deals with different pharmacies to say, 'Hey, can we just fill out the paperwork and give it to the patient, so that they can go get their medications?' and the hospital will pick up the fees…"
- "There's no separate long-term care here. It's part of the hospital, which is a good use, right? There's probably not enough volume to have a long-term care center, so it makes sense for it to be part of the hospital. I think that's a strength, kind of blurring the lines but I think that is a strength..."

Gaps in Long-Term Supports and Services

Human Resource/Staffing Shortages

- "And then to get people to come in and work they were paying them a minimum wage, and people were just kind of like, 'I can make more than that, you know, working at a cash register at a grocery store.' And being a caregiver or an adult daycare person takes a lot of work. So, if you can make more not doing as much work, not working as hard… Although there are some benefits, emotional benefits, in helping people, they want to pay their bills, too. You can make ten dollars more an hour at a grocery store or at a restaurant, so it is very challenging."
- "I think the gaps in aging services, and I know this is based on the scope of services, is the actual feet in the field. We have one social worker now – yay – and we are so grateful for her, but we're still a large community with a lot of needs. And, so, to have more feet on the ground… Not a person that comes from Vegas once a month, toots their horn, and says these are things we can do from Vegas, because they don't know Pahrump."
- "I think one of the primary gaps is that the service or resource is technically available in the area, but that there's no one to provide it… Then there's a lot of danger honestly in traveling those highways constantly. Weather and animals and open range and there's all kinds of considerations, and when you're talking about older volunteers, they don't always want to take those risks."
- "I just know more anecdotally that in small rural towns there are fewer jobs and so people, the younger people, whoever they are, whatever younger is, leave. They go to

where the jobs are. So, I think that creates one gap in terms of actually having folks who would be looking for work."

- "Getting the providers out here is a big issue…They can't get local people to stay here or to come here and work, and we at the VA are seeing the same thing. We can't get a new doctor to come to the clinic. It's been four years and we can't get one."
- "Pahrump has been very surprising over the last couple of years in developing specific clinics and providers for older adults, which is encouraging, but most frontier areas are really lacking."

Financial Resources (Low Income)

- "The other thing is the income level for Elko, which I'm sure isn't unique to Elko, but we see that many people can't afford their co-pays for their medications or their housing; so a lot of times what the hospital is, you know, what my department is doing is, they're choosing their medications so they're not eating, or they didn't pay their electric bill because they had to pay for food. So, we see that gap in choosing what can they afford to pay for and so they either are going without food, going without electricity, or going without medications. And our doctors will say, 'Well, maybe you should get them into an assisted living program,' but assisted living is very expensive when you're on a very fixed income, because even if we can get them on Medicaid, Medicaid doesn't pay for assisted living and our low-income housing list has a two-year waiting list right now… So, that's all we have is [name of facility redacted], and as great as they are, they are expensive, so that's a barrier for getting anyone in assisted living."
- "You know, [name of assisted living facility redacted], which I absolutely love… but the cost factor. What people don't realize when they do things out here that, yes, this is a very big county and, yes, we have a handful of property owners that have beaucoup bucks. But this is the poorest county in the state and it's not priced accordingly. So, you have a lot of people who are stuck living home alone because they can't afford to take advantage of places like [name of assisted living facility redacted], or any one of the private homes for them to live in. It's beyond their means. They just don't have that kind of money."
- "Unfortunately, a lot of families find themselves being taken advantage of because they're thinking, 'Well, I can't afford that agency price, so I'll just go with somebody on Facebook for $10 an hour,' and you're really paying a lot more in the long run with all the things that can happen when you're not going through the protection of an agency who provides training on elder abuse and protection and neglect, and all of those fabulous trainings that we go through…"
- [Follow-up question]: "If there was an assisted living model available, how likely is it that folks in your community would be able to afford that service out-of-pocket?"
    - "Very unlikely. The majority would not be able to."

Lack of Transportation

- "Transportation is a gap... They want that socialization, but how do they get there and how do they get back?"
- "One of the things that's talked about and I am a huge, huge, huge supporter of the concept is senior day care, so that people who have their family members living at home

can bring them someplace, you know, have some place to bring them – just for the day. They're fine at home, but there's some place to bring them for the day. We don't have that out here."

- "One gap is transportation if we really talk about the social determinants of health, and people not being able to drive and then they're living in a community that does not have any public transit system or very minimal, and that absolutely expedites them having to leave their community to move closer to where those services are."
- "If you don't have the transportation to go in and pick up your prescriptions, and pick up food, and do those kind of things, that makes it very hard."
- "Transportation is a big issue. If they can't drive, we have very limited sources. That has changed a bit. They've got a new busing system that will take them for very minimal fee to doctor appointments and shopping, things like that, but they still have to be mobile."
- [One of the difficulties often associated with moving an older adult to another town to receive services is transportation.] "They [the person's family] don't have reliable transportation, so they can't go visit. They've told me before, 'You know, if you send my dad to Las Vegas, I'm never going to see him again or I won't be able to see him for years and he'll probably be dead by the time I get a car, you know things like that, so we hear that quite regularly."
- "That's the biggest problem, the transportation again, you know, same type of thing. If they can't get somebody to take him to their appointments, they just forget it. They don't go."

Lack of Adult Day/Respite Programs

- "We do have an agency that does the respite program, and the problem there is getting providers to provide respite… So, people have to pick and choose their respite and then they have to be able to get onto the program, but then there's a gap in that because they have to wait for caregivers to become available and that can be a while."
- "Some people are understandably really concerned about having a stranger come into their home and then there are others, and this is why the voucher model was not something I wanted to consider, I have worked within voucher respite models for a long time and there are so many families that are just kind of like, you know, especially family care partners that are just in crisis mode, just need a break, and they're coming to you because they really need a break, and if they had someone in mind [for a respite voucher], they wouldn't be coming to you. I'm like, 'Here's a voucher,' and they're like, 'Well, we don't have anybody!'"
- "So, for respite services, for instance, I tried to work with companies that were willing to travel to train respite workers but for one reason or another it never worked out. So, though respite was technically available in that area, there was no one to fulfill that resource. More often than not that was because the local individuals that were interested in the work couldn't pass a drug or background test, so that's another challenge..."
- "I feel like home care, day care, and respite care are all gaps. Not only do they not have facilities for these kind of programs, but also staffing is an issue."
- "…I mean a lot of these services, I see on paper and they say they have operations in Hawthorne, but once again, without being overly cynical, it's in name only. I don't see a physical presence. I'm not aware of any; they certainly don't work with the hospital and

we're the ones who deal with all these folks on a regular basis. I try to keep a positive attitude about it, but you know it's, and I understand in the last six months of course everybody's focus is elsewhere, but prior to last spring there really wasn't much in the way of help."

Lack of Caregiver Education and Resources

- "For the respite voucher, you know it can't be a person who lives in a household with the older adult. It can be a family member, friend, neighbor, or someone they just know casually. The older adult and with support from family can identify anybody they choose, but that individual then has to have some very specific training to be self-directed. They need specific training about their role, tasks, limits, etc. And I'm not sure how that's provided. I think that's sort of the gap."
- "If we can help to fill those gaps by providing education and we can encourage people to understand and learn more about the Alzheimer's journey and how they can help their loved one and give them tools as caregivers to be able to take care of that person and to manage their own stress and feelings of being overwhelmed, then that should be our goal."
- "Education is a huge gap here and part of the problem is, and I've seen this in Eureka, too, and I'm sure it's probably every rural area, there's no real great way to get information out. Facebook is probably the best way that we found that hits a lot of people but it doesn't hit necessarily all the age groups at this point. But we don't have a TV station. We don't have a radio station. I mean there is a radio station but no one really listens to it and then there's a newspaper but it's once a week and you know you're lucky if you can get stuff in it. So, getting information out is actually extremely difficult..."

Q2: How do you think people are coping with these gaps?

In light of the gaps identified in Question 1, four common coping strategies were reported:

- elders receive assistance from family, friends, and neighbors;
- elders are dropped off and abandoned at the local hospital;
- elders are forced to move to another county or urban area to receive needed services; and
- many elders and their families are simply not coping.

Elders Receive Assistance from Family, Friends, and Neighbors

- "The challenge that we've seen, how families handle that, is muddling through the best they can until they find an agency that can help."
- "I think a lot of respite is provided through friends and neighbors, through other family members."
- "People talk about how they may give a friend, a neighbor, money for gas to drive them and you know that's okay, there's nothing wrong with that, but for the most part we're dealing with a population of older adults who don't have a lot of extra cash and so if they're having to pay somebody for every single trip, it begins to add up."
- "They have to find somebody, a neighbor or friend or somebody, who will take them to the store. I know one guy drives to the store and the guy goes in and because he can't

walk that far in the store, so he'll drive his neighbor to the store and the neighbor goes in, gets his groceries, and then he drops him at his house and then drives home."

Elders are Dropped Off and Abandoned at the Local Hospital

- "We'll have an elderly patient dropped off who is not in very good shape and the family member just says, 'I can't do this anymore; I need a break,' and they leave. And there's nothing necessarily wrong with the patient from a medical standpoint, at least not enough to admit [to the hospital], but you have this patient that basically was abandoned on your doorstep and we can't just put them out in the parking lot, so we end up admitting them and keeping them and trying to find a place for them to go, which is always difficult and a long process that we get burdened with… So, it's difficult. If they do have a skilled nursing need… then we can swing them and use that to rehab them to some degree while we're looking for a proper placement for them. But oftentimes we're stuck with an individual or we take care of an individual that we just don't get paid for. And they just take a room. We feed them. We take care of their meds and everything else."
- Exchange between Interviewer and Mount Grant General Hospital, Hawthorne (MGGH):
    - Interviewer: "I'm curious, what happens when someone has maxed out their Medicare benefit, they've been in a swing bed for 100 days, and they can't get into long-term care, but they really shouldn't be going home by themselves and you can't find a family member… can you help me understand what happens to these folks?"
    - MGGH: "Well, we will do anything we can legally to continue to provide care for them. I mean sometimes we have to, you know, we're not going to color outside the lines, we're going to, as they say, we're going to color right up to that line as far as what we can do, as far as being creative as much as possible, working with Medicare and Medicaid, and to continue to provide services for them. You know, we know these people. This is a small community and many of us have lived here for years, decades, and so it's really hard to say, 'No, we can't help you.' It's just, given our unique presence here, there's no other option and we're not going to turn them away. So, we'll do whatever we can to provide for their care which means that we write off quite a bit each year, you know, costs that we are never going to collect or be reimbursed for, but that's just the nature of a small rural hospital, I'm afraid."
    - Interviewer: "How many times a year does this come up that a person has nowhere to go and they can't get other services in Hawthorne? Is it a common issue or would you say it is kind of rare?"
    - MGGH: "I'll just give you my three-year perspective, that it's far too common. You know, we play this game where we'll discharge someone who's been in a swing bed a long time, we'll get them home for a couple days, it does not work no matter what supports we can find, you know, minimal resources available to help them succeed, to scaffold them, so they can stay at home and then they're back here a few days later. I've seen it twice here in the last couple of weeks with the folks that we hope they'll be successful, but we know we're going to see him back within a week's time."

Elders are Forced to Move to Receive Needed Services

- “People that can't afford services in Winnemucca are having to move to other communities that are far away to get what they can't afford, and that is creating, obviously, a challenge when people can't travel to see their loved ones.”
- “Lincoln County has a long-term care unit as part of their hospital but they are not prepared to take on patients with dementia, so more often than not they get relocated to either Salt Lake or to Reno or Las Vegas, wherever there's room.”
- “They end up leaving to go to a place where they can get the medical care that they need. Here in Elko, we're close to Twin Falls, and if you go to Idaho, then Idaho has a lot of services for the elderly population. So, they're thinking, I can go three hours away and get the services that I need… Twin Falls has so many resources that people end up going to Idaho or they end up moving to Reno or Las Vegas, or perhaps we have a lot of people that move to Pahrump, which is right outside of Las Vegas so they can get their services and still have the rural community.”
- “They should be aging in their community, and so it's unfortunate that a lot of times you see people having to leave the rural communities, and this is probably a lot of why this bill [AB122] is kind of looking into having a better way, because people absolutely have to leave their community in order to get the additional support they need.”
- “So, if it's memory care, the place here is not set up to do memory care and so they don't take any memory patients and locally, I get it, I'm not dogging on them, they have a business to run, but they don't take a lot of the patients on Medicaid presumptive eligibility and they don't want to fight the fight of trying to get the money. So oftentimes in that scenario, they don't take our patients either and so the patients that they do take will be the ones that are already, you know, either have insurance or Medicaid or something set up for long-term care and they have, again, their business, so I don't fault them for this, but they have a very specific checklist. So, they come up, they look at the fact sheet, they do everything that they're supposed to do to make sure that it's going to be financially positive for them to take the patient and that's when they will accept a patient from our hospital. But these ones that usually get dropped off, they're usually not the type that are going to be that route, or when a family member drops off a memory care patient here [at the hospital] because their loved one is now at a point where they're trying to wander or they're having issues. Now it's too late for local care and so our local facility will come up and say, ‘Yeah, they don't meet the criteria. They need a better, you know, a different place.’ So, they get shipped out as well. If I were to throw a percent, I would say probably 75-80% leave the area.”

Elders and Their Families are Not Coping

- “They're living in their motorhomes by themselves” and “some without power.”
- “We also know that there are families who despise that someone who is not like they used to be, and we worry about violence, we worry about safety, we just worry about the mental well-being of that individual as well.”
- “Unfortunately, I just had one veteran, he's like ‘Well I don't have transportation.’ He has three appointments in Vegas but... he can't drive three times at seventy-five years old. So, he's like, ‘You know what, screw it.’ One is with pulmonology, one’s with cardiology, and one’s for his oxygen… and he said, ‘You know what, forget it. I'm not going.’ They just cancel it and don't go.

- "I think often we encounter people when they are at that point of crisis. They maybe have tried other avenues. They have reached out to other resources and haven't been successful in connecting with them, or they have just been so overwhelmed by the situation that they're in, that they've come to the point where they can't continue and they need more help. Some are successful but there are others that are not."

Q3: From your perspective, what are some potential benefits and barriers to the proposed combined service model (assisted living, adult day, and respite)?

Three themes emerged regarding the perceived benefits of a combined service delivery model that would include assisted living, adult day, and respite support:

- Avoiding displacement by receiving services locally;
- Opportunities to provide education locally and build capacity for family caregivers; and
- Opportunities for engagement, meaning and purpose for elders ("someplace to go").

However, four strong themes emerged regarding perceived barriers to the idea:

- Human resources/staffing shortage;
- Out-of-pocket costs (assisted living is "unaffordable" for most and generally "not covered by Medicaid");
- Strict licensing, regulations, and policies; and
- Stigma.

Benefits of Proposed Combined Service Model

Avoiding Displacement by Receiving Services Locally

- "…certainly the opportunity for people to access, to understand what's available to them within their community, to be able to stay within the community."
- "One of the things that I see when I go into rural communities is, a lot of times if they don't have a long-term care facility, they are sending their elders out to Reno, over to Utah, California sometimes—they're sending them far away from home and we know that when people are in those kind of facilities, they fare much better if they can have visitors. But once they move that distance, it doesn't help the resident and doesn't help the family, because a lot of times those ties are kind of severed because the family cannot visit their loved ones. I know when I went up to Dermott –another Indian Reservation I visited back in probably the early 2000s… When I got up there, they said, 'We'd really like to start a nursing home for our elders.' And the more I talked to them, it was like, 'Yes, this makes more sense.' Because, if they're sent to Reno, they're in a place that does not understand their culture, many times their language, and so they're like fish out of water. They're struggling. And then they basically, it's like they just give up and die."

Opportunities to Provide Education Locally and Build Capacity for Family Caregiving

- "I think just having the services would be an incredible benefit for each of the communities just given how little access they have currently. I think if that were able to come to fruition it would open a whole new world of support for a lot of the families, and

it would also give or provide a space for partnership and collaboration to outside organizations that can provide additional support and education."

Opportunities for Engagement, Meaning, and Purpose for Elders ("Someplace to Go")

- "I really think it comes down to people having purpose and meaning in their life, and if you take them out of the community that they've lived in, they lose a lot of that and they quickly, you know, it really affects their health and their well-being."
- "The benefits are exponential. It's so important to wake up in the morning and feel like I've got a place to go, I've got a reason to get up and get dressed and fix my hair or grab my handbag, whatever it happens to be, and to be going someplace. And we would have the security of a safe health facility, and the people leaving their loved one with us would know that everything was going to be fine for the day."

Barriers to Proposed Combined Service Model

Human Resource/Staffing Shortage

- "I'm hoping that if we had an organization willing to do that [proposed combined service delivery model], they would be fully-staffed. So that would be the barrier – finding the staff. Even if they are paying well, I mean just look at the hospital and look at the nursing home. The nursing home has a full wing that isn't even open because they don't have the staff, and hospitals are always looking for staff. So, it's the shortage of CNAs, and nursing, and dietary, and all those are just, it's hard to fill those positions."
- "Multiple clinics use 'travelers' because we just can't find the people who live here or want to live here. So, they are traveling, and they pay their hotel. They just stay in a hotel because it's short term."
- "You're not going to find the volunteers and, like I said, volunteers are hard to come by. Even the services we do have in place have difficulties finding volunteers."
- "Out here, it's always a challenge. Almost every newspaper has ads for CNAs, staffing of that kind. I know they're always looking for CNAs at the nursing home. One of the things – one of the biggest problems in that field – is it doesn't pay well so you can't keep help. They're always understaffed…It's just the nature, and I have a feeling that that's not just here. I have a feeling that's everywhere."
- "The idea is fantastic of course, and we would support it every way possible, but you know the challenge, of course, is staffing. When you're in a remote location like ours with a very shallow labor pool, there's not the personnel out there that you need to train, personnel to make the program successful. We try to train a lot of our folks. We hire them as CNAs and train them, and then, you know, then we'll give them tuition assistance so they'll either become an LPN or RN and we try to grow our own. But that staffing is the biggest challenge. Whatever we get in place, having the personnel, the right personnel, to make it successful, that's the biggest hurdle… We hire a lot of travelers because you can't get people permanently, so we'll get people for three months or six-month stints here."

