Understanding the Benefits of Providing Assisted Living-Like Supports to Older and Disabled Adults in Subsidized Housing Settings

Final Summary Report

Authors: Christin Lindberg, Greg Owen, and Cael Warren

With support from the Amherst H. Wilder Foundation, Healthy Aging and Caregiver Services; Minnesota Department of Human Services, Aging and Adult Services Division; Saint Paul Public Housing Agency

JUNE 2020

451 Lexington Parkway North | Saint Paul, Minnesota 55104
651-280-2700 | www.wilderresearch.org

Wilder Research®
Information. Insight. Impact.

Contents

Figures

Executive summary

Background and need

A review of current literature, a service gaps analysis conducted by Minnesota's Department of Human Services, and discussions with housing and service providers in Minnesota; highlight the inadequate supply of housing programs with supportive services that can accommodate the needs of low-income older adults with health and functional impairments.

Evidence indicate housing programs that include services and supports for older adults can result in cost savings, due to the lower costs associated with this level of care (vs. more restrictive settings, such as nursing homes) (Brown et al., 2013; Burt, 2015; CORE, 2013; Ficke & Berkowitz, 2000; Golant, 2008; Golant et al., 2010; Joint Center for Housing Studies of Harvard University, 2014; Lepore, et al., 2017; McFadden & Lucio, 2014; Redfoot & Kochera, 2005; Wilkins, 2015).

Customized Living as a solution

Customized Living is one service option available under Minnesota's Home and Community Based Services (HCBS) waiver programs for Brain Injury (BI), Community Access for Disability Inclusion (CADI), and Elderly Waiver (EW). It provides an individualized package of regularly scheduled health-related and supportive services to persons who reside in a qualified, registered housing with services establishment. Services are delivered by a comprehensive home care provider licensed by the Minnesota Department of Health. Covered services include, 1) Activities of Daily Living assistance, 2) Mental health, cognitive or behavioral concerns assistance, 3) Health related assistance, 4) Home management tasks, 5) Non-medical transportation, and 6) Socialization.

Study Approach

To assess the extent to which Customized Living supports, in combination with subsidized housing programs, provide an effective strategy to address these needs, Wilder Research collaborated with the Minnesota Department of Human Services, Aging and Adult Services Division to develop a study of Customized Living services delivered in subsidized housing settings. The study:

- Describes the service model used by the Wilder Foundation's Aging Services Division to deliver assisted living-like services to low-income adults in Ravoux and Hamline Hi-Rise public housing programs in St. Paul using Customized Living supports
- Examines other similar models that combine some form of subsidized housing with

Customized Living supports in both metro and non-metro counties throughout the State

- Assesses the costs of delivering these services to Ravoux and Hamline program clients and compares these costs to a sample of other Minnesota residents who also receive Customized Living supports
- Identifies the benefits and challenges of using Customized Living supports to serve older adults in subsidized housing

Findings

- Demographic trends suggest that there will be continued growth for at least the next decade in the number of low-income older adults in Minnesota and that there will be a continuing need to expand services and supports as chronic health conditions further diminish the functional abilities of those in this population.
- Many low-income older adults have had unstable housing histories, including episodes of homelessness, which, when combined with other risk factors, further increases vulnerability.
- Public housing facilities are one of the most important resources already present and deployed throughout Minnesota to help low-income residents achieve stable housing. The present study has explored how these and similar subsidized housing programs have partnered with nonprofits like Wilder to deliver Customized Living services to health-challenged residents and create assisted-living like supportive housing environments.
- There are at least 25 other housing sites in the state that, like Wilder, combine Customized Living supports funded through Medicaid waiver programs and some form of housing subsidy to deliver supportive services to frail older adults residing in low-income housing with services settings.
- While the models differ in several ways, they all seek to allow a person to remain in their own housing despite health limitations. However, the waiver rates providers receive for clients assessed at lower case mix levels, who have lower budget amounts, are sometimes not fully adequate to cover service costs if the provider does not also serve other residents who pay privately or receive higher reimbursement amounts based on higher levels of assessed need.
- A comparison of Saint Paul Public Housing residents receiving Customized Living supports through Wilder at two program sites (Ravoux and Hamline Hi-Rises) to a proportionate comparison group of 1,094 people identified through State claims data who also received Customized Living supports in October 2018 shows that the two groups are similar in many respects. However, the following differences were observed:
  - Wilder programs serve a larger percentage of divorced older adults

- Wilder clients are somewhat less costly to the Customized Living program
- Wilder clients are more racially diverse
- Wilder clients have somewhat lower numbers of hospital or ER admissions (although these data are based on self-reports and need to be interpreted with caution)

- Differences observed between Wilder clients and the comparison group are likely due to the use of additional supports and services available through Public Housing by Wilder clients, especially the Congregate Housing Services Program (CHSP), as well as the ability of Wilder program staff to connect residents to additional resources in the wider community.

Conclusions

- Results support the claim that providing Customized Living services in a subsidized living setting has benefits for both the State and for the residents served by the program. Further analysis, covering a broader time span, could reveal additional patterns in groups' characteristics, and costs and expenditures by the State of Minnesota.
- The study demonstrates that Customized Living supports, in combination with subsidized Public Housing, is a cost effective strategy for supporting the health and functional needs of this population without incurring the higher costs associated with skilled care facilities.