Out-Of-Pocket Costs (Assisted Living is Unaffordable and Generally Not Covered)

- "All we have is [name of facility redacted] and as great as they are, they are expensive, right, and so that's a barrier for getting anyone assisted living or independent living even."
- "When I was working for [name of facility redacted], the first team that came in were from California and they set the room rates at Las Vegas prices and we were lucky to get anybody in there. It was really, really, really a challenge and all the time I was there we were never past 50% [occupancy] because the prices were too high. They lowered the prices after I left and then they lowered them again. Now they tend to range in the 80 to 90% – I don't think they've been 100%."
- Exchange between Interviewer and RSVP:
    - RSVP: "A lot of them can't afford it… it's simply out of their financial realm.
    - Interviewer: "Right. So, do you think that that is one of the barriers to having some kind of combined service delivery model? That it's just not affordable to folks out-of-pocket?"
    - RSVP: "Oh, without a doubt. I mean, it's just a crushing blow when you realize that you're 76 and in the same boat, you think about it."
- "People who are on a fixed income and don't have resources are going to find it hard. We know it's expensive to place a loved one in a long-term care situation, so certainly cost would be a barrier."
- "The biggest barrier I would say is the need for more financial assistance in our community. Not having to worry about the expense of the care provision."
- Exchange between Interviewer and Sanford Center for Aging:
    - Interviewer: "How affordable do you think paying out for assisted living, adult day, and/or respite would be for most rural families?"
    - Sanford Center for Aging: "My guess is that it would be impossible."

Strict Licensing, Regulations, and Policies

- "One of the challenges I would see is having one license cover three provisions. I'll tell you, as a PCA agency administrator, I have a lot I have to remember. And I get a phone call and my PCA will think it's this simple, little problem that needs a two second answer and I have to think of five regulations that could address that answer before I answer. And I'm taxed – I'm very, very taxed – emotionally, mentally, physically – in knowing all of that and being new to this. So, the administration of this, having one license, I think one of the barriers would be now we are looking at one administrator…if me as a PCA, I have five regulations to think of, I may now have 25 to think of as an individual! So, it would require a really well-versed individual to be that administrator. It might actually be recommended to require that there's one administrator but where…like, my PCA agency, I have to have an administrator and then an assistant administrator to fill-in in my place. Maybe that's a team. That it's not just everything relies on two individuals, but you have one administrator over the whole facility and then you have one assistant for the staffing, you have one for each licensure, I guess. And then they have an assistant that's focusing on those regulations."
- "I know there's licensing issues, and that's probably one of your hurdles, is how do you license these facilities? Because it's not fair really, I don't think, to make the person get three different licenses. 'I'm gonna have a respite license…' Well, I don't know that they

license respite. But, 'I'm gonna have a daycare license and then I'm going to have my residential care license.' If there's some way to have it so that it's less onerous. That's another thing that would make people not want to do it is if it's too much paperwork and bureaucracy to actually get licensed to be able to provide these services."

- "Maybe there's kind of an endorsement that, I don't know if they'd be able to do all three and one license, but if they even had an endorsement that would mean that you wouldn't have to go through the same hoops that you go through when you get the first license. If they could do all three and one license, that'd be great."
- "Then to the point of assisted living, providing respite, and adult day care, and again I think this is the challenge. Assisted living facilities have to deal with issues around, you know, hot water and cleanliness and more institutional building pieces, you know, the actual structure, etc. And that isn't to say that adult daycare doesn't, but there are different sets of rules and so again I think it's in my brain, I'm thinking, so I'm the administrator for an assisted living facility and I want to run an adult daycare, how do I have to shift and adjust in some ways? How do I manage the staffing of that? Is it appropriate to integrate the people in adult daycare into the functions and services provided for by the residential care assisted living? In other words, if there's an activity program that's being run for the residents there, is it appropriate to include folks who are non-residents? And I don't think it's impossible but you know the challenge at times is, again, based on state codes, etc., does the person have to have a TB test, does a person have to have a recent history or physical, when was the last, you know, have they seen a doctor in the last 30 days? Not just to come in the door to be admitted, but what's the level of complexity or not that you're gonna have for someone who's gonna come in for an overnight or a few days or a week? A nursing home, assisted living resident, whatever, there are admission criteria and you know most of that is based on regulation and best practices and safety and all those things. So, you know, very appropriate, so the question becomes do you relax that somehow for somebody who's just using respite?"
- "One of the facilities, The [name of facility redacted] down in Vegas, did have an adult daycare attached to a memory care, and we went to visit it. They closed the following year because of regulations. So, my personal opinion is attaching it to either an assisted living and or memory care and most likely a memory care because majority of the families they're looking for the ones that have dementia… and with the regulations now, they've always said for assisted living that you're not supposed to have anybody with any diagnosis of dementia."
- "I will tell you the long-term care center down here, the previous owner, so two owners - three owners ago, I met with them and just told them about the need that we had for respite because they were dropping them off here [at the hospital] and with the need for adult daycare because sometimes that's why they drop them off, too, you know. And so I talked to them about that, and they told me that they were unable to do daycare in their long-term care center and they were unable to do, well, they said they could do respite but there were a number of hoops they had to jump through and the reimbursement was so low it wasn't really worth it to them."
- "I think they would do adult daycare and possibly respite – right now there's a waiting list at just about every hospital – we have a waiting list, Battle Mountain has a waiting list, and Humboldt has a waiting list – and so my guess is they probably wouldn't have a ton of room for respite or assisted living per se, but again they probably just don't look at

those options because it's too much work and it doesn't pay off… we looked into it, and it was just kind of more headache than it was worth. But if they could make the regulations more in line - and that's the problem, everyone has their own set of regs and to try to dog every single reg that you have to follow for all the different licenses – it just becomes overwhelming really."

Stigma

- "They [Elders] don't want any part of this. They don't want to feel as though they can't live on their own."
- "We also looked at adult day care and respite services, and that's when I learned the great stigma that goes with aging and dementia and Alzheimer's disease, even when I'm at a place where I'm speaking to people who are aging, have friends and family with dementia or Alzheimer's disease, and we just kept running into roadblocks."
- "I want to carefully word this, but in the senior center, in our effort to host a group respite program there, we kept getting this blowback, like we were going to have a bunch of people show up and wander around in various states of cognitive confusion, and we were going to just leave them. And I couldn't convince them, number one, I would never do that, number two, there would always be two of us there so that if something happened you've got someone to handle emergencies. It was the strangest thing to think that a senior center that should be welcoming and open to everybody was not at all. And it's kind of typical of a lot of centers."
- "And so again I think you know, it's that notion, on the one hand you know this mix might be helpful, but again recognizing that in some congregate living situations there still is a tremendous stigma about going through those double doors. And so, would folks feel comfortable? And again these are things that can be overcome, not a reason not to do it, but are people going to be comfortable coming to the assisted living facility? Typically, my experience has been when we talk to older adults in the clinic about getting services, you know, I think in the back of your mind is like they're thinking, 'I can't take care of myself, and it's just one step away from you taking away my autonomy and putting me in a nursing home.' Because people still believe that the state and families can literally take people out of their home forcefully and put them in nursing homes. And so again I think these are the sort of stigma pieces that the organization, the assisted living facility, is gonna have to overcome. So now you may make the adjustments in licensure but how do you adjust community attitude?"
- "Finding providers to offer respite care and encouraging people to attend adult day programs, sometimes there's a fear, there's a reluctance, you know, 'I don't need this. I don't need to be… I'm fine on my own… you don't need to take me somewhere which is associated, of course, we know with fear and concerns about the future.' So just getting over that barrier, so people can become familiar with what an adult community looks like and how they can benefit from that. Again, it's fear."

Q4: Based on the aims of this feasibility study, do you know of any innovations or best practices that have been implemented in other communities or states that we should consider?

(Not a thematic analysis but a list of individual ideas mentioned)

Though the best practices and innovative ideas below were not elaborated upon in great detail during the interviews (and thus this report does not include any specific quotes), the ideas offered provide an important springboard for further discussion and subsequent research into many options described in Chapter 6. These ideas suggested by the stakeholders are listed below:

- Onsite housing provided as a benefit for assisted living employees who do not have children living with them
- Care transition coordinators and nurse navigators
- Community paramedicine programs
- Tax levy for community-based programs and support
- Host home/medical foster home models (Privately owned homes in which providers receive stipends; already happening in the context of disabilities and VA)
- Self-directed respite vouchers (Select your own caregiver; could be family; there are not enough respite volunteers)
- Partner with faith-based organizations to provide a free space for an adult day program
- County-sponsored adult day program
- Affordable/subsidized housing with integrated social services (e.g., Portland's Housing with Services and Well Home Network), with a focus on delivering non-institutional and lower-cost home and community-based services
- Non-urban PACE programs (Programs of All-Inclusive Care for the Elderly)

Q5: In summary, what do you think are the "biggest needs" among the people you serve in rural areas?

There was one theme that was very clear and very strong among respondents when asked what they believe are the "biggest needs" among elders and people living with disabilities in their communities. The biggest need identified was affordable or free respite support, whether in-home or through an adult day program.

Affordable or Free Respite Support

- "I really think it is the respite, because if we had the respite programs, then their senior partners or their caregivers could then get out and even work a part-time job and then afford to stay here in the community and provide some of those resources… I think respite would just be a benefit to our community and I know so many people relied on it. And when it closed, it really just put a hardship on our community."
- "What popped in my head first are more support services for people to live in their home, whether they live alone, and just to have support to continue to do so or providing that primary care partner a break. I think that's huge."

- “When we did the listening sessions for Joyce Woodhouse's committee on care for persons with cognitive disorders, respite was the number one issue that families said to us. So, I think respite is a big, big gap. It just comes up over time, over and over again, that families need that break from constant caregiving. They just need to have somebody come in and be able to stay with their loved one while they go and do whatever they need to do… Even though I think food is an issue, I just know that when we talk to families that are living with folks that have dementia, respite comes up to the top.”
- “Most of my families will admit that they get very short tempered, they need more of a break. Let's pick up an extra day, or they end up calling in a friend, or they pay, or they get a respite grant, and they go take them somewhere. Now I will tell you that isn't happening as much, because with our facilities being booked there's no place to do respite right now. So, then they have to pay for the nurse which exceeds the grant, any grant that you can get. But, so again, depending on the situation, my answer is sometimes the daily respite is okay, but if somebody is really progressing in their dementia, getting out for at least two to three days every few months is a necessity.”
- “The biggest need is having a safe place [where] those with disabilities, again whether cognitive or physical, can actually go somewhere and be safe and that the family members, because the family member could drop off someone who has physical issues here at the senior center, and they could go away and have their own lunch. But if there's not a designated safe spot, they're still wondering who's helping that loved one. Now here at Douglas County, we help each other. Most rurals, they're going to help each other. But it's still not the same as having a designated place where you're going to find out, do they need help in the bathroom, do they need help eating or cutting up their food, because there are some that will not ask for help to cut up their food. So, we just do it. So, I would say that is the biggest, is that they just they need some place, that the family needs some place they can trust and that's safe and the care, that person who needs the care wants some place fun and not institutional.”
- “As we discussed, respite to me would be the biggest need. That's what we could do with personnel. We could start next week or next month. That's the most we could do to meet needs in the shortest amount of time, and getting those folks to support our homemakers and community paramedics, to help these folks in their homes. That's the one that to me it's more realistic. The other ideas would be, you know, years down the road, whereas respite is something we could do in the immediate or foreseeable future… If we had something sustainable like that, to go into the folk’s homes and help them be successful in their homes, and work in conjunction with their homemakers with the community paramedic, you know that kind of scaffolding or support I believe would be invaluable in this community.”

CHAPTER 6: POTENTIAL SERVICE MODELS

KEY POINTS

- While there are many ways to enhance the resources available to support elders in living well across Nevada, any potential solution will require alignment with existing community assets and structures, connection to the preferences of community members, a commitment by state and local leadership to support it, and financial investment.
- This chapter includes exploration and description of several *possible* service models to consider, ranging from those simply requiring increased investments in existing community-based services to those including the development, construction, staffing and launch of all-new integrated models of care and support along with the physical structures and staffing needed to make them successful.
- This chapter describes four different potential service models, including: (1) Affordable Housing with Supportive Services; (2) Small House Assisted Living with Combined Adult Day; (3) Tiny House Villages or Pocket Neighborhoods; and (4) Rural PACE (Program of All-Inclusive Care for the Elderly).

When exploring the best way to create an integrated, single-license approach to delivering elder care Long-Term Services and Supports (LTSS) in Nevada's rural and frontier (non-urban) communities, there are a range of options to consider. In reflecting on community needs and resources, financial analyses, and regulatory landscape (as outlined in this report's previous chapters), several options emerge as possibilities. One overarching principle that seems to fit most closely with the needs and preferences of non-urban communities and the elders who live there is that "smaller is better." For several reasons, including quality of care, quality of life, and cost of care considerations, the likelihood of creating a financially viable, large-assisted living combined with Adult Day (AD) and Respite Care (RC) services appears low.

In fact, a combined service model option did not resonate with most of the stakeholders interviewed (see Chapter 5). Their reasons included consumer affordability, expensive new construction costs, stigma, perceived regulatory complexities and constraints, staffing shortages, and the overwhelming desire among most adults to live in their own homes. Therefore, in this chapter, we explore a range of options for models aligned with the identified needs and preferences in non-urban communities, presented here in order of complexity, including (1) Affordable Housing with Supportive Services; (2) Small House Assisted Living with Combined Adult Day; (3) Tiny House Villages or Pocket Neighborhoods; and (4) Rural PACE.

In addition to these innovative models, it is also important to note that stakeholders interviewed as part of this study identified a number of effective support services currently underway in some non-urban communities that could be strengthened and expanded, such as a county-supported Adult Day (AD) Program (Douglas County); community paramedic programs (Humboldt, White

Pine, and Mineral Counties); and a hospital-sponsored homemaker companion program utilizing Personal Care Aides (PCAs; Mineral County).

Each of the models presented in this chapter represent an option for consideration in how to best support Nevada's non-urban older adults, described in this section in terms of their key features as a service model. There are a variety of funding options for each of these service models, such as Medicare, Medicare Advantage Plans, Medicaid, Medicaid Waivers, private pay, and others, that will also need to be considered to determine the best fit, as explained in previous chapters focused on staffing, cost, licensing, and reimbursement.

Each of the models described below could be considered by individual counties for adoption and adaptation according to their specific community needs, or could be rolled out as a pilot program by the State in one or more communities, working in close collaboration and partnership with local community members.

Affordable Housing with Supportive Services

An Example from Oregon

A recent report by *Leading Age* (Sanders & Patterson, 2016) offers a thorough overview of the structures and processes for bringing needed LTSS into affordable housing complexes for older adults and people living with disabilities. Essentially, where communities include and offer subsidized, "low-income," and/or affordable senior housing options, there is an opportunity to enhance the supports available to residents by bringing in well-trained care navigators. In the *Leading Age* report, they provide a case study of a model from Portland, Oregon that fully details the opportunities and challenges associated with this model. Although Portland is not a rural area, the major elements of the approach may offer insights into how to pursue it for Nevada's communities. As described in the report, the case study reviews:

> Housing with Services (HWS) in Portland, OR, is a care navigation program based in affordable housing properties that serve older adults and younger people with disabilities. A multidisciplinary care navigation team of physical health, mental health, and social work professionals collaborates with property-based resident service coordinators to provide onsite assistance to residents in 11 affordable housing communities in the Portland metropolitan area.
>
> This case study explores two features of the HWS program:
>
> 1. A service delivery mechanism that brings services to residents living in a network of affordable senior housing communities.
> 2. A funding mechanism that pools resources from multiple stakeholders to support program services.

These program features address two key challenges faced by programs that link affordable senior housing communities with health and supportive services:

1. *Volume*: Individual housing properties may not have a large enough pool of residents to entice service and/or funding partners to collaborate with them on a service-delivery initiative. The volume challenge may be even more problematic for health care providers or payers that have responsibility for only a portion of property residents.
2. *Ownership*: Residents in affordable senior housing properties choose their own health care providers and insurers. Therefore, residents in one housing property may be patients or members of a variety of physician practices, hospital/health systems, Medicare Advantage/Special Needs Plans, or other managed care plans. As a result, no single health provider or insurer serves all of the residents in a property (Sanders & Patterson, 2016, p. 2).

In addition to the case study noted above from Leading Age, affordable housing coupled with supportive services has received attention from a range of aging-related organizations encouraging innovative models of service delivery. In particular, Grantmakers in Aging (Sanders, 2020) provides a high-level overview of the benefits of the model, as shown in the following excerpt.

> Affordable housing options − such as Section 202 housing [described below], low-income housing tax credit, or public housing − linked with health and supportive services may provide a cost-effective answer for meeting the needs of lower-income seniors. The strategy has several potential advantages, such as:
>
> - Building on an existing infrastructure of housing and community services networks;
> - Offering economies of scale in organizing, delivering, and purchasing services, which can increase efficiency and affordability;
> - Assisting in several health and long-term care policy initiatives, including: reducing Medicare/Medicaid costs associated with unnecessary hospital use, enhancing service integration and care coordination, expanding community-based long-term care options, and improving delivery systems for dual eligibles;
> - Helping preserve seniors' autonomy and independence;
> - Serving as a hub for service delivery and extending into surrounding neighborhoods to help even more seniors;
>
> Many proactive housing providers have cobbled together various public and private resources to help support their aging residents. These strategies have developed in an ad hoc manner, as coordination and collaboration is (sic) generally limited between the public entities responsible for financing, managing, and regulating housing and health and supportive services.

An Example from Florida

In Jacksonville, FL, there are three apartment complexes specifically for elders, Pablo Towers and Pablo Suites, which are adjacent to each other, and Pablo Hamlet. All three buildings include recreational areas and activities for the residents. Pablo Towers and Pablo Hamlet are owned by nonprofit corporations and all three are managed by Elderly Housing Management Corporation [a 501(c)(3) not-for-profit management company].

Pablo Towers is a high-rise building, built in 1973 with a Housing and Urban Development (HUD) 40-year facility construction loan. It contains 199 units, 31 of which are market-rate, and the remaining 168 units are Section 8 HUD subsidized. All units are either studio or one-bedroom apartments. This complex is owned by Beaches Christian Service Corps., Inc, a faith based nonprofit 501(c)(3) corporation.

> To be eligible to reside in Pablo Towers residents must be single and over 62 years of age, a married couple with at least one spouse over 62 years of age, or two people one of whom is at least 62 years of age. This building contains a computer room, laundry, library, beauty shop, exercise room, and activity rooms.

Pablo Towers (16-story high-rise) and adjacent Pablo Suites (3-stories).
Photo source: https://elderlyhousingmanagement.com/.

In 2015, 15 new market-rate apartments were developed adjacent to Pablo Towers. These apartments are all for elders as well, as eligibility requirements are the same as for Pablo Towers (noted above). However, there are no HUD subsidies for these units. There are 15 available suites in this three-story building—eight one-bedroom suites and seven studio suites. One suite is totally accessible for the disabled.

The building that houses Pablo Suites contains a café, as well as an activity room with a kitchen and restrooms that are used for recreational activities and meeting for residents of both Pablo Suites and Pablo Towers.

The Pablo Café, inside of Pablo Suites.
Photo source: https://elderlyhousingmanagement.com/

> Pablo Café serves nutritious, affordable meals for lunch Monday – Friday from 11:00 a.m. – 1:30 p.m. Lunch menus are planned monthly. In 2017, Pablo Café expanded its reach beyond the residents to the surrounding beaches community, now offering catering and banquet opportunities in addition to chef-prepared lunches.

In 2002, the Pablo Towers board of trustees formed Beaches Elderly Housing Corp., Inc. [also a faith based, nonprofit 501(c)(3) corporation] in order to acquire an apartment high-rise building at the request of the Jacksonville office of HUD. They then renovated the property to make it more accessible to elders and named it Pablo Hamlet. Pablo Hamlet contains 104 units (one- and two-bedroom units), all of which are Section 8 eligible. Residential eligibility requires that the head of household or spouse must be at least 62 years of age or must be over the age of 18 and disabled. Ten percent of the units are set aside for the disabled.

Pablo Hamlet employs a service coordinator who helps facilitate resident sponsored social events and classes as well as help identify local services for residents. Currently, activities include holiday parties, weekly devotions, monthly birthday parties, exercise classes, art classes, and bingo.

Although both Pablo Towers and Pablo Hamlet are designed for elder residents, employees at all facilities are "neither licensed nor trained to give meal service, physical or medical care." However, one of the services that the facilities arrange for residents are for on-site appointments

with medical specialists, including podiatrists and dermatologists, as well as other therapists, such as physical therapists and occupational therapists.

[All information on these affordable housing options in Jacksonville, FL were acquired from: https://elderlyhousingmanagement.com/.]

Pablo Hamlet.
Photo source: https://elderlyhousingmanagement.com/pablo-hamlet/

As noted above, it is also worth exploring options offered through opportunities available through the HUD 202 program. This program provides funding options for supportive services for low-income elders through incentives and support for project developments. The Section 202 program helps expand the supply of affordable housing with supportive services for elders. It provides direct loans and capital advances from the federal government to support non-profit entities in building housing for very low-income elders. Senior housing through Section 202 provides seniors, defined as 62 or older, with options that allow them to live independently but in an environment that provides supportive activities such as cleaning, cooking, transportation, and others. Although no new funding has been available for Section 202 capital advances since 2012, affordable senior housing developments that were built with Section 202 funds continue to provide housing and services to their residents and could serve as a model for non-urban Nevada. Detailed information about this program can be found at https://www.hud.gov/program_offices/housing/mfh/progdesc/eld202.

Small House Assisted Living and Adult Day Program Combined Models

Small House Recommendation

As described in a recent article published by AARP (American Association of Retired Persons; Abrahms, 2020, February 12), and demonstrated for many years, small house approaches to care and support are not only possible, but are often preferable in terms of both quality and cost to large-scale assisted living.

> Residential care homes can provide the same basic services as large assisted living centers. Staffers help with personal needs, including bathing, dressing, eating, medication management, toileting — and emergencies.
>
> Typically, there are five to 10 people (but maybe as many as 20, depending on state regulations), who live in a home, which is licensed in every state using the same requirements as any other assisted living community. Staff who directly care for residents must have mandated annual training. Residents must have care plans. Employees are required to keep records on them, too.
>
> The local market determines prices but expect to pay less than a larger assisted living community, in part because of fewer amenities such as onsite beauty salons or art classes. Monthly charges are either paid out of your own pocket, through long-term care insurance, or if the home has a Medicaid contract, via government financing (Abrahms, 2020, February 12).

Table 6.1: Advantages and Disadvantages of Small House Living

Advantages	Disadvantages
More personalized care and continuity of care is possible, unlike in larger assisted living communities. With fewer older adults, staff can more easily detect physical and emotional changes in residents.	Fewer opportunities to discover compatible friends, participate in activities or use amenities (than can be found in a larger assisted living community) can make for less stimulation.
The staff-to-client ratio is often higher than in large assisted living complexes or skilled nursing.	Potentially less privacy. Residents have a room and shared spaces rather than their own apartments.
Meals are home cooked and can be customized.	No physician and rarely an onsite nurse. However, a home sometimes contracts with a medical professional or practice to make house visits. If complex medical tasks are necessary, the resident must bring in help or move to a nursing home.
The homelike, smaller environment may be a better fit for those with dementia and could help any resident form friendships with fellow residents and staff more easily.	-
The presence of other residents encourages socialization, and can lessen loneliness and enhance well-being.	-
A smaller monthly fee generally is the result of fewer amenities.	-

Green House Project Example

One innovative small house model that initially launched as an alternative form of skilled nursing home, but has adapted to include assisted living, is the Green House Project (Project, 2020).

> Green House® (GHP) is a not-for-profit organization founded on the belief that everyone has the right to age with dignity. GHP seeks to protect this right by destigmatizing aging and humanizing care for all people through the creation of radically non-institutional eldercare environments that empower the lives of people who live and work in them.
>
> Central to GHP's mission is the development of Green House homes—small-scale, self-contained, and self-sufficient nursing home and assisted living settings that put elders at the center. Each home includes private rooms and bathrooms for each elder, a living room with a fireplace, and outdoor spaces that are easy to access and navigate.
>
> Since the Green House model's inception some 17 years ago, 300 homes have been built in 32 states, with more on the way. Based on an organizational structure that is radically different from other settings, the operation of each home is guided by the Green House core values of Real Home, Meaningful Life, and Empowered Staff.
>
> A living room with a fireplace, together with an open kitchen, where all meals are prepared and served at a communal dining table, completes the home. Dedicated public, private, and support spaces that are small and easily navigable support the sharing of lives and foster community engagement.
>
> [For those interested in developing a Green House Home], GHP offers comprehensive consulting, education, and resources based on many years of experience and knowledge. Following are some of the services offered throughout the development process:
>
> - Financial Feasibility Review
> - Design and Architectural Review
> - Project Management Planning
> - Regulatory Education and State-Specific Analyses
> - Operational Implementation
> - Leadership Development
> - Comprehensive Staff Education (Project, 2020)

Although each Green House is unique, given the needs of its own community, organization, and elders, the following are photographs of existing homes that offer a sense of the small house and homelike feel of a Green House and depict key design features, including an open kitchen, communal living and dining areas, and private rooms.

Images 6-1 through 6-4. Green House Design Features

Photo source: https://www.thegreenhouseproject.org/about/tour-green-house

Photo source: https://www.thegreenhouseproject.org/about/tour-green-house

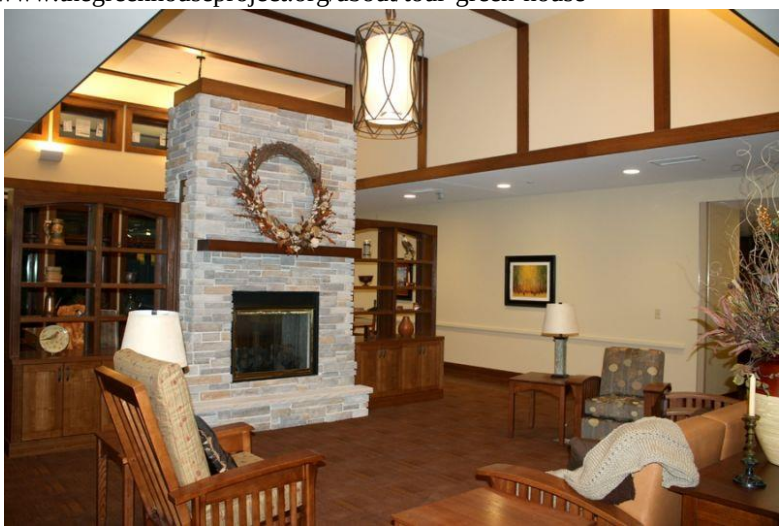

Photo source: https://www.thegreenhouseproject.org/about/tour-green-house

Photo source: http://stelizabethcommunity.org/Our-Communities/Greenhouse-Homes

Examples of Combined Licensing Approaches from Other States

In developing an assisted living/AD program combined model, one consideration is the implication of creating a license to support the model. The following examples are the licensing approaches taken by two states that have done work on this combined license model (Florida and Tennessee).

Florida

Since 2013, Florida has employed the Statewide Medicaid Managed Care program (SMMC) and has eliminated the traditional HCBS Medicaid Waivers. The SMMC contains three subsets: Long-term Care (LTC), Managed Medical Assistance (MMA), and Dental (*Florida statewide Medicaid Managed Care Long-Term Care program (SMMC LTC)*, 2020, August 23).

The SMMC-LTC is also referred to as a "nursing home diversion program" and functions similarly to a health maintenance organization, however it is intended for LTC-related services only, and not medical care. Under SMMC-LTC, both care and LTSS are provided to financially and medically eligible persons. Benefits include, but are not limited to, personal care assistance, home-delivered meals, and respite care. Some of the services, such as attendant nursing care, can be participant-directed, meaning that participants can hire the caregiver of their choice, including relatives (*Assistive care services*, 2020). Below is brief description of the licensure and funding for AD programs and assisted livings in Florida.

Licensure for AD care:

- The Florida Agency for Health Care Administration, Division of Quality Assurance, Health Facility Regulation is the licensing agency for all adult day care centers. [Note: Florida uses the title "adult day care centers," and it is retained here. Other parts of this report use the term "adult day programs."]

- The above referenced Agency along with the Department of Elderly Affairs adopts and implements the rules for AD care.
- AD care centers can be freestanding. They can also be part of nursing homes, assisted living facilities (ALFs), or hospitals. In the latter cases, if the facilities are already licensed, then they are exempt from having to obtain specific AD care licensure.
- AD care centers can also be Adult Day Health Care (ADHC) facilities, which do not require a separate license. However, to advertise as an ADHC, the facilities must be properly staffed and offer health-related services, such as nursing and rehabilitative therapies (O'Keeffe et al., 2014).

Licensure for ALFs:

- The Bureau of Health Facility Regulation is the licensing agency for ALFs.
- ALFs are granted "standard" licenses when they provide routine personal care.
- ALFs can be granted "specialty" licenses that have more rigorous requirements (e.g., limited mental health services; Carder et al., 2015).

ALF Funding:

- Florida replaced previous Medicaid waivers with a statewide 1915(b)(c) MLTC program. Facilities with standard licenses and private or semi-private rooms are eligible (Carder et al., 2015).
- Florida also has a Medicaid State Plan program, called the Assistive Care Service which reimburses for the costs of health-related support and daily needs support (*Assistive care services*, 2020).
- Regarding room and board, these rates are negotiated by the provider and the MLTC plan on behalf of waiver participants (Carder et al., 2015).
- Florida Department of Children and Families also provides an Optional State Supplementation (OSS) for assisted living. Residents of ALFs and AFCHs are eligible if they receive federal SSI benefits or are determined by the Department of Children and Family Services to be eligible for the OSS benefit (Carder et al., 2015).
- The OSS program provides financial assistance to low-income seniors that cannot live independently and require residential care. This care may be provided in an adult family care home (traditionally what most people think of as an adult foster care home), an assisted living residence, or a mental health treatment center. Assistance comes in the form of a cash payment made directly to the individual that requires care or their legal guardian. It is intended for the room and board portion of the fees charged by the residence. Other assistance is available for care services. However, "individuals receiving this benefit cannot concurrently be receiving Medicaid assistance for assisted living" (*Florida optional state supplementation (OSS) for assisted living*, 2020, June).
- Supplemental payments can be made on behalf of a resident by a family member or other third-party payer. These payments do not count as income for the resident, and thus are not counted when determining resident eligibility for OSS benefits (Carder et al., 2015).

Tennessee

Tennessee requires any AD center program which cares for five[1] or more participants for more than three hours per day, but less than 24 hours per day, to be licensed by the Tennessee Department of Human Services (TN DHS; O'Keeffe et al., 2014; Adult Day Services Standards, 2018; tn.gov, 2020). Licensing of ADCs ensures the protection of participants in ADCs which are designed to maintain or restore each adult participant's capacity to care for themselves (Adult Day Services Standards, 2018, May).

According to the TN DHS, an AD center can become licensed by applying directly through the TN DHS, or they can be indirectly licensed through another agency with which the AD center is "co-located" (O'Keeffe et al., 2014, pp. 8-9). For a standalone AD center to obtain a direct licensure, applicants must complete 13 steps toward licensure (tn.gov, 2020). These steps include attending an intake meeting with a local DHS licensing office, completing a pre-orientation course for new Directors, obtaining all appropriate documentation and permits, assigning a program evaluator to the AD center for an inspection of the program, and clearing all relevant background checks through the TN DHS (tn.gov, 2020).

An AD center in Tennessee can be licensed in two ways: (1) direct licensure through DHS, or (2) licensed through another agency of state government such that the Commissioner of the DHS determines the provisions afforded by the other state agency's licensing are sufficient to regulate the center's AD center program, thus making direct licensure through DHS unnecessary (Adult Day Services Standards, 2018). This "combined" license streamlines the licensing process to make AD centers available to the community while still being provisioned under the guidelines set forth by the licensing requirements.

A direct licensure for a standalone AD center seems to work similarly to other licensing procedures (e.g., application, inspection, etc.). For a co-located AD center, a combined license streamlines the licensing process, such that the Commissioner of the TN DHS can deem a direct licensing process as unnecessary as long as the AD center adheres to the licensing and provisions of the co-located agency or facility.

Tiny Home Villages or Pocket Neighborhoods

A third potential model is to bring together "tiny homes" or stand-alone individual small units arranged into a community, "village," or "pocket neighborhood." Combining this village of tiny homes with a centrally located community center that includes an AD Program would create a single, scalable campus with opportunities for the combined assisted living/AD/respite model discussed in this report.

[1] Previous state law required licensing for any ADC with ten or more participants, however, this was lowered to five effective July 1, 2017 (https://www.tn.gov/humanservices/news/2017/6/28/tdhs-press-release-new-adult-day-care-licensing-requirement.html). This policy update was published in 2017 by Devin Stone (615-313-5786).

One example of a "tiny home" model is the groundbreaking "Village of Hope." Simply put, the Village of Hope aims to create something M.A.G.I.C. (Multi-Ability, Multi-Generational, Inclusive, Co-Living) in rural Pennsylvania. Still under development in Clearfield County, the Village of Hope is a housing innovation developed by Mature Resources Foundation, a 501(c)(3) charitable non-profit organization. Its Master Plan describes the vision they aim to create:

> The Village of Hope transforms a decommissioned school property and its surrounding 23-acre pastoral setting into a model community, designed in partnership with its residents, to be open to Pennsylvanians of all incomes and inclusive of older adults living with dementia and other cognitive changes. The Village will be a purposeful living community where neighbors help neighbors who are living with cognitive changes… The co-living model, where people with special needs live together with the general public of all ages and capabilities, is an apt model for today and like all great societies of the past, maintains a balanced resiliency, a humanity of diversity able to change with the times.
>
> The Village of Hope envisions a community where all members, particularly people experiencing dementia, thrive by connecting to the beauty and creativity within themselves, within other people, and from being in nature. To achieve this vision at the Village of Hope, [its developers] tap cutting-edge technologies, world class design and a deep respect for local community and creative engagement…
>
> The Village of Hope will serve not only its residents but also the greater community now and long into the future. The former elementary school will be transformed into a Village Hall to provide much-needed community resources such as a health clinic, grocery store, café/restaurant and community arts and theater spaces that will be open to the community...
>
> At the Village of Hope, all community members will benefit from the opportunity of having a [tiny] home of their own, belonging to a community that includes people of all ages, feeling secure without loss of opportunity to grow; growing, changing and engaging in creative expression and civics, living in a community where one can age in place, giving to others and receiving form others, while reconnecting to nature and the living world (Hope).

The developers also share their vision for a MAGIC community:

> The Village of Hope differs from other kinds of places where elders live because it rejects the idea that older people need to be segregated from the rest of society. We use the term 'MAGIC' to describe our approach to life and living. MAGIC stands for Multi-Ability, multi-Generational, Inclusive Co-Living. A MAGIC community is committed to the idea that our differences are a source of strength, not a cause of weakness. This is an ancient idea. The founders of our country recognized its importance when they chose our nation's motto, "E Pluribus Unum," out of many—one.

In a MAGIC community, people are not sorted and segregated into specific buildings based on physical or cognitive abilities. Everyone is entitled to equal rights and freedom from discrimination, no matter their age or ability. Americans have long understood that differences can create strength and resiliency. The Village of Hope applies this truth to life in a village. As a MAGIC community, the Village of Hope blends "home" and "together" to create a whole that is greater than the sum of its parts.

Image 6-5. The Village of Hope in Clearfield County, PA

Photo source: https://www.ourvillageofhope.com/

Scalable in its design, core to the Village of Hope model is a tiny- or modular-home concept developed by Dr. Bill Thomas called the "Minka," which is based on research into human complexity and decades of input from some of our culture's most vulnerable and valuable people. In brief, Minkas are 3D-printed, energy-efficient, low-waste, accessible, affordable, easy-to-maintain dwellings that leverage new, voice-activated technologies to support independence, some of which are linked to e-commerce capabilities that "can help people live where they want to live for as long as they wish" (p. 47). In the Village of Hope model, Minkas are arranged in pocket neighborhoods (a cluster of homes), built around a Village Hall (community center) that support reciprocal, intergenerational relationships and community, creating what Dr. Thomas calls a "triple alloy" of architecture, technology, and culture. The Village Hall provides a centralized space for "food and fellowship, art and music, and health and wellness" (Hope, n.d.). It could also provide a space for an adult day program.

Image 6-6. Minka tiny home post-and-beam system with customizable infill panels

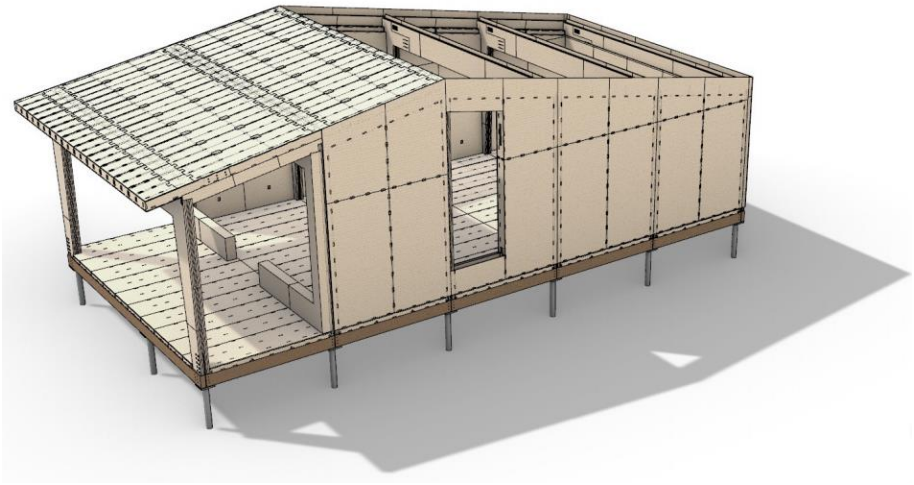

Photo source: https://www.ourvillageofhope.com/the-village-of-hope

Image 6-7. Minka's accessible interior

Photo source: https://www.ourvillageofhope.com/the-village-of-hope

The Village of Hope is pioneering a social citizenship model for housing called "independent living together," based on the belief that all people, including people living with dementia, need opportunities to grow. The developers explain:

> For more than six decades the senior housing industry has created an alphabet soup of Independent Living, Assisted Living, Memory Care and Skilled Nursing housing options focused on attempts to mitigate the negative aspects of aging. Every system, unit, policy, staffing and operations model was created with the belief that old people, especially those with dementia, need to be kept safe, clean, dry, fed, medicated and occasionally entertained, while we wait for them to die.

> Independent Living Together means building relationships instead of walls to help people feel connected, rather than locked up. This approach has been accepted because no one expected elders to grow–often not even the elders themselves! Growth is risky and, in a culture based on safety, growth is often strongly discouraged. Much of the distress and problematic behaviors associated with dementia is not so much a function of brain disease as it is our inability to create communities that treat people's needs as rights, connects them as valued members, and supports their agency as citizens.
> While safety and comfort are always important considerations, the Village of Hope sees 'security' as more than physical safety – it also means emotional and psychological security, which requires building relationships based on familiarity, trust, respect, dignity, privacy and balance. Building walls or locking doors to 'protect' people living with dementia might help us feel better, but it can actually decrease the sense of security felt by the person being confined (Power, 2014).

According to Kathy Gillespie (Hope), Clearfield County Area Agency on Aging, "Necessity is the mother of invention." She explains that 17% of the population in Clearfield County is 65 or older, and a large percentage of is population is living with dementia. Though there are a number of high-rise buildings in the area for older adults, outside of institutional living, there are virtually no memory support programs available to people living with dementia. Furthermore, there are some older adults who have children and teenage family members living with them, which also rules out institutional options that do not accept dependent children. Through the Village of Hope, Gillespie and her partners aim to build a new community that brings multiple generations together; a place where neighbors can become attuned to and help meet each other's needs; an affordable, community-based option to mitigate institutionalization. Of course, the success of this innovative model, to a large extent, will be tied to the education Village members receive about how to support the needs of people living with dementia and other cognitive issues. To create places where people living with dementia can thrive, Dr. Bill Thomas says,

> We must build communities that embrace people of different ages and abilities, rather than putting them in institutions just because they are frail or forgetful… I spent decades fighting to make the long-term care system better and created innovative alternatives such as the Green House… But I've also learned that people want real communities, not facilities (Byers, 2018, November).

In addition to building the Village of Hope, the Clearfield County Area Agency on Aging also provides two other housing options to help older adults age in community with choice: Elder Cottage and Shared Housing. An Elder Cottage is a small, manufactured residence that is temporarily placed on the property of an older adult's loved one, allowing that person independence with the support of family or friends nearby. Shared Housing joins two to three older adults in one home to share expenses, gain emotional and social support, and eliminate home maintenance. Each person has their own room and shares the common areas of the home. These are also models for further consideration in non-urban Nevada.

Rural PACE (Program of All-Inclusive Care for the Elderly)

Launched in San Francisco in the late 1970s, the Program of All-Inclusive Care for the Elderly (PACE) was institutionalized as a permanent provider type under Medicare and Medicaid in 1997, with the final PACE regulations published in 2006. This dually funded model has been well-tested as an approach to supporting all relevant health and social service needs for high-risk, low-income elders. The PACE model is very complex in terms of the service delivery, and requires substantial funding from both Medicare and Medicaid, but the joint-funding model has been shown to be financially viable under certain conditions. In recent years, much attention has been given to exploring the viability and functioning of the PACE model as an option for rural communities, including a report from the U.S. Health and Human Services Agency to Congress in 2011 evaluating the Rural PACE Provider Grant Program (Sebelius, 2011).

The following is a description of PACE and its use in rural communities, offered as a "toolkit" on the Rural Health Information Hub website:

> The Program of All-Inclusive Care for the Elderly (PACE) model is designed to integrate care for frail older adults who are eligible for both Medicaid and Medicare (dual-eligible individuals). This population of dual-eligible individuals is more likely to have physical, mental, and cognitive conditions, and therefore, benefit from integrated care. Some PACE programs are targeted toward all older adults who meet the minimal acuity levels required for nursing home care.
>
> PACE services are provided by interdisciplinary teams, which are responsible for coordination of 24-hour care delivery. PACE provides all Medicare and Medicaid benefits, which [may] include:
>
> - Adult day care
> - Meals
> - Social services
> - Transportation
> - Primary care
> - Nursing home care
> - Home care

This integrated model of care aims to improve the quality of life of older adults with chronic care needs by providing services in the community when possible. In rural communities, PACE programs are located either in a larger healthcare system or in a local agency or organization.

Examples of Rural PACE Programs:

- Senior CommUnity Care is a PACE program that serves older adults in rural Delta and Montrose counties in Colorado. Senior CommUnity Care addresses all medical and social needs of enrolled patients, including transportation services, meals, and nursing, dental, and mental healthcare, among many other services.

- Northland PACE, which serves older adults in Dickinson and Bismarck, North Dakota, coordinates healthcare and home care services for enrolled patients through care teams. This team includes a range of providers, including physicians, nurses, social workers, licensed therapy professionals, and home care attendants.

Considerations for Implementation

The high start-up costs for designing and implementing PACE means rural health networks may need to look for additional funds. As PACE programs typically enroll patients based on service area, rural PACE programs may find it difficult to maintain sufficient enrollment, and may also have challenges building the necessary workforce of providers to fulfill participant needs. In addition, rural communities should be aware that program enrollees may only see physicians that participate in PACE. PACE program leaders should communicate with enrollees about their choices within the PACE program to ensure that patients still feel in control of their healthcare management. Program leaders can also consider applying for a CMS waiver to allow enrollees to use community physicians in addition to PACE providers. The National PACE Association has a toolkit for states with strategies for incorporating PACE into state integrated care initiatives and information to help communities develop their own PACE program (*Program for All-Inclusive Care for the Elderly (PACE)*, 2020).

For a final note on the potential for a rural PACE program, it is worth noting that establishing and supporting PACE is already addressed in the Nevada Revised Statute (NRS), though no PACE program has been established in the state thus far:

> **NRS 427A.250 Aging and Disability Services Division to establish and administer program; goals of program; regulations.**
> 1. The Division shall establish and administer a program to provide the community-based services necessary to enable a frail elderly person to remain in his or her own home or with his or her family and avoid placement in a facility for long-term care. The program may be carried out solely by the Division or in cooperation with another state agency, the Federal Government or any local government.
> 2. Any such program established by the Division pursuant to this section may have as its goals to:
> (a) Foster independence and self-reliance and maintain the dignity of frail elderly persons and allow them, to the fullest extent possible, to be an integral part of their families and communities;
> (b) Establish in communities throughout the state community-based services which will enable frail elderly persons to remain in their homes;
> (c) Ensure that any frail elderly person who has been, or is at risk of being, placed inappropriately in a facility for long-term care is able to receive the services which will enable the person to stay in his or her home; and
> (d) Promote participation by any appropriate public or private agency, organization or institution in the development of services that offer options to frail elderly persons and foster independent living.
> 3. The Division shall adopt regulations necessary to establish and administer the program established pursuant to this section. (Added to NRS by 1987, 974)

NRS 427A.255 Establishment and administration of program of all-inclusive care for the elderly.

1. In addition to any program established pursuant to NRS 427A.250, the Division may establish and administer a program of all-inclusive care for the elderly, commonly known as a PACE program. The program may be carried out solely by the Division or in cooperation with another state agency, the Federal Government or any local government.

2. A program established pursuant to subsection 1:

(a) Must comply with the provisions of 42 U.S.C. § 1396u-4, 42 C.F.R. Part 460 and any other federal regulations governing programs of all-inclusive care for the elderly; and

(b) May be established in any county in this State.

3. The Division may adopt regulations necessary to establish and administer the program.

4. If the Division wishes to establish a program pursuant to subsection 1, the Director shall submit to the Secretary of Health and Human Services any amendment to the State Plan for Medicaid necessary to enable the Division to establish the program and to revise the program from time to time. (Added to NRS by 2009, 1255)

Concluding Thoughts on Service Models

As evidenced in this chapter, there are several different models to consider in terms of ways to combine services to achieve a more comprehensive, integrated approach to elder care and support in rural communities. These include:

1) Working to expand affordable housing options while integrating support services onsite;
2) Exploring and developing combined license assisted living and AD;
3) Creating pocket neighborhoods of "tiny houses" with AD community centers; and
4) Launching a rural PACE program to comprehensively meet the needs of dual-eligible (Medicare/Medicaid) elders.

Each of these possible approaches are worth consideration, and each has its drawbacks and barriers (see Chapter 5). As mentioned earlier, the key barriers are shortages of available staff to deliver services, lack of financial resources and ability to pay, regulatory concerns, stigma related to aging services, particularly for people living with dementia, and a widespread desire to "stay in one's own home." For these reasons, the likelihood of successfully leveraging existing or building new assisted living communities while combining them with AD services and respite in rural communities appears low. However, one viable option could be to dramatically enhance the availability of high-quality in-home respite as a straight-forward approach that is directly aligned with the preferences of elders. Another option is to invest more strongly in county-run AD programs to serve as a "drop-off" respite opportunity. Drop-off respite opportunities are support goal of enabling people to stay in their homes by supporting informal caregivers and providing socially meaningful engagement for care recipients. If regulatory alignment between the multiple services can be achieved, investors or government funding sources are available to build new integrated housing/support campuses, recruitment and training of care staff is successful and sufficient, and awareness campaigns can reduce stigma so people are more willing to move to an elder care campus, then the potential models outlined in this chapter offer options for the combined service model suggested.

CHAPTER 7: FEASIBILITY ANALYSIS

KEY POINTS

- Analysis of data on non-metropolitan counties in the eight Mountain States indicates that the probability that a non-urban county will have at least one ALF is significantly affected by the presence of a town with at least 2500 people. Counties that do not have such a town are significantly less likely to have an ALF than counties with similar populations that do include a town of this size.
- Of counties with ALFs, all but one (Pershing) have predicted probabilities ranging from 0.64 to 0.73. Of counties that do not have an ALF, all but one (Eureka) have predicted probabilities less than or equal to 0.54. This suggests that Eureka's current population size and distribution pose less of a challenge than that posed by population characteristics of the other non-ALF counties.
- County-level availability of ALF beds is positively associated with the number of adjusted potential ALF residents in the county.
    - Seven counties in Nevada are estimated to have 40 or fewer adjusted potential ALF residents. Of these, six do not have an ALF while the seventh has 10 ALF beds.
    - Two counties are estimated to have 40-99 adjusted potential ALF residents. Of these, one does not have an ALF, while one has 10 ALF beds.
    - Each of the remaining eight counties has at least 100 adjusted potential ALF residents, and all of these counties have at least 57 ALF beds.

  The computation of adjusted potential ALF residents in each county is based on the assumption that utilization patterns in each non-urban county would be the same as utilization patterns in the U.S., if facilities were available within the county.
- A spreadsheet accompanies this chapter ("*Excel template_ROM estimates to support early-stage financial analysis.xlsx*"). This interactive spreadsheet provides a tool to facilitate preliminary analyses of proposed projects. The tool can also be used by project planners and policy-makers to generate Rough-Order-of-Magnitude (ROM) estimates of Net Operating Income, Replacement Reserves and Debt Service, to assess the sensitivity of financial projections to underlying assumptions, and to consider impacts of business risk. For more information on this spreadsheet, contact Tom Harris (harris@unr.edu) at the Center for Economic Development, University of Nevada Reno.
- Under the cost and revenue assumptions used to construct the example analysis, small ALFs with 10 beds may not generate enough revenue to cover operating expenses. An ALF with at least 20 beds would generate sufficient Net Operating Income (NOI) to fund Replacement and Debt Service at the average levels indicated in the 2019 State of Senior Housing Cost Report (American Seniors Housing Association [ASHA], 2019). Under the assumptions used to create the example, facilities with at least 20 beds may be sustainable. However, seven of Nevada's non-urban counties have fewer than 40 adjusted potential ALF residents. A 20-bed ALF may not be realistic in some of these counties.
- In counties with small numbers of adjusted potential ALF residents, developing a strategy for sustainable ALF will require boosting per-resident monthly revenues and/or reducing per-resident monthly costs. A combined license that permitted an ALF/AD/RC to share the

resources that generate fixed costs could be one step. It may also be necessary to increase monthly fees (although this must be considered carefully due to the potential impact on the number of residents). Collaborating with a neighboring county to increase the number of adjusted potential residents and AD/RC participants could be a useful step. Obtaining funding to acquire, renovate or purchase a building from a source that does not rely on residents' monthly fees could also contribute to facility sustainability.

This chapter includes two sections. The first section addresses the fact that seven of Nevada's non-urban counties do not have an ALF. We analyze data on non-metropolitan counties in the eight Mountain states to identify characteristics of counties that distinguish counties with ALFs from counties that do-not have an ALF. The second section focuses on Net Operating Income. We describe statistical methods used to estimate numbers of potential older-adult ALF residents, and we use the results of this analysis to estimate potential revenues. We also describe assumptions and data sources for estimating fixed and variable operating costs. The information presented in this section informs the accompanying Excel spreadsheet ("*Excel template_ROM estimates to support early-stage financial analysis.xlsx*"), which is designed to facilitate early-stage financial analysis of proposed projects.

Statistical Analysis of probability that a specific county will have at least one ALF

The statistical analysis addresses the question: What county characteristics affect the probability that an ALF operates in the county? To address this question, we consider the business decision faced by an organization considering opening and operating an ALF. This decision hinges on the question of whether the revenues will be sufficient to cover the costs.

- Anticipated revenues reflect estimated numbers of potential residents and payment rates for these residents. County populations, and the distributions of those populations, vary widely across counties. In addition, anticipated revenues may be affected by state-specific policies such as Medicaid reimbursement rates, numbers of Medicaid "slots", or the impacts of state regulations on the availability of substitutes.
- Fixed and variable cost structure are not expected to vary dramatically across counties unless low numbers of expected residents in some counties make it impossible for the ALF to capture economies of scale. However, costs may differ across states due to differences in state regulatory requirements.

Therefore, our analysis utilizes county-level variables that capture population size, the extent to which the population is clustered into towns, and whether the county is adjacent to a metropolitan or micropolitan county, along with binary variables identifying the state in which each county is located. These binary variables allow us to test whether inter-state differences in Medicaid policies or state regulations play a significant role in determining whether a county has an ALF.

Data and Variables

The analysis utilizes data from the eight states included in the U.S. Census Mountain region. These states include substantial rural areas, hence they are useful comparison states for NV. The Mountain states, as defined by the U.S. Census, include AZ, CO, ID, MT, NV, NM, UT, and

WY. We utilize data on the 215 counties in these states that are not classified as metropolitan counties. Of these, 58 counties do not have any Assisted Living Facilities.

The dependent variable in this analysis is a binary variable that indicates whether each county has at least one ALF within its borders. Data on the number of facilities in each county was provided by state health administrators. We use this variable as the dependent variable in our analysis. We use the independent variables defined below to identify county characteristics associated with the presence or absence of an ALF in a county. See Appendix Table A.7-1 for the additional detail on these variables in Nevada's counties.

The U.S. Office of Management and Budget (OMB) categorizes counties as non-metropolitan, micropolitan or non-core counties. All counties included in our analysis are delineated by OMB as either micropolitan or non-core counties, as detailed in the June 28, 2010 Federal Register[2]. OMB delineates counties as core-based micropolitan counties if they include at least one urban cluster that has a population of at least 10,000, but less than 50,000.

The classification system also indicates whether each county is adjacent to either a Metropolitan or Micropolitan county. A county is delineated as "Adjacent" to either a Metropolitan or Micropolitan county if it is physically adjacent to that county, and at least 2% of its employed residents commute to the Metropolitan or Micropolitan county for employment.

The U.S. Department of Agriculture (USDA) Economic Research Service utilizes this system to assign an Urban Influence Code (UIC) to each county (see Table 7.1).

[2] Federal Register: https://www.govinfo.gov/content/pkg/FR-2010-06-28/pdf/2010-15605.pdf See also: https://obamawhitehouse.archives.gov/sites/default/files/omb/bulletins/2013/b-13-01.pdf

Table 7.1: Urban Influence Code Descriptions	
Code	Description
1	In large metro area of 1+ million residents
2	In small metro area of less than 1 million residents
3	Micropolitan area adjacent to large metro area
4	Noncore adjacent to large metro area
5	Micropolitan area adjacent to small metro area
6	Noncore adjacent to small metro area and contains a town of at least 2,500 residents
7	Noncore adjacent to small metro area and does not contain a town of at least 2,500 residents
8	Micropolitan area not adjacent to a metro area
9	Noncore adjacent to micro area and contains a town of at least 2,500 residents
10	Noncore adjacent to micro area and does not contain a town of at least 2,500 residents
11	Noncore not adjacent to metro or micro area and contains a town of at least 2,500 residents
12	Noncore not adjacent to metro or micro area and does not contain a town of at least 2,500 residents

This system focuses on three county characteristics that are important determinants of economic activity in the county: whether the county has a Large or Small Metropolitan core, a Micropolitan core, or no core, whether the county is adjacent to a Large or Small Metropolitan or Micropolitan area, and (for non-core counties) whether the county has a town with at least 2500 residents.

- UIC codes 1 and 2 are assigned to Large and Small Metropolitan counties, which are not included in this analysis.
- Micropolitan counties are assigned UIC codes 3, 5, or 8, depending on whether they are adjacent to Large or Small Metro areas (codes 3 and 5), or not adjacent to a Metropolitan area (code 8).
- Non-Core areas are assigned codes 6, 7 or 9-12 depending on whether they are adjacent to a Small or Large Metropolitan area (codes 4, 6 and 7) or Micropolitan area (codes 9 and 10), or not adjacent to one of these areas (codes 11 and 12). Within each of these categories, the UIC indicates whether the county includes a town[3] with at least 2500 residents.

Table 7.2 summarizes the classification system:

[3] A town refers to an incorporated city or town, or a Census Designated Place, which is an entity that has no legal definition. USDA Documentation for Urban Influence Codes: https://www.ers.usda.gov/data-products/urban-influence-codes/documentation/

Table 7.2: UIC Codes for Non-Core Counties				
Description	Not Adjacent to Metro or Micro County	Adjacent to Micro County	Adjacent to Small Metro County	Adjacent to Large Metro County
Non-Core County does not include town with >=2500 residents	12	10	7	-
Non-Core County includes town with >= 2500 residents	11	9	6	4

We define two rank-order variables to measure the size of the largest population cluster in each county, and to indicate whether each county is linked to a metropolitan or micropolitan county by a common border and at least 2% of employed county residents commuting to work in the larger county.

- The first variable, *ADJACENT*, indicates whether each county in the Mountain states is adjacent to a large or small metropolitan county or a micropolitan county. This variable is equal to:
    - 0 if the county is not adjacent to a micropolitan or metropolitan county (UIC=8, UIC=11, or UIC=12)
    - 1 if the county is adjacent to a micropolitan county (UIC=9 or UIC=10),
    - 2 if the county is adjacent to a small metropolitan county (UIC=5, UIC=6 or UIC=7), or
    - 3 if the county is adjacent to a large metropolitan county (UIC=3 or UIC=4).
- The second variable *CORE* indicates whether each county is a micropolitan county or includes a town with at least 2500 people. This variable is equal to:
    - 0 if the county is classified as a non-core area that does not have a town with at least 2500 residents (UIC=7, UIC=10, UIC=12),
    - 1 if the county is classified as a non-core area that does have a town with at least 2500 residents (UIC=4, UIC=6, UIC=9, UIC=11),
    - 2 if the county is classified as a micropolitan area (UIC=3, UIC=5, UIC=8).

We estimate an Ordinary Least Squares (OLS) regression with a binary dependent variable that indicates whether each county has an ALF. The dependent variables include Adjacent and Adjacent-squared, Core and Core-squared, and a set of binary variables indicating the state in which each county is located. Table 7.2 reports the regression results. Counties with higher values for the Core variable are significantly more likely to have at least one ALF operating in the county. The sign of the Core-squared variable suggests that the impact of moving from Core=0 to Core=1 (i.e. moving from not having town with at least 2500 residents to having such a town) is greater than the impact of moving from Core=1 to Core=2 (i.e. moving from being a non-core area with a 2500-resident town to being a micropolitan area).

The results also indicate that counties with comparable values of the variables *Adjacent* and *Core* are less likely to have at least one ALF if they are located Nevada, than in ID, MT or UT. Interstate differences that could contribute to different likelihoods of having an ALF in micropolitan or non-core counties include differences in Medicaid eligibility and/or payment policies, differences in state regulatory infrastructures, differences in the availability and prices

of substitutes for ALFs, or differences in population densities that are not captured by the *Adjacent* and *Core* variables.

Table 7.3 Impacts of County Characteristics on the Probability that at Least one ALF Operates in the County

Independent Variable	OLS Regression Coefficient	P-value
ADJACENT	0.128	-0.189
ADJACENT-SQUARED	-0.0412	-0.323
CORE	0.396***	-0.001
CORE-SQUARED	-0.0679	-0.242
AZ	0.101	-0.59
CO	0.248	-0.053
ID	0.352**	-0.008
NM	0.182	-0.189
MT	0.382**	-0.003
UT	0.509***	0
WY	0.271	-0.061
CONSTANT	0.12	-0.347
N	215	-
R-square	0.252	-

Dependent variable is binary variable equal to 0 if no ALF operates in the County, and 1 if the county has at least one ALF
County level data for non-metropolitan counties in the 8 Mountain states. Variable definitions based on the USDA ERS Urban Influence Codes.
One-tailed significance tests. *** p<=0.001, ** p<=0.00=1, ** p<0.05

Table 7.4 reports the predicted probabilities of having at least one ALF for non-urban Nevada counties, based on the regression results detailed in Table 7.3. These predicted probabilities account for each county's Adjacent and Core characteristics, and they also account for the fact that Nevada counties have a lower likelihood of having at least one ALF than counties in other states with comparable Adjacent and Core values. Efforts to develop an ALF in counties with low predicted probabilities of having at least one ALF will face a geographic hurdle. Of counties with ALFs, all but one (Pershing) have predicted probabilities ranging from 0.64 to 0.73. Of counties that do not have an ALF, all but one (Eureka) have predicted probabilities less than or equal to 0.54. This suggests that Eureka's current population size and distribution pose less of a challenge than that posed by population characteristics of the other non-ALF counties. Carson City and Storey County are not included in Table 7.4, because they are classified as small Metropolitan Counties.

Table 7.4: Predicted Probability of at Least One Operating ALF in County Non-urban Nevada counties	
County	Predicted Probability
Churchill County, Nevada	0.73
Douglas County, Nevada	0.65
Elko County, Nevada	0.64
Esmeralda County, Nevada	0.21
Eureka County, Nevada	0.64
Humboldt County, Nevada	0.64
Lander County, Nevada	0.54
Lincoln County, Nevada	0.46
Lyon County, Nevada	0.73
Mineral County, Nevada	0.45
Nye County, Nevada	0.65
Pershing County, Nevada	0.21
White Pine County, Nevada	0.45

Financial Analysis

The financial analysis provides Rough-Order-of-Magnitude (ROM) estimates for users to identify potential projects that should be assessed in more detail. Annual estimates are provided as "starting points" for operating an ALF. Users can adjust these estimates as appropriate.

Projected Revenues

Revenue estimates are constructed from two components: the estimated number of potential older-adult residents and average payment per resident per day.

Our strategy for estimating numbers of older adults who would potentially utilize an ALF in each county combines the results of the regression of the National Health and Aging Trends Survey (NHATS) data (see Chapter 4) with ACS data on county-level demographic characteristics (see Table 4.1). The regression analysis of the NHATS data estimates the nationwide relationship between numbers of older adults and numbers of ALF residents. We focus on potential utilization by older adults because NSLTCP data indicates that 93% of ALF residents are in this age category (see Table 4.6a).

We apply this regression result to data on the number of older adults in each county to estimate the number of older adults who would potentially utilize an ALF if county-level ALF utilization patterns are the same as utilization patterns in the U.S. We adjust these numbers downward to account for one known factor that is likely to cause utilization in Nevada to be lower than nationwide utilization: Medicaid is a payer for 17% of ALF clients in the U.S., but Medicaid is a payer for only 9% of ALF clients in Nevada. Table 7.5 reports the estimates of potential utilization with the counties in alphabetical order, and Table 7.6 reports the same information with the counties grouped by magnitudes of potential utilization.

Table 7.6 also reports county-level differences in the number of adjusted potential ALF residents and the number of existing ALF beds. These differences represent the number of potential unserved ALF clients.

These numbers should be viewed as a starting point for financial analysis. The number of people who will actually utilize an ALF may be sensitive to ALF monthly charges, the distribution of income among the county's older adults, Medicaid reimbursement rates for ALFs, and the availability of substitutes such as Personal Care services delivered to residents in subsidized housing units. Counties developing financial analysis of proposed projects will adjust the numbers to include utilization by adults age 18-64 with physical disabilities. The adjustment of expected utilization by younger and older adults will depend on the types of services to be offered in the ALF, and by the ALF's licensure endorsements.

Table 7.5: Numbers of Older Adults Potentially Residing in Assisted Living Facilities if the Utilization Patterns in Nevada Counties Matched Those of the U.S.		
County	Number of older adults reporting assistance with IADLs	Number of older adults potentially residing in Assisted Living Facility
Carson City	1,227	313
Churchill	516	139
Clark	34,515	9441
Douglas	1,465	394
Elko	616	171
Esmeralda	29	8
Eureka	36	9
Humboldt	235	65
Lander	95	26
Lincoln	144	38
Lyon	1,216	342
Mineral	127	34
Nye	1,466	395
Pershing	115	33
Storey	128	37
Washoe	7,853	2184
White Pine	196	50

Estimates based on project team analysis of NHATS data and ACS 2018 data.

Table 7.6: Potential Older-Adult ALF Residents and Existing Numbers of Licensed Beds Counties Grouped by Potential Older Adult ALF Residents					
County	Number of Older Adults (2018)	Estimated Number of Potential Older-Adult ALF Residents	Adjusted Number of Potential Older-Adult ALF Residents (to reflect lower proportion of ALF residents with Medicaid as a payer in Nevada, compared to U.S.)	Existing Number of Licensed ALF Beds	Difference between Adjusted Number of Potential Older-Adult ALF Residents and Existing Number of Licensed ALF Beds
Counties with 39 or fewer potential ALF residents					
Esmeralda	269	8	8	0	8
Eureka	283	9	8	0	8
Lander	822	26	24	0	24
Lincoln	1,225	38	35	0	35
Mineral	1,099	34	32	0	32
Pershing	1,061	33	31	10	21
Storey	1,176	37	34	0	34
Counties with 40-99 potential residents					
Humboldt	2,083	65	60	10	50
White Pine	1,587	50	46	0	46
Counties with 100-299 potential residents					
Carson City	10,018	313	289	382	-93
Churchill	4,446	139	128	112	16
Elko	5,477	171	158	57	101
Counties with 300-999 potential residents					
Douglas	12,611	394	364	236	128
Lyon	10,937	342	316	145	171
Nye	12,644	395	365	118	247
Counties with more than 1,000 potential residents					
Clark	301,845	9,441	8,714	6,153	2,561
Washoe	69,819	2,184	2,016	1,821	195

In Nevada, 9.3% of ALF residents have Medicaid as a payer. The comparable number for the U.S. is 17%.

Source: Project team analysis of NHATS and ACS 2018 data.

Tables 7.5 and 7.6 illustrate the following points:

- Seven counties (Esmeralda, Eureka, Lander, Lincoln, Mineral, Pershing and Storey) are estimated to have fewer than 35 adjusted potential older-adult residents. Six of these counties do not have an ALF. The remaining county, Pershing, has 10 licensed ALF beds. Eureka does not have a low probability of having an ALF based on population characteristics because it has a town of at least 2500 residents. However, the number of adjusted potential older-adult ALF residents is less than 10.

- Two counties (Humboldt and White Pine) have 40-99 adjusted potential older-adult ALF residents. One has 10 licensed ALF bed; the other does not have an ALF.
- The remaining eight counties have at least 100 adjusted potential older-adult ALF residents, and they all have licensed ALFs. One county, Carson City has more licensed ALF beds than adjusted potential ALF residents. The Medicaid claims data indicates that Carson City provides ALF beds for numerous individuals who previously resided in other counties (see Table 4.14).

The average payment per resident depends on the type of payer. There are two expected types of payers: Private Pay and Medicaid.

- Private payment rates for various long-term care settings in Nevada are provided by the Genworth Financial 2019 Cost of Care report (Financial, 2019). In Nevada, the median monthly cost of care for an individual in an ALF is $3400 compared to the national median of $4051.
- Medicaid payment rates are detailed in Table 4.16 in Chapter 4. As shown in that Table, the daily Medicaid reimbursement rate for ALF services ranges from $23 to $83 per resident per day, depending on patient acuity. Average payments per ALF resident are detailed by county in Table 4.15. Based on the numbers reported in Table 4.15, the average daily Medicaid reimbursement rate was $48.34 throughout Nevada, and it was $46.65 in Nevada's non-urban counties. The Medicaid reimbursement rate is expected to cover the cost of providing personal care services for the ALF resident.

The resident is responsible for the room and board portion of the monthly charge.
In the example constructed in the Excel template, we assume that Medicaid will reimburse the ALF for services provided to 9% of the residents, and the remaining residents will be private-pay clients. We assume that the private pay clients will pay the average 2019 charge reported by Financial (2019). We further assume that the facility revenue will be equal to this charge for the residents with Medicaid LTSS coverage: Medicaid will reimburse the facility for the cost of providing services and the residents will pay the room and board portion of the charge. This assumption is a starting point for analysis, that maximizes the likelihood that a facility will appear to be financially viable. However, it may not be a realistic assumption for facilities that choose to accept Medicaid reimbursements. Project planners can over-ride this assumption by entering project-specific numbers that reflect the project-planners' goals with regard to accepting Medicaid reimbursement and accepting below-market monthly payments from individuals with low incomes.

Projected Costs

Cost estimates include three types of operating costs: fixed costs, costs that vary by number of residents, costs that vary by square footage.

Fixed Costs

Nevada licensure requirements specify that every ALF must have a facility director. Anecdotal evidence from a discussion with an ALF provider indicates that this is a major component of facility fixed costs. The second component is the facility chef, who manages the kitchen and

food preparation process. Salaries for these two professionals are shown in the Excel spreadsheet as $87,000 for the director's salary and benefits and $58,000 for the chef's salary and benefits. These estimates are based on average salaries for ALF directors and chefs from www.glassdoor.com. In addition, every licensed facility pays an annual license renewal fee that includes a fixed component (see Table 7.7).

Licensure fees in Nevada are detailed in Table 7.7 below. According to Nevada Administrative Code (NAC) 449.016, the initial fee for new facilities is $2,386 and $200 per bed. There is also a license renewal fee. The facility license must be renewed annually on November 15. According to NAC 449.017, the renewal fee is $1193 and $100 per bed. The fee is reduced to $35 per bed for low-income beds.

Table 7.7: Nevada License Fee Schedule

Item	Initial	Annual Renewal
License Fee	$2,386.00	$1,193
Fee Per Bed	$200	$100

Source: Nevada Administrative Code 449.016

Operating Costs that Vary by Number of Residents

This category includes two subcategories: costs associated with Direct Care Labor and Other Costs.

Direct Care Labor

Direct care labor for assisted living facilities includes individuals in the following occupations: *Healthcare Support*, *Healthcare Practitioner*, and *Personal Care and Service*. The National Study of Long-Term Care Providers (NSLTCP; Lendon & Rome, 2019) reports data on average labor hours per ALF resident for these occupations in Nevada. Average labor hours per resident are detailed in Table A.3-1 (in the Appendix to chapter 3). Wage data for these occupations for 2019 is provided by Nevada DETR (see Chapters 1 and 3). Nevada's legislated mandate that the minimum wage will increase by $0.75 each year until it reaches $11 per hour could create upward pressure on wages for some of these occupations.

Other Costs

In addition to Direct Care workers, ALFs also employ individuals in the following occupations: Community and Social Services, Management, Food Preparation, Buildings & Grounds and Office Administration and Support. These employees are included under "Other Labor" on the spreadsheet. Cost data is available in the 2019 State of Seniors Housing Cost Report (ASHA, 2019), which is based on a 2018 nationwide survey of ALF providers. These data indicate that wages paid to "other" labor are equal to 89%of the wages paid to Direct Care workers. We use

this percentage, along with report data indicating that payroll taxes and benefits are equal to 22% of wages, to generate the cost estimate for "other" labor.

Non-labor operating costs for assisted living facilities include items such as food, utilities, property and liability insurance and the "per-bed" component of Nevada's annual ALF licensure fee. The ASHA (2019) indicates that non-labor costs are equal to 26% of total labor costs. We use this percentage to generate the estimate for non-labor costs.

Operating Costs that Vary by Square Foot

Square footage is a function of the number of residents. The average amount of personal space in ALFs is 541 square feet per resident, and ALFs typically contain 73 square feet of non-personal space for every 100 square feet of personal space. Non-personal space includes both gathering spaces, such as dining and socializing spaces, and working space, such as the kitchen and office areas (ASHA, 2019). Utility expenditures are the primary component of operating costs that vary by square foot. Utility cost information is also provided by the ASHA (2019).

Net Operating Income

Net Operating Income is equal to revenues minus fixed and variable operating costs. These revenues are used to fund replacement reserves, fund debt service, and compensate owners for investing resources and bearing risk.

Capital Expenditures

According to ASHA (2019), amounts allocated by ALFs to fund Replacement Reserves average $1321 per resident per year, and amounts expended for Debt Service average $1189 per resident per year.

Net Operating Income (NOI) is estimated before considering Replacement Reserve allocations and Debt Service. The variable (NOI less Replacement Reserve allocations) is useful, because some counties may have separate sources of funds for acquiring or constructing a facility. The variable (NOI less Replacement Reserve allocations less Debt Service payments) indicates the residual amount available to address contingencies and compensate owners for bearing the risk of investing in the ALF.

The Excel template uses estimates for Replacement Reserves and Debt Service provided in the State of Senior Housing 2019 Cost Report (ASHA, 2019). These numbers represent average numbers reported by an array of ALFs with 80 or fewer beds. This sample of ALFs includes facilities with new mortgages and facilities that have already completed their debt service payments. It may also include ALFs with donated capital funds or capital funds provided from public sources. As a result, the average Debt Service payment used in the spreadsheet is not sufficient to service debt that would likely occur if a new facility were constructed. Project planners may adjust that number in response to project-specific information about the source of project financing and the degree to which building remodeling or new construction are required.

These estimates provide insight into the question of whether a new ALF would be sustainable and resilient. They do not provide insight, however, into the cost impact of creating a new combined license for ALF, AD and RC services. This impact will depend on the numbers of individuals utilizing each service and the degree to which service provision is integrated to achieve economies of scale and scope.

Sensitivity Analysis

Estimates of Net Operating Income are based on assumptions about numbers of residents, wages and other prices, Medicaid reimbursement rates and policies, and state and federal regulations. The Excel template can be used to assess the degree to which net revenue is sensitive to changes in each of these assumptions. Users can utilize the tool multiple times to estimate net revenue under a range of assumptions. This sensitivity analysis can help users assess the degree of risk involved in each proposal. The example template provides a convenient tool for analyzing the sensitivity of Net Operating Income to changes in assumptions. Net Operating Income is sensitive to the number of residents because increases in the number of residents spread fixed costs over a larger number of individuals. Larger numbers of residents might also make it possible to hire full-time employees for tasks such as Information Technology support, rather than relying on consultants. This potential source of scale economies is not considered in the accompanying Excel spreadsheet.

The Excel tab labeled “sensitivity analysis” in the accompanying Excel spreadsheet indicates that Net Operating Income per resident increases as the number of residents increases. When the number of residents is 10, Net Operating Income is negative. When the number of residents is at least 20, Net Operating Income per resident is positive, and it is sufficient (in the constructed example) to fund Replacement Reserves and Debt Service at the average levels indicated by the ASHA (2019.

Some of Nevada’s non-urban counties will still face a challenge posed by inability of smaller facilities to achieve scale economies. Counties considering ALFs with fewer than 20 beds have small margins for dealing with business risk. Because the director’s salary and benefits may be the largest source of fixed costs, a combined license could be a critical factor. If the combined license allows one director to oversee both the ALF and AD, the director’s salary and benefits would be spread across the ALF residents and the AD participants.

Business Risk

Business risk stemming from potential fluctuations in numbers of residents may be a particularly important issue for projects in non-urban counties. Estimates of adjusted potential older-adult residents range from 8 to 365 in Nevada’s non-urban counties. Statistical analysis (using the Poisson Distribution) provides insight into the relative likelihood of fluctuations in small versus large facilities. If a small facility expects to have, on average, 12 residents, the Poisson Table indicates that the probability of having no more than 8 residents in any month is 0.09 (see Table 7.8). This represents a 33% drop in the number of residents below the expected number. For

comparison, the probability that a larger facility that is expected to have 60 residents will have a 33% shortfall in any month (to only 40 residents) is only 0.003. Thus, the smaller facility faces substantially larger business risk from reductions in demand, than the larger facility.

Table 7.8: Probability of Experiencing 33% less than Expected Demand

Expected Demand	33% Less than Expected Demand	Probability of Experiencing 33% less than Expected Demand
6	4	0.15210
12	8	0.08951
18	12	0.05489
24	16	0.03440
30	20	0.02187
60	40	0.00255

Source: https://stattrek.com/online-calculator/poisson.aspx

The tab labeled "risk analysis" in the Excel template that accompanies this report provides a second example. If the actual number of residents is equal to 80% of the expected number, Net Operating Income drops by 47% in an ALF that expected to have 20 residents. The decline is smaller (27%) in an ALF that expected to have 80 beds.

Conclusion

The spreadsheet financial analysis tool provides a starting point for estimating the costs and revenues for an ALF in Nevada's non-urban counties. County analysts may adjust these estimates, based on the characteristics of specific projects (e.g. anticipated monthly charges, portfolio of services to be provided, and location), county characteristics and trends, state regulatory policies, and Medicaid reimbursement rates. The tool can be used to estimate the number of residents required for the ALF to breakeven. It also can be used to conduct sensitivity analysis, to assess the impacts of deviations from the assumptions on the facility's net revenue. It could also provide a skeleton for constructing estimates of the impacts of a combined license on operating costs and revenues, when the details of this license are known.

If the state creates a combined license, under which an ALF could offer AD and RC services, it would be necessary to adjust the staffing information provided in the spreadsheet to reflect staffing needs for the additional services, and staffing and non-labor items that can be shared across services (such as the kitchen area and the chef).

APPENDIX 7

Table A.7-1: Defining Categories for Nevada Counties for Statistical Analysis			
County	Urban Influence Code	Core	Adjacent
Carson City	2	-	-
Churchill	5	2	2
Clark	1	-	-
Douglas	3	2	3
Elko	8	2	0
Esmeralda	10	0	1
Eureka	8	2	0
Humboldt	8	2	0
Lander	9	1	1
Lincoln	4	1	3
Lyon	5	2	2
Mineral	11	1	0
Nye	3	2	3
Pershing	10	0	1
Storey	2	-	-
Washoe	2	-	-
White Pine	11	1	0

Source: United States Department of Agriculture Economic Research Service

CHAPTER 8: ANALYSIS OF REPORT TOPICS SPECIFIED IN AB 122

Topic 1: An Analysis of the Feasibility of Creating a Single License for Such a Facility

Allowing a facility to offer a combination of Assisted Living (AL), Adult Day (AD) and/or Respite Care (RC) services under a single "combined" license could generate some operating efficiencies. This cost reduction could potentially increase the likelihood that services would be available in more locations in non-urban Nevada. The availability of services in non-urban Nevada is an important issue: 7 counties in Nevada do not have any licensed Assisted Living Facilities (ALF) and 14 counties do not have any licensed Adult Day Centers (ADC).

Current law includes the following provisions relevant to creation of a single license for ALF and ADC:

Pertaining to the licensure Board:

NRS 449.0302 [Effective January 1, 2020.]

2. The Board shall adopt separate regulations governing the licensing and operation of:
(a) Facilities for the care of adults during the day; and
(b) Residential facilities for groups, which provide care to persons with Alzheimer's disease or other severe dementia, as described in paragraph (a) of subsection 2 of NRS 449.1845.

Pertaining to ALFs:

NAC 449.208 Restrictions on conducting other businesses or providing other services on premises. (NRS 449.0302**)** No other business may be conducted or other services may be provided on the premises of a residential facility if the business or services would interfere with the operation of the facility or the care provided to the residents of the facility.

Pertaining to ADs:

NAC 449.4067 Operation in combination with other medical facility or facility for the dependent. (NRS 449.0302**)** A facility must not be operated in combination with any other medical facility or facility for the dependent unless it is licensed as a separate and distinct unit.

Nonetheless, it would be allowable for a facility to offer both Assisted Living and overnight RC under current law. It would also be allowable for a facility to offer both Adult Day (AD) Care and daytime Respite Care (RC).

- If the respite care is to occur within the facility, the RC may only be provided if:
    - There is an available bed, and
    - The individual meets the admission criteria for the facility.
        - It is important to assure that the staff on duty at the ALF or the ADC have the necessary skills and training to provide the care needed by the care

recipient who needs RC. For example, it would not be possible for care recipients with Alzheimer's to obtain Respite Care at an ALF, unless the ALF had an Alzheimer's endorsement and available bed. On the other hand, it would not be possible for an ALF with an Alzheimer's endorsement to provide Respite Care for care recipients with mental illness.

    - It would also be important to ensure that the care recipient who needs Respite Care does not have a contagious infection, unless the ALF or ADC have sufficient capacity to isolate the care recipient from other residents or program participants.
- If the respite care is to occur in the care recipient's home, then the ALF would need an additional license to provide PCA or HH Aide services.

Currently the only facility type that describes "respite care" is hospice. Licensure requirements for ALF[4] and for ADC do not mention RC. Admission criteria to ALF and to ADC remain the same, whether the care recipient receives services for one day or an indefinite number of days. To create a combined license, it would also be necessary to create an operational definition of "Respite Care" in the licensure laws.

If a combined license is created, it would be necessary to ensure that no program is operated at the expense of the others. It may be advisable to consider training requirements for personnel that might staff the ALF, the ADC and the RC programs.

If the state decides to craft legislation to permit creation of a combined license, it may be advisable to consider restricting use of the new combined license to facilities operating in counties with fewer than 100,000 residents.

Tennessee offers a potential model for structuring a combined license for ALF and ADC. The Rules of Tennessee Department of Human Services Community and Social Services Chapter 1240-07-10 Adult Day Services Standards' (2018) state:

> *When adult day services are co-located within other licensed settings such as nursing homes or assisted living facilities, states vary regarding licensure requirements. In **Tennessee**, if an ADC center is operated by a licensed facility such as a nursing home, the state may determine that its licensing provisions adequately regulate the ADC center's program and that a separate ADC license is not needed. But an ADC program, regardless of its affiliation or location, must comply with the program content requirements as detailed in the rules.*

This differs from the combined license considered in this report, because the Tennessee provision pertains to an AD Center operating in a NH, while we focus on the possibility of offering a combined license for an entity that offers ALF, AD and RC. The distinction between offering ADC in an NH and offering ALF and ADC in one location is important. A plan to offer ADC in an NH would face heightened scrutiny under the Federal Settings Rule because ADC is a Home and Community Based Service, while the nursing home offers institutional care. In

[4] In Nevada, Assisted Living Facilities are licensed under Residential Facilities for Groups.

contrast, a plan to offer both ALF and ADC in one location would not face heightened scrutiny, as long as each of these services meets the criteria to qualify as HCBS under the Settings Rule.

However, in Nevada, an ADC may offer nursing services, whereas an ALF may only offer the services described in the regulations at NAC 449.271 to 449.2738 (these services are most often provided by layperson caregivers). Under current law, the staffing requirements of an ADC and ALF are different in Nevada.

> (ADC) NAC 449.4072
> 1. Each facility must have the number and kind of employees required by the physical characteristics of the facility, the number of clients and the services provided.
> This language allows for provision of nursing services in an ADC.
>
> (ALF) NAC 449.4081
> 1. If the facility accepts a client who cannot administer his or her own medication, an employee licensed to administer medications must administer the medication to the client.
> This language requires an employee "licensed" to administer medications, such as a registered nurse, it does not authorize a layperson caregiver to administer medications.

A combined license offers opportunities for small ALF and ADC programs to create efficiencies. Both types of facilities must have:

- a director/administrator,
- staff trained in first aid and CPR,
- a first aid kit, space and staff for activities,
- space and staff for food planning, meal preparation, and serving and dietary consultants,
- space and staff for laundry, and
- systems to handle:
  - medication administration and client health monitoring
  - resident/client records, admissions, employee training
  - facility maintenance, inspections, security

For small facilities, a combined license could potentially facilitate creation of economies of scale and scope.

A combined license may also offer flexibility to shift capacity between Assisted Living and Adult Day services, as population demographics evolve. National data indicates that Assisted Living residents are, on average, older than Adult Day program participants. As the baby-boomers age, the population "bulge" is expected to move through the age 65-80 category into the age 80 and over. As this occurs, individual care recipients may transition from Adult Day programs to Assisted Living. The flexibility offered by a combined license could benefit the care recipients by allowing them to make the transition with minimal disruption of personal relationships with care givers and with fellow care recipients.
The flexibility could also help the provider organizations deal with the business risk posed by potential fluctuations in demand. While all providers face fluctuations in demand, this source of business risk is particularly salient for small providers. If a small ALF expects to have six

residents, the actual number of residents in a given month or year could be lower or the number of people who would like to be residents could be higher. Based on the Poisson statistical distribution, the probability that the actual number of residents is at least 33% lower than expected is 0.151. As the expected number of residents increases, however, the probability of experiencing a 33% shortfall in residents decreases dramatically. If the expected number of residents is 40, this probability is only 0.003. Such a gap between the actual and expected numbers of residents could have serious financial implications (see Table 7.8).

Two concerns should be addressed, to successfully craft a combined license. First, quality assurance oversight is essential for all services provided under the license. Second, the combined license requirements must be consistent with the Federal Settings Rule described in Chapter 4. Two provisions of the Settings Rule are relevant to the combined license: if the licensee plans to receive Medicaid reimbursement for HCBS, the combined facility will face heightened scrutiny if it is owned by an institution or co-located with an institution. In addition, the combined ALF/AD cannot isolate clients from the community, and it must offer choice of service providers to residents. CMS specifies that the degree of choice must be similar to choices available to other people living in the same area.

Topic 2: Identification of the Manner in which Such a Facility Would Receive Reimbursements from Medicaid

Medicaid payment polices pose important issues for ALFs that accept this type of payment. As shown in Table 4.16 in Chapter 4, Medicaid payments to Assisted Living Facilities range from $23 to $83 per resident per day, depending on the number of services required by each resident. Average payments per ALF resident are detailed by county in Table 4.15. Based on the numbers reported in Table 4.15, the average daily Medicaid reimbursement rate was $48.34 throughout Nevada, and it was $46.65 in Nevada's non-urban counties. The Medicaid reimbursement rate is expected to cover the cost of providing personal care services for the ALF resident.

Under federal law, Medicaid cannot pay for the room and board portion of ALF charges (https://www.macpac.gov/wp-content/uploads/2018/10/Medicaid%E2%80%99s-Role-in-Housing.pdf). The resident is responsible for this portion of the cost. This expectation may underlie the positive correlation reported in Chapter 4 between income and the likelihood of utilizing ALF services. The difference between the average Medicaid payment per ALF resident per day ($46.65 in non-urban counties) and the average daily private pay charge reported by Genworth ($111.48) is equal to $64.83. Assuming that the average number of days per month is 30.5, this implies that the difference between the charges to private pay residents and the Medicaid reimbursement rate is $1977 per month. If ALFs view this as the room and board charge that must be paid by residents with Medicaid coverage, these individuals would need to be able to pay $23,726 per year to the ALF.

The fact that state Medicaid programs cannot pay for ALF room and board charges has two implications:

- Medicaid is a payer for only 17% of ALF residents nationwide, and 9% of ALF residents in Nevada.

- Some individuals who are eligible for Medicaid LTSS assistance may not utilize ALFs, because they cannot afford the room and board portion of ALF charges. In a rural county with a small number of potential ALF residents, this reduction in the demand for ALF services may make it impossible for an ALF to operate in the county. In this situation, changes in Medicaid reimbursement rates, eligibility policies and waiver slots could potentially boost the ALF utilization rate enough to make an ALF financially viable.

The lack of licensed ALFs in seven of Nevada's non-urban counties suggests that an ALF operating in a non-urban county may have relatively high costs per resident per day due to diseconomies of scale, transportation costs to bring goods and services to the county, and salary differentials required to induce licensed professionals to locate in the county (see Chapter 1). In this situation, the State may consider whether a non-urban differential would be appropriate for attendant care services provided in ALFs.

In addition, the State could consider two strategies implemented in some other states: Managed Long-Term Services and Supports (MLTSS; see Chapter 4) or Program of All-Inclusive Care for the Elderly (PACE; see Chapter 6), Due to wide interstate variation in the structures of Medicaid programs and state-level health care industry components, budget and program impacts of MLTSS and PACE are expected to vary across states. Both programs (MLTSS or PACE) involve major redesign of current Medicaid systems; hence implementation of either MLTSS or PACE would require careful thought and discussion over an extended period of time.

Topic 3: An Analysis of the Feasibility of Recruiting Adequate Staff to Operate Such a Facility

ALF and AD workforces include individuals working in the following occupations:

(a) Health care support (HH Aides)
(b) Health care professionals (nurses)
(c) Personal Care Aides (PCAs)
(d) Other
    i. Social workers
    ii. Food service
    iii. Building maintenance
    iv. Administrative

While these workforces encompass diverse occupations, Aides account for approximately three-fourths of the weekly hours in Residential Care Communities (which include ALFs) and more than one-third of weekly hours in AD Centers.

Personal Care Aides (PCAs) are also an important component of the workforce that provide services to individuals living at home but needing assistance with ADLs and IADLs. Services provided in the home help individuals remain at home and delay entrance to ALFs or NFs. Both in-home services and ALF services are essential components of the LTSS system, and PCAs comprise a significant share of the workforce delivering both services.

Federal regulations establish the minimum amount of training permitted for PCAs, and Nevada adheres to this standard. The initial training includes 75 hours, which must include 16 hours of practical or clinical training. In addition, PCAs must complete 12 hours of continuing education training each year. Nevada Department of Employment, Training and Rehabilitation (DETR) data indicates that average hourly wages for PCAs in Nevada were $11.08 for PCAs working in Nursing and Residential Care Facilities, and $11.99 for PCAs working in Community Care Facilities for the Elderly.

Survey data indicate that other sources of job dis-satisfaction for PCAs were on-the-job injuries and inadequate work hours. The second issue stems from the fact that payers authorize a specific number of daily or weekly care hours for each patient. From this set of restrictions, PCAs must piece together schedules that include travel time between patients.

PCA shortages are widespread and are expected to be exacerbated by the ongoing growth of the numbers of people who need help with ADLs and IADLs.

Two Components of the Personal Care Aide shortage

Medicaid reimburses Personal Care agencies for providing services to clients. Medicaid reimbursement policies can affect the number of Personal Care Aides providing services in Nevada and the proportion of Personal Care agencies accepting Medicaid payment. The Medicaid reimbursement rate can affect the wage PC agencies pay to the aides they employ, and it affects whether Personal Care agencies can break even providing services reimbursed by Medicaid. If the wage is too low, the Agency may not be able to hire and retain enough Aides to serve all potential clients. If Medicaid reimbursement rates do not cover the cost of providing services to Medicaid recipients, the Agency may not be willing to provide those services.

Nevada increased the Medicaid reimbursement rate paid to Personal Care agencies on 1/1/2020 from $17 to $17.44 per care hour. This was the first reimbursement rate increase since the $17 per hour rate was set in 2002. This rate is paid for hours during which PCAs provide authorized services to clients. It does not reimburse agencies for time PCAs spend traveling between clients during the workday, even though federal labor law now requires agencies to pay PCAs for this time. During the 2020 Special Session, Medicaid reimbursement rates were reduced by 6% for all providers, including PCAs. The rate paid to Personal Care agencies is now $16.39 per hour, which is less than the $17 per hour approved in 2002.

During the years between 2002 and 2020:

- The Consumer Price Index (CPI) increased 44% from 180.1 to 259.1.
- Nevada's minimum wage increased from $5.15 per hour to $8 if the employer offers health insurance and $9 otherwise. In addition, current law specifies that the minimum wage will increase $0.75/hour each year until the minimum wage is $11 for employers offering health insurance and $12 for employers not offering health insurance.
- Federal Wage and Hours regulations were changed in 2015 to eliminate the exemption for Personal Care Agencies. These employers are now required to pay the PCAs for travel time required between clients during the workday. However, this travel time is not reimbursed by Nevada Medicaid.

Median PCA wages are typically higher than the minimum wage. It appears that this above-minimum-wage premium may be needed to attract and retain workers in this occupation. From the agency perspective, the margin between the Medicaid reimbursement rate and the minimum wage allows the agency to pay the above-minimum-wage premium to the PC Aides and also cover administrative costs. This margin has declined while the cost of living has increased.

These trends raise questions about the sustainability of LTSS service providers, given the current Medicaid reimbursement rate for Personal Care Services (see Chapter 4). Two types of questions are relevant. First, order-of-magnitude estimates suggest that the current reimbursement rate is not generally sufficient to enable Agencies to break even. Second, the fact that the cost of between-client travel time is not directly reimbursed differentially penalizes agencies with relatively high travel times, which are predominantly in the non-urban areas. These agencies may serve high numbers of clients living in widely-dispersed homes, rather than clients who are clustered in apartments or housing areas more common in urban areas. Two approaches could be deployed to address this issue:

- Medicaid could set Personal Care Agency reimbursement rates to cover the entire time needed to deliver the service, including both the direct care time and the travel time required to arrive at the care site.
- Medicaid could analyze whether travel times are higher in non-urban counties. If times are higher in rural and frontier counties, Medicaid could create a non-urban differential for Personal Care Services. Medicaid reimbursement rates currently include a rural differential for in-home services provided by Physical Therapists, Speech Language Pathologists and Home Health Aides, but this differential is not currently available for PCAs.

Medicaid traditionally pays lower rates than private insurers to healthcare providers such as hospitals and physicians. Generally, Medicaid rates are sufficient to cover variable costs, but they do not cover the share of fixed costs associated with the number of patients covered by Medicaid. Rates paid by private insurers cover more than their "fair share" of fixed costs, to fill the gap create by low Medicaid reimbursement rates. This system does not work as well for LTSS because the proportion of individuals covered by LTSS insurance is low. Instead most individuals who are not eligible for Medicaid LTSS assistance must pay out-of-pocket.

Personal Care Aide Recruitment and Retention

PHI (2020) describes initiatives designed to increase aide training and expand the set of tasks that aides may perform:

> *Recent developments highlight the potential of quality training and advanced roles. A 2016 evaluation report of the federally funded Personal and Home Care Aide State Training (PHCAST) initiative found that this six-state program led to low attrition rates and high levels of satisfaction among direct care aides who participated. In New York City, an 18-month pilot program for advanced training among home health aides found that clients served by aides with advanced training were admitted to the ER at a rate*

eight percent lower than those admitted in the previous year (when clients weren't paired with aides with advanced training). Similarly, a multi-year training initiative in New York City led to increased retention and job satisfaction among home health aides who took part in the program. And in June 2016, New York State passed a bill that created an advanced role for home health aides, allowing them to perform tasks such as administering medication and injecting insulin upon completing training and demonstrating competency.

This type of initiative may have two impacts. First, as mentioned in the PHI summary, the enhanced PCA role could boost recruitment and retention. Second, enhanced training and responsibilities is likely to lead to higher wages. This would increase the cost of personal care services for private-pay individuals who utilize the services currently provided by PCAs. One possible strategy would be to create a mid-level Aide who could perform more tasks than are currently authorized for PCAs, but fewer tasks than those authorized for HH Aides or Certified Nursing Assistants (CNAs).

Topic 4: An Analysis of the Economic Viability of and Payment Structure of Such a Facility

The feasibility calculations provided in Chapter 7 (and the interactive Excel spreadsheet that accompanies Chapter 7 labeled "*Excel template_ROM estimates to support early-stage financial analysis.xlsx*") provide a starting point for early stage financial analysis, as counties and providers consider strategies for increasing the supply of LTSS in the rural and frontier communities. Chapter 7 describes an example computation of net revenues for an ALF project, which is illustrated in the accompanying spreadsheet. Because the spreadsheet is interactive, users can enter the expected number of residents who would live in a proposed project, and they can adjust the numbers of residents and cost estimates to reflect current conditions relevant to specific projects under consideration. For example, the number of people who will actually utilize an ALF may be sensitive to ALF monthly charges, Medicaid reimbursement rates for ALFs, and the availability of substitutes such as Personal Care services delivered to residents in subsidized housing units. Counties developing financial analyses of proposed projects will also adjust the numbers to include utilization by adults age 18-64 with physical disabilities. These adjustments of expected utilization by younger and older adults will depend on the types of services to be offered in the ALF.

The lack of ALFs in several of Nevada's non-urban counties suggests these facilities might not be financially viable in counties with small populations and low population density (see Table 7.6).

- Counties with small populations are likely to have small numbers of potential ALF residents. Counties with fewer than 40 adjusted potential ALF residents include Esmeralda, Eureka, Lander, Lincoln, Mineral, Pershing and Storey. Of these, Pershing is the only county with licensed ALF beds. ALFs with small numbers of adjusted potential residents face a financial challenge: average total cost per resident per day is likely to be relatively high because the fixed costs are spread over a small number of residents. For example, ALF licensure requirements specify that an ALF must have a Director. Assume

that salary and benefits for the Director total $87,000. If an ALF in a rural county has 20 residents, each resident would have to contribute approximately $4350 per year to cover the cost of the Director's compensation. If the facility had only 10 residents, each resident would have to pay nearly $8700 per year to cover this cost. This is only one component of the ALF's fixed costs; however, it illustrates the challenge faced by small ALFs.

- In addition, statistical analysis of data from non-metropolitan counties in the eight Mountain states indicates that counties that do not have a town with at least 2500 people face a geographic challenge with regard to ALF services. In Nevada, two counties do not have a town of this size: Esmeralda and Pershing. Pershing has 10 licensed ALF beds, and Esmeralda does not have any licensed ALF beds. Other counties with relatively low probabilities of having an ALF (below 0.60) include Lander, Lincoln, Mineral, and White Pine. These counties face geographic challenges due to population size and dispersion, and county location within the state.

The situation is exacerbated by the fact that Medicaid can only pay for services delivered in ALFs, while residents are responsible for the room and board portion of ALF charges. Because this may block individuals with low incomes from utilizing ALFs, it reduces the number of potential ALF clients. In a non-urban county, with an already-low number of adjusted potential ALF residents, this could reduce the number of potential ALF residents below the break-even point.

The example computation illustrated in the spreadsheet provides Rough-Order-of-Magnitude (ROM) estimates of costs and revenues based on data from secondary sources. Planners considering specific projects can enter project-specific numbers into the interactive spreadsheet to obtain project-specific results. Under the assumptions used to construct the template example (and described in Chapter 7), Net Operating Income is positive for ALF facilities with 10 beds, and it increases as the number of beds increases. It is equal to $645 per resident per month for facilities with 20 beds, and it increases to $1102 per resident per month for facilities with 80 beds. This Net Operating Income is not sufficient to fund Replacement Reserves and Debt Service for ALFs when the number of beds is 10, even at the modest estimate of Debt Services utilized in the spreadsheet. It is sufficient, however, when the number of beds is at least 20.

Project planners face four challenges.

- First, most of the numbers used in the constructed example reflect data from secondary nationwide sources. Project planners may adjust the cost numbers upwards, to reflect actual costs of doing business in some non-urban counties.
- Second, the constructed example employed the optimistic assumption that total payment from residents with Medicaid as a payer would be equal to the monthly charges paid by private-pay residents. We employed this assumption because it may not be realistic to assume that small ALFs can be financially viable with reduced monthly payments from a subset of residents.
- Third, the Excel template uses estimates for Replacement Reserves and Debt Service provided by the ASHA (2019). These numbers represent average numbers reported by an array of ALFs with 80 or fewer beds. This sample of ALFs includes facilities with new

mortgages and facilities that have already completed their debt service payments. It may also include ALFs with donated capital funds or capital funds provided from public sources. As a result, the average Debt Service payment used in the spreadsheet is not sufficient to service debt that would likely occur if a new facility is constructed. Project planners may adjust that number in response to project-specific information about the source of project financing and the degree to which building remodeling or new construction are required.

- Fourth, the impact of facility size is important. In the seven counties with no ALF, the numbers of adjusted potential ALF residents are fewer than 40. In some these counties, it may be realistic to consider a small ALF with 10 to 20 beds. These counties may need creative strategies to support an ALF.
    - A combined license could help, if it is designed to allow the ALF/AD/RC facility to spread the fixed costs over the full set of ALF residents and AD/RC participants. A carefully designed combined license could reduce regulatory burden while maintaining quality,
    - Inter-county collaboration could contribute to a solution if the facility could be placed in a location that allows it to serve people living in more than one county.
    - In addition, the State could explore strategies for increasing options for individuals with low incomes to receive housing, food, and energy subsidies as well as Medicaid coverage for attendant care services delivered in the ALF. These steps may be need to make it possible for a small ALF to accept reduced monthly payments for services and room and board for residents with Medicaid as a payer.
    - Finally, the State could review the ALF reimbursement rates, to ensure that these rates cover the cost of delivering services in non-urban counties

Several strategies could be considered to expand options for individuals with low incomes. These include consideration of:

- Funding other types of low-income housing assistance (see Chapter 4),
- Strengthening coordination across Nevada's Department of Housing and Urban Development and DHCFP to facilitate implementation of programs such as the Section 811 housing program (see Chapter 4),
- Increasing funding for Optional State Supplementation (OSS) to help cover a portion of ALF room and board charges for individuals with Medicaid assistance with ALF services. OSS supplements Supplemental Security Income (SSI) payments for eligible individuals. This program is administered by the Social Security Administration. An aged or blind SSI-eligible individual, SSI-eligible couple, or member of an SSI-eligible couple may be eligible for OSS in Nevada, if the individual lives in a non-medical facility serving 16 or fewer persons, which provides personal care and services to aged or disabled handicapped adults who are unrelated to the proprietor. The facility must be licensed or authorized to receive payment by the State of Nevada. (https://secure.ssa.gov/poms.nsf/lnx/0501415300sf). Nevada offers OSS equal to $391; amounts offered in other states vary widely from zero to $791 in SD (https://www.macpac.gov/subtopic/table-5-state-room-and-board-affordability-policies-for-residential-care-settings-by-state-2016/[5]),

[5] From the MACPAC website: The Medicaid and CHIP Payment and Access Commission (MACPAC) is a non-partisan legislative branch agency that provides policy and data analysis and makes recommendations to Congress,

- Implementing a PACE program in Nevada (see Chapter 6),
- Strengthening services, such as Respite Care and Adult Day Programs, that help care recipients continue to live at home (see Chapters 5 and 6).

Finally, it may be useful to pursue a multi-pronged approach. Statistical analysis of the characteristics of individuals who utilize ALF and AD services indicates that utilization patterns differ across groups with varying racial, ethnic, income and education characteristics (see Chapter 4). It may be necessary, therefore, to develop a state regulatory and financial-support infrastructure that facilitates county implementation of a portfolio of service options, to serve the population as a whole.

Topic 5: Identification of Technical, Economic and Legal Barriers to the Establishment and Operation of Such a Facility

Technical Barriers

The primary technical barrier is lack of broadband services in some of Nevada's non-urban counties. Traditional Electronic Health Records (EHR) systems did not encompass LTSS services. There is growing recognition, however, of the value of coordination between LTSS providers and health care providers. Substantial proportions of ALF residents have diagnosed medical conditions, 6% of ALF residents had an overnight hospital visit during the ALF stay, and 13% had an emergency room visit for a variety of medical conditions (see Tables 4.6f and 4.6f in Chapter 4: "Demand").

Health care and LTSS coordination could include telemedicine, remote monitoring of patient biometrics, and Health Information Exchange. To the extent that these technologies will generate efficiencies and improve quality of care, lack of broadband service is a barrier to efficient operation of an ALF. A more detailed response addressing technical barriers such as medication optimization, remote patient monitoring, assistive technologies, as well as policies affecting technology implementation is addressed in Chapter 2: "Supply" (Part 1, see pages 60-62).

Economic Barriers

The economic barrier is likely to be the most difficult to surmount. The lack of ALFs in some of Nevada's rural counties suggests that these facilities are not financially viable at the scale likely to be useful in areas with small populations and low population density. Statistical analysis of non-metropolitan counties in the Mountain states indicates that ALFs are not likely to be operating in non-core counties in which the largest town has fewer than 2500 residents. The Nevada counties with this characteristic are Esmeralda and Pershing. A more detailed response for strategies to address some of these economic barriers, including workforce issues and the cost of operating these Assisted Living, Adult Day, and Respite Care Facilities, are specifically addressed in Chapter 3: "Workforce" (Part 1, pages 96-110) and above in Chapter 7: "Feasibility Analysis" (pages 42-50).

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the Secretary of the U.S. Department of Health and Human Services, and the states on a wide array of issues affecting Medicaid and the State Children's Health Insurance Program (CHIP).

Legal Barriers

The primary legal barrier is posed by current provisions in the NRS and NAC that do not permit a combined license. A more detailed response to the licensing and policy issues are addressed in Chapter 1: "Introduction".

The second legal or policy barrier is the number of slots available for accessing waiver services. In July 2020, there were 98 individuals on the wait list for the waiver for People with Intellectual Disabilities, 666 on the Frail Elderly waiver wait list, and 175 on the wait list for services provided under the waiver for Adults with Physical Disabilities. Expanding service capacity will not increase the availability of services for people eligible for these Medicaid services unless the number of slots is expanded to reduce or eliminate the wait lists.

From a fiscal perspective, reducing or eliminating the wait lists could have two effects. To the extent that utilization of HCBS services postpones or eliminates costlier nursing home stays, this action would be cost-effective. On the other hand, providing HCBS to an expanded number of eligible individuals could also increase total cost if these services are utilized by individuals who would not have needed nursing home in the absence of the HCBS. Actuarial and statistical analyses are needed to determine the net fiscal impact of reducing or eliminating wait lists. The actuarial analysis is needed to understand current service utilization and costs. Statistical analysis to understand individual responses to the new incentive structure would also be useful.

Lack of Transportation

Lack of transportation is a barrier to provision of AD services. Nevada Medicaid contracts with MTM (https://www.mtm-inc.net/nevada/) to manage non-emergency transportation to Medicaid-covered services. Medicaid pays a fixed amount per-Medicaid-member per-month (pmpm), and MTM reimburses transportation vendors for covered transportation. This includes transporting an eligible individual to services covered by Nevada Medicaid. New entities can apply to become transportation vendors, and entities offering services such as AD can apply to operate a transportation service that could be reimbursed by MTM. MTM is responsible for processing the application to determine whether the applicant will be permitted to offer the transportation service.

Anecdotal evidence suggests, however, that incentives are misaligned. One entity applied to begin operating a small transportation service, and reports that the application process was lengthy and frustrating, and required numerous calls to MTM over a period a several months.

From an incentive design perspective, this system raises questions. MTM receives a payment each month that does not vary with the number of transportation services provided. MTM therefore has a financial incentive to discourage new applicants and delay approval of applications. Separating the function of evaluating applicants from the function of administering payment for transportation services could produce better alignment between the policy goal of providing transportation and the incentives facing the entity that administers transportation payments.

Federal law requires that state Medicaid programs must establish methods and procedures to ensure that Fee for Service (FFS) Medicaid beneficiaries can access services to at least the same extent as the general population in the same geographic area.
http://dhcfp.nv.gov/Resources/AccesstoCare/NevadaAccesstoCareMonitoringReviewPlan/

This requirement is based on the assumption that the availability of services is not affected by Medicaid reimbursement rates, Medicaid eligibility policies, and the availability of Medicaid waiver slots. This assumption may be reasonable in metropolitan counties, but it may not be valid in smaller counties. In small counties, ALFs may not be financially viable if the number of potential residents is smaller than the number needed to break even. In this situation, Medicaid rates, policies and slots could affect the likelihood that a county will have any ALFs offering services within the county.

Topic 6: A Possible Timeline for Creating a Pilot Program to Establish Such Facilities

Nevada's non-urban counties may pursue a variety of strategies to strengthen the local availability of LTSS. Timelines for specific projects will depend on project details, and on the timing of state policy changes that may be needed to facilitate specific projects.

Some strategies for consideration are discussed in Chapter 5: "Stakeholder Interviews" and Chapter 6: "Potential Service Models." These strategies may be shaped by factors such as:

- the numbers of individuals likely to utilize an ALF,
- the local availability of services that substitute for ALFs and complement ALFs,
- the local availability of subsidized housing units, and
- the local availability of the workforce needed for the specific pilot strategy implemented.

A county might focus on:

- building and operating a facility that offers ALF, AD and RC services under a combined license,
- developing systems for offering and coordinating LTSS services to individuals living in subsidized housing units or receiving housing vouchers,
- developing a mechanism to increase the PCA and HH Aide workforce to offer more HCBS, and/or
- strengthening supports for unpaid caregivers.

In this situation, the State can facilitate county efforts to pursue the goal of strengthening LTSS systems in non-urban counties, by providing a framework that supports each of these options. These actions may include:

- Creation of a combined license
- Development of a reimbursement rate for Personal Care Agencies that covers total costs in non-urban and urban counties
- Increase in the number of waiver slots to minimize or eliminate wait lists
- Increase in the availability of housing and energy assistance in rural counties and work with counties to facilitate application processes
- Strengthening the availability of transportation services in rural counties

- Strengthening coordination between the Department of Health and Human Services and the Department of Housing and Urban Development to facilitate development and implementation of programs such as the Section 811 housing vouchers.

Timelines will vary, depending on strategies adopted in specific counties, and the time required to make changes in state law and state policies. Three examples illustrate the issues involved:

- One county might prefer the option of building and operating a facility that will offer ALF, AD and RC services under a combined license. This county might view several state actions as pre-requisites to the county's efforts, potentially including:
    - Creation of the combined license,
    - Increase in the number of waiver slots,
    - Establishment a reimbursement rate for Personal Care services that covers total cost,
    - Increase in the availability of transportation services, and/or
    - Increase in broadband service to the county.

- Another county might pursue the strategy currently being explored in Eureka County. Matt Walker, Chief Executive Officer, has indicated that the William Bee Ririe Rural Health Clinic is exploring options for strengthening the package of services provided to individuals living in a small set of houses near the clinic. The individuals living in these houses have relatively low incomes and they obtain primary healthcare at the Clinic; some have received care at the Clinic, and some receive Personal Care services at home. The package of additional potentially useful services might include:
    - in-home visits by physicians, Community Health Workers and/or Medical Assistants,
    - efforts to improve coordination of health care services and LTSS, and
    - efforts to help the individuals apply for services such as energy assistance or SNAP (Supplemental Nutrition Assistance Program; "food stamps").

    The feasibility of this effort would be strengthened by state actions to:
    - Increase the number of waiver slots,
    - Establish a reimbursement rate for Personal Care services that covers total cost,
    - Increase the availability of transportation services, and/or
    - Increase broadband service to the county.

    If the initial pilot project is successful, efforts to expand this program might also hinge on state policies that affect housing affordability and PCA recruitment and retention.

- A third county might develop a strategy to allow low-income individuals to obtain housing subsidies in a licensed ALF. Organizations such as the Nevada Rural Housing Authority and Nevada Hand have experience developing such projects. Discussions with representatives from these two organizations indicate that the following issues affect the viability of this type of strategy:
    - Low Income Housing Tax Credit (LIHTC) financing has limited usefulness for helping individuals with low incomes afford the room and board portion of ALF charges. Projects financed with LIHTCs screen renters to ensure that they have

enough income to be able to afford the rent payments, while Medicaid LTSS assistance is available to qualifying individuals who have low incomes. The set of people who can meet both criteria is a small subset people with low and moderate incomes who cannot afford ALF room and board charges. Therefore, LIHTC financing for an ALF may not be a useful strategy for helping a broad population segment to afford an ALF. The constraints pose a particularly salient issue in counties with small numbers of adjusted potential older-adult ALF residents.

- Additional types of housing assistance funded through federal, state or local sources would substantially increase the affordability of ALFs for individuals with low and moderate incomes. Place-based or person-based vouchers would be useful.
- Implementing the Section 811 program would be useful. The Nevada Rural Housing Authority provided the following comment on the Section 811 program:

  Through the Section 811 Supportive Housing for Persons with Disabilities programs, HUD provides funding to develop and subsidize rental housing with the availability of supportive services for very low-and extremely low-income adults with disabilities ages 18 but less than 62 years. The program allows persons with disabilities to live as independently as possible in the community by subsidized rental housing opportunities which provide access to appropriate supportive services. In October 2015, HUD awarded Nevada Housing Division (NHD) approximately 44 units of Section 811 Project Rental Assistance (PRA) which has yet to be implemented in Nevada. Nevada Rural Housing Authority (NRHA) has been actively engaged with NHD for more than a year, working through the process to have Section 811 PRA's activated at properties in rural Nevada. NRHA awaits direction and confirmation from NHD.

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Revenues and Costs: Rough-Order-of-Magnitude (ROM) estimates to support early-stage planning: EXAMPLE

NOTE: any numbers by entering different numbers, if you have specific information about

Step 1: Estimate number of beds and square footage to be included in the potential facility

A. Estimate the average number of residents each month

Number of Residents (=number of occupied beds)	**20**

B. After you enter a number in the yellow cell, the following two (green) cells will be filled-in automatically, using data from a nationwide survey[a].

B.1. The number you put in the yellow cell represents the number of occupied beds. Data from a nationwide survey[a] indicates that occupancy rates typically average 91%. This estimate is similar to anecdotal information from a Nevada ALF provider. We use this occupancy rate to compute the number of

Number of Built Beds	**22**

B.2. National data from the The State of Seniors Housing 2019 Cost Report indicates the average number of square feet of personal space per built bed is 541 square feet. It also

Total Facility Square Footage	**20,570**

Step 2: Estimate net revenues

Estimated net revenues will be filled-in automatically using the number of residents entered into cell C8 above, along with data on the current proportion of ALF stays with Medicaid as a payer (NSLTCP[b] 2016), the

Revenues

Residents with Each Payment Source

Payer Type	Proportion	Number of Residents	Number of Residents Rounded	Monthly Payment Rates*	Revenue
Medicaid	9.30%	1.86	2	$3,400	$6,800
private pay	90.70%	18.14	18	$3,400	$61,200
Net Revenues				**TOTAL**	**$68,000**

*The Medicaid monthly reimbursement rate (equal to the daily rate * (365/12)) is $1419. An ALF resident with Medicaid payment is responsible for the room and board component of the ALF charge. For this computation, we assume that the facility receives the the full facility charge. This is an arbitrary assumption. Actual revenue for clients with Medicaid payment would depend on the availability of federal, state and/or local subsidies for the client portion of the ALF charge. It will also depend on project goals, design and financing.

Step 3: Estimate fixed and variable operating costs

Estimated operating costs will be filled-in automatically (dark green cell), using work hours (per resident per day) from the NSLTCP survey, wage data from Nevada

Fixed Costs

	Annual Cost	Monthly Cost Total	Monthly Cost Per Resident
Facility Director ($66,800 salary[g] + 30% benefits)	$87,000	$7,250	$363
Executive Chef ($44,500 Salary[g] + 30% Benefits)	$58,000	$4,833	$242
Annual License Renewal Fee	$1,193	$99	$5
Total Fixed Cost	**$146,193**	**$12,183**	**$609**

Costs that vary with the number of residents

	Hours per Occupied Bed per Day[b]	Mean Hourly Wage[f]	Hourly Cost including 22% Payroll Tax and Benefits[a]	Daily cost = Hours per resident * hourly cost	Monthly Cost Total	Monthly Cost Per Resident
Direct care labor						
Registered Nurse	0.01	$35.96	$43.87	$0.44	$267	$13
Licensed Practical Nurse or Licensed Vocational Nurse	0.02	$26.24	$32.01	$0.64	$389	$19
Personal Care Aide	1.59	$11.08	$13.52	$21.49	$13,075	$654
Social Worker	0.01	$34.14	$41.65	$0.42	$253	$13
Total direct care labor cost					**$13,985**	**$699**

Other costs that vary by the number of residents

Annual License Renewal Fee per Bed[c]	$167	$8
Other Labor (administrative, dietary, activities staff, housekeeping, maintenance, marketing) including Payroll Tax and Benefits[a]	$15,185	$759

Revenues and Costs: Rough-Order-of-Magnitude (ROM) estimates to support early-stage planning: EXAMPLE

NOTE: e any numbers by entering different numbers, if you have specific information about pl

Step 1: Estimate number of beds and square footage to be included in the potential facility

A. Estimate the average number of residents each month

Number of Residents (=number of occupied beds)	**20**

B. After you enter a number in the yellow cell, the following two (green) cells will be filled-in automatically, using data from a nationwide survey[a].

B.1. The number you put in the yellow cell represents the number of occupied beds. Data from a nationwide survey[a] indicates that occupancy rates typically average 91%. This estimate is similar to anecdotal information from a Nevada ALF provider. We use this occupancy rate to compute the number of built

Number of Built Beds	**22**

B.2. National data from the The State of Seniors Housing 2019 Cost Report indicates the average number of square feet of personal space per built bed is 541 square feet. It also

Total Facility Square Footage	**20,570**

Number of Residents for sensitivity analysis

number of residents	20	10	20	40	80
per resident per month:					
fixed cost	$609	$1,218	$609	$305	##
net operatin	$645	$36	$645	$949	##
NOI - Repla	$535	($74)	$535	$839	##
NOI - Repl	$436	($173)	$436	$741	##

NOTE: Based on the assumptions used in this example, the ALF facility would generate a positive Net Operating Income (NOI), but this NOI is not sufficient to fund Replacement Reserves when the number of beds is 10. It is also not sufficient to fund Replacement Reserves and Debt Service. Developing a strategy for sustainable ALF for such a small facility will require boosting per-resident monthly revenues and/or reducing per-resident monthly costs. A combined license that permitted an ALF/AD/RC to share the resources that generate fixed costs could be one step. It may also be necessary to increase monthly fees (although this must be considered carefully due to the potential impact on the number of residents). Collaborating with a neighboring county to increase the number of adjusted potential residents and AD/RC participants could be a useful step. Obtaining funding to acquire, renovate or purchase a building from a source that does not rely on residents' monthly fees could also contribute to facility sustainability. For larger facilities (e.g. at least 20 beds), the NOI is sufficient to fund Replacement Reserves and Debt Service at the levels indicated in the AHSA report. These numbers represent averages for a wide range of facilities that may include facilities that have already completed making Debt Service payments and facilities that utilized capital from non-NOI sources. The level of Debt Service indicated in the AHSA report would not be large enought to repay debt on new construction.

Step 2: Estimate net revenues

Estimated net revenues will be filled-in automatically using the number of residents entered into cell C8 above, along with data on the current proportion of ALF stays with Medicaid as a payer (NSLTCP[b] 2016), the

Revenues

Residents with Each Payment Source

Payer Type	Proportion	Number of Residents	Number of Residents Rounded	Monthly Payment Rates*	Revenue
Medicaid	9.30%	1.86	2	$3,400	$6,800
private pay	90.70%	18.14	18	$3,400	$61,200
Net Revenues				**TOTAL**	**$68,000**

*The Medicaid monthly reimbursement rate (equal to the daily rate * (365/12)) is $1419. An ALF resident with Medicaid payment is responsible for the room and board component of the ALF charge. For this computation, we assume that the facility receives the the full facility charge. This is an arbitrary assumption. Actual revenue for clients with Medicaid payment would depend on the availability of federal, state and/or local subsidies for the client portion of the ALF charge. It will also depend on project goals, design and financing.

Step 3: Estimate fixed and variable operating costs

Estimated operating costs will be filled-in automatically (dark green cell), using work hours (per resident per day) from the NSLTCP survey, wage data from Nevada DETR, salary

Fixed Costs

	Annual Cost	Monthly Cost Total	Monthly Cost Per Resident
Facility Director ($66,800 salary[g] + 30% benefits)	$87,000	$7,250	$363
Executive Chef ($44,500 Salary[g] + 30% Benefits)	$58,000	$4,833	$242
Annual License Renewal Fee	$1,193	$99	$5
Total Fixed Cost	**$146,193**	**$12,183**	**$609**

Costs that vary with the number of residents

	Hours per Occupied Bed per Day[b]	Mean Hourly Wage[f]	Hourly Cost including 22% Payroll Tax and Benefits[a]	Daily cost = Hours per resident * hourly cost	Monthly Cost Total	Monthly Cost Per Resident
Direct care labor						
Registered Nurse	0.01	$35.96	$43.87	$0.44	$267	$13
Licensed Practical Nurse or Licensed Vocational Nurse	0.02	$26.24	$32.01	$0.64	$389	$19
Personal Care Aide	1.59	$11.08	$13.52	$21.49	$13,075	$654
Social Worker	0.01	$34.14	$41.65	$0.42	$253	$13
Total direct care labor cost					**$13,985**	**$699**
Other costs that vary by the number of residents						
Annual License Renewal Fee per Bed[c]					$167	$8
Other Labor (administrative, dietary, activities staff, housekeeping, maintenance, marketing) including Payroll Tax and Benefits[a]					$15,185	$759
Other Non-Labor Costs (raw food, activities, supplies, marketing)[a]					$7,584	$379
Workers Compensation[a]					$875	$44
Total: Other costs that vary by the number of residents					**$23,810**	$1,191
Total cost that varies by the number of residents					**$37,795**	**$1,890**

Costs that vary with the number of square feet

		Monthly Cost per Square Foot[a]	Monthly Cost Total	Monthly Cost Per Resident
Utilities	-	$ 0.25	$5,125	$256
Total Variable Cost (by square footage)			**$5,125**	**$256**

Total Operating Costs

	Monthly Operating Costs total	Monthly Operating Costs per resident
Total operating cost	**$55,103**	**$2,755**

Step 4: Compute estimated net operating revenue

Net Operating Income will be computed automatically, using the cost and revenue numbers estimated above. Net Operating Income is equal to monthly revenues minus monthly operating costs.

Net Operating Income	Total	Average per Resident
Total Monthly Revenues	68,000	3,400
Total Monthly Operating Costs	55,103	2,755

Net Operating Income	**12,897**	**645**

Replacement Reserve and Debt Service

Step 5:	**Capital Costs and Replacement Reserves**	**Average Annual per Resident**	**Average Monthly per Resident**
Estimated replacement reserve is median monthly costs per unit[a]; adjusted for facility occupancy.	**Replacement Reserve**	**$1,321**	**$110**
Debt Service is median monthly cost per unit[a]; adjusted for 91% facility occupancy	**Debt Service**	**$1,186**	**$99**

Step 6: Compute Net Operating Income minus Replacement Reserve

Net Operating Income (NOI)[a]	**$645**
Replacement Reserve[a]	**$110**
NOI - Replacement Reserve	**$535**

If (NOI - Replacement Reserve) is positive, the facility may be financially viable if facility acquisition or construction costs are funded from a separate source. The magnitude of (NOI - Replacement Reserve) is important, to provide resiliency in the face of changes in conditions underlying the assumptions and/or business risk.

Step 7: Compute (NOI - Replacement Reserve - Debt Service)

NOI - Replacement Reserve	**$535**
Debt Service	**$99**
NOI - Replacement Reserve - Debt Service	**$436**

If (NOI - Replacement Reserve - Debt Service) is positive, the facility may be financially viable if facility acquisition or construction costs are funded from revenues generated by facility operation. The magnitude of (NOI - Replacement Reserve - Debt Service) is important, to provide resiliency in the face of changes in conditions underlying the assumptions and/or business risk.

Step 8: Analyze senstivity to changes in assumptions and analyze risk, using the remaining two sheets in the workbook

TABLE NOTES

[a] The State of Seniors Housing 2019 (Chapters 3, 9 and 12), American Seniors Housing Association. Data is for 2018.

[b] NSLTCP is the 2016 National Study of Long Term Care Providers.

[c] Genworth 2019 Cost of Care Survey. https://www.genworth.com/aging-and-you/finances/cost-of-care.html

[d] Non-private space includes common areas, kitchen and dining, administrative and employee areas.

[e] State of Nevada HCQC

[f] State of Nevada DETR

g average salary information from Glassdoor.com (https://www.glassdoor.com/Salaries/assisted-living-director-salary-SRCH_KO0,24.htm#:~:text=The%20national%20average%20salary%20for,by%20Assisted%20Living%20Director%20employees)

Revenues and Costs: Rough-Order-of-Magnitude (ROM) estimates to support early-stage planning: EXAMPLE

NOTE: ty numbers by entering different numbers, if you have specific information abou

Step 1: Estimate number of beds and square footage to be included in the potential facility

A. Estimate the average number of residents each month

Number of Residents	20

B. After you enter a number in the yellow cell, the following two (green) cells will be filled-in automatically, using data from a nationwide survey[a].

B.1. The number you put in the yellow cell represents the number of occupied beds. Data from a nationwide survey[a] indicates that occupancy rates typically average 91%. This estimate is similar to anecdotal information from a Nevada ALF provider. We use this occupancy rate to

Number of Built Beds	22

B.2. National data from the The State of Seniors Housing 2019 Cost Report indicates the average number of square feet of personal space per built bed is 541

Total Facility Square Footage	20,570

Step 2: Estimate net revenues

Estimated net revenues will be filled-in automatically using the number of residents entered into cell C8 above, along with data on the current proportion of ALF stays with Medicaid as a payer

Revenues

Payer Type	Proportion	Residents with Each Payment Source: Number of Residents	Number of Residents Rounded	Monthly Payment Rates *	Revenue
Medicaid	9.30%	1.86	2	$3,400	$6,800
private pay	90.70%	18.14	18	$3,400	$61,200
Net Revenues				**TO1**	**$68,000**

*The Medicaid monthly reimbursement rate (equal to the daily rate * (365/12)) is $1419. An ALF resident with Medicaid payment is responsible for the room and board component of the ALF charge. For this computation, we assume that the facility receives the the full facility charge. This is an arbitrary assumption. Actual revenue for clients with Medicaid payment would depend on the availability of federal, state and/or local subsidies for the client portion of the ALF charge. It will also depend on project goals, design and financing.

Step 3: Estimate fixed and variable operating costs

Estimated operating costs will be filled-in automatically (dark green cell), using work hours (per resident per day) from the NSLTCP survey, wage data from Nevada

Fixed Costs

	Annual Cost	Monthly Cost: Total	Per Resident
Facility Director ($66,800 salary[g] + 30% benefits)	$87,000	$7,250	$363
Executive Chef ($44,500 Salary[g] + 30% Benefits)	$58,000	$4,833	$242
Annual License Renewal Fee	$1,193	$99	$5
Total Fixed Cost	**$146,193**	**$12,183**	**$609**

Costs that vary with the number of residents

	Hours per Occupied Bed per Day[b]	Mean Hourly Wage[f]	Hourly Cost including 22% Payroll Tax and Benefits[g]	Daily cost = Hours per resident * hourly cost	Monthly Cost: Total	Per Resident
Direct care labor						
Registered Nurse	0.01	$35.96	$43.87	$0.44	$267	$13
Licensed Practical Nurse or Licensed Vocational Nu	0.02	$26.24	$32.01	$0.64	$389	$19
Personal Care Aide	1.59	$11.08	$13.52	$21.49	$13,075	$654
Social Worker	0.01	$34.14	$41.65	$0.42	$253	$13
Total direct care labor cost					**$13,985**	**$699**
Other costs that vary by the number of residents						
Annual License Renewal Fee per Bed[d]					$167	$8
Other Labor (administrative, dietary, activities staff, housekeeping, maintenance, marketing) including Payroll					$15,185	$759
Other Non-Labor Costs (raw food, activities, supplies, marketing)[g]					$7,584	$379
Workers Compensation[g]					$875	$44
Total: Other costs that vary by the number of residents					**$23,810**	$1,191
Total cost that varies by the number of residents					**$37,795**	**$1,890**

Costs that vary with the number of square feet

		Monthly Cost per	Monthly Cost Total	Per Resident
Utilities	-	$ 0.25	$5,125	$256
Total Variable Cost (by square footage)			**$5,125**	**$256**

Total Operating Costs

	Monthly Operating Costs total	per resident
Total operating cost	**$55,103**	**$2,755**

Step 4: Compute estimated net operating revenue

Net Operating Income will be computed automatically, using the cost and revenue numbers estimated above. Net Operating

Net Operating Income	Total	Average per
Total Monthly Revenues	68,000	3,400
Total Monthly Operating Costs	55,103	2,755
Net Operating Income	**12,897**	**645**

Step 5: Replacement Reserve and Debt Service

Estimated replacement reserve is median monthly costs per unit[c]; adjusted for facility occupancy.

Debt Service is median monthly cost per unit[c]; adjusted for 91% facility occupancy

Capital Costs and Replacement Reserves	Average Annual per Resident	Average Monthly per Resident
Replacement Reserve	**$1,321**	**$110**
Debt Service	**$1,186**	**$99**

Step 6: Compute Net Operating Income minus Replacement Reserve

Net Operating Income (NOI)[g]	**$645**
Replacement Reserve[g]	**$110**
NOI - Replacement Reserve	**$535**

If (NOI - Replacement Reserve) is positive, the facility may be financially viable if facility acquisition or construction costs are funded from a separate source. The magnitude of (NOI - Replacement Reserve) is important, to provide resiliency in the face of changes in conditions underlying the assumptions and/or business risk.

Step 7: Compute (NOI - Replacement Reserve - Debt Service)

NOI - Replacement Reserve	**$535**
Debt Service	**$99**
NOI - Replacement Reserve - Debt Service	**$436**

If (NOI - Replacement Reserve - Debt Service) is positive, the facility may be financially viable if facility acquisition or construction costs are funded from revenues generated by facility operation. The magnitude of (NOI - Replacement Reserve - Debt Service) is important, to provide resiliency in the face of changes in conditions underlying the assumptions and/or

Step 8: Analyze sensitivity to changes in assumptions and analyze risk, using the remaining two sheets in the workbook

If the actual number of residents is equal to the expected number (in cell c8).

assume the expected number of residents =	20	
Net Operating Income	**Monthly Total**	**Average per Resident**
Total Monthly Revenues	$68,000	$3,400
Total Monthly Operating Costs	$55,103	$2,755
Net Operating Income	**$12,897**	**$645**

assume the expected number of residents =	80	
Net Operating Income	**Monthly Total**	**Average per Resident**
Total Monthly Revenues	$272,000	$3,400
Total Monthly Operating Costs	$183,864	$2,298
Net Operating Income	**$88,136**	**$1,102**

If the actual number of residents is only 80% of the expected number (in cell c9).

Net Operating Income IF the actual number of residents is only 80% of the expected number	Monthly Total	Average per Resident
Total Monthly Revenues	$54,400	$3,400
Total Monthly Operating Costs	see detail below	
Net Operating Income		
Assume the ratio of Medicaid to Private-Pay clients is maintained		
Total Monthly Revenues	$54,400	$3,400
Total Monthly Operating Costs		
Fixed operating costs	$12,183	$761
Operating costs vary by residents	$30,236	$1,890
Operating costs vary by sq. feet	$5,125	$320
Net Operating Income	**$6,856**	**$428**

Net Operating Income IF the actual number of residents is only 80% of the expected number	Monthly Total	Average per Resident
Total Monthly Revenues	$217,600	$3,400
Total Monthly Operating Costs	see detail below	
Net Operating Income		
Assume the ratio of Medicaid to Private-Pay clients is maintained		
Total Monthly Revenues	$217,600	$3,400
Total Monthly Operating Costs		
Fixed operating costs	$12,183	$190
Operating costs vary by residents	$120,944	$1,890
Operating costs vary by sq. feet	$20,501	$320
Net Operating Income	**$63,972**	**$1,000**

change in net operating income:	**$6,041**	**change in net operating income:**	**$24,164**
percent change in net operating income:	**47%**	**percent change in net operating income:**	**27%**

Note: If the actual number of residents is equal to 80% of the expected number, Net Operating Income drops by 47% in an ALF that expected to have 20 residents. The decline is smaller (27%) in an ALF that expected to have 80 beds.

TABLE NOTES

[a] The State of Seniors Housing 2019 (Chapters 3, 9 and 12), American Seniors Housing Association. Data is for 2018.
[b] NSLTCP is the 2016 National Study of Long Term Care Providers.
[c] Genworth 2019 Cost of Care Survey. https://www.genworth.com/aging-and-you/finances/cost-of-care.html
[d] Non-private space includes common areas, kitchen and dining, administrative and employee areas.
[e] State of Nevada HCQC
[f] State of Nevada DETR
g average salary information from Glassdoor.com (https://www.glassdoor.com/Salaries/assisted-living-director-salary-SRCH_KO0,24.htm#:~:text=The%20national%20average%20salary%20for,by%20Assisted%20Living%20Director%20employees)