Introduction

Background

One of the important issues facing the nation today is our changing demographic profile and the tremendous growth in the older adult population. As older adults live longer and live with chronic conditions, their reliance on long-term services and supports will also increase. But, not all older adults have access to income and other resources that will pay for the care they will need as they grow older and increasingly need help with daily functioning. High costs of housing, for example, leave low-income older adults with fewer resources for food, medicine, and services that can support their independence (Minnesota Compass, 2019). Poor nutrition and scarce medical care may exacerbate multiple chronic conditions. The risk of homelessness may also increase.

All indications are that the demands for affordable housing, rental assistance, and community-based services and supports will increase. At the same time, the financial pressures on publicly funded health care programs like Medicaid, which low-income older adults rely on for their care, will also grow. Policy leaders have been clear about the need for strategies that can produce cost savings in the care of low-income older adults who are eligible for Medicaid and qualify for nursing home care.

Subsidized housing, such as public housing, is an important option for many low-income older adults. However, living in a public housing setting may prove particularly challenging when significant health problems emerge. If older adults' health issues cannot be managed effectively and safely within the public housing setting, they may need to move to more costly and restrictive settings, such as skilled nursing facilities. Those without means or eligibility for services may also end up homeless. Preventing these outcomes can allow older adults to maintain a higher level of independent living, and potentially reduce costs to public systems.

Until the 1980s, care options for older adults with chronic medical conditions were dominated by skilled nursing facilities. Assisted living programs that provide housing and some supports for daily living emerged, partly because of negative perceptions of nursing homes, and partly because of the need for a bridge between independent living and the higher level of care provided by nursing homes. The lower cost of assisted living programs, relative to nursing homes, has also contributed to their appeal.

In fact, researchers and policymakers are taking a closer look at the potential for cost savings that may result from supporting older adults in less restrictive living settings. An article in U.S. News and World Report by Henry Cisneros and Vin Weber summarizes the importance of strategies that address the housing needs of older adults (2015):

> *Responding to the needs of an aging population will be one of the most complex public policy challenges facing our nation in the 21st century. A successful response will require innovative approaches that bring together the best thinking from a variety of different fields and disciplines. A critical element of any strategy must be more effective use of housing as a platform for the delivery of health care and other services.*

In general, researchers and policy leaders agree about the following:

- There is an inadequate supply of housing programs with supportive services that accommodate low-income older adults
- There is an increasing need among low-income, frail older adults for affordable housing with co-located supportive services that may help delay institutionalization
- Housing programs that include services and supports for older adults can improve quality of life, well-being, and independence
- Housing programs that include services and supports for older adults can result in cost savings, due to the lower costs associated with this level of care (vs. more restrictive settings, such as nursing homes) (Brown et al., 2013; Burt, 2015; CORE, 2013; Ficke & Berkowitz, 2000; Golant, 2008; Golant et al., 2010; Joint Center for Housing Studies of Harvard University, 2014; Lepore, et al., 2017; McFadden & Lucio, 2014; Redfoot & Kochera, 2005; Wilkins, 2015).

While it may seem to follow that the cost of providing care in assisted living settings will be less than in skilled nursing facilities, there is not a clear description of how these models vary; how costs are distributed among public agencies, housing providers, and residents; or what types of cost savings may be realized through these programs.

Minnesota

In Minnesota, the majority of assisted living programs are private-pay facilities (Maxfield, Research, 2018), although many do allow a proportion of their residents to use Elderly Waiver funds to pay for their care.[1] Some facilities may require older adults first to enter the facility with private-pay funding before transitioning to public assistance status after a specified period of time (Maxfield Research, 2018). Reimbursement rates for care for residents on public assistance typically do not fully cover operating costs of programs, often making long-term sustainability dependent on private pay funding or some other form of subsidy.

Minnesota has recently passed legislation that clarifies rules and licensing requirements regarding the operation of assisted living programs,[2] which may influence the operation and management of the programs. Until now, programs seeking to help low-income older and disabled adults have managed by using a variety of creative strategies in order to implement service models that allow individuals who qualify for some type of housing subsidy to remain in their home. These programs, like the two operated by the Amherst H. Wilder Foundation (housed at Saint Paul Public Housing Agency (SPPHA) sites Ravoux and Hamline), often receive Medicaid waiver funding through Customized Living services, as well as federally and county-funded health and nutrition programs, and other community-based services to patch together a more comprehensive care model within publicly funded, multi-unit housing programs. Through these efforts, we have seen an expansion of program opportunities for low-income older adults that approximate the models seen in market rate assisted-living programs.

If these programs are in fact reducing financial demands on Minnesota's Medicaid program, specifically regarding authorization and use of skilled nursing facilities, there may be good reason to bolster support for these programs, increase their availability, and strengthen their sustainability and effectiveness. Staff from Wilder Research; Wilder's Healthy Aging and Caregiver Services; and the Minnesota Department of Human Services, Aging and Adult Services division believe that the unique service model of Ravoux and Hamline Customized Living programs merits further examination and assessment. This report is the response to understanding these issues further.

A complete annotated bibliography of articles and sources is located in Appendix C.

---

1 Maxfield Research (2018) reported that 15% to 20% of residents at assisted living facilities use Elderly Waivers.

2 Effective August 1, 2021, no assisted living facility may operate in Minnesota unless it is licensed under Section 3 of statue 144I.02 (sub.1). Specific rules regarding the new licensure requirement will be written beginning July 1, 2019. https://www.revisor.mn.gov/laws/2019/0/Session+Law/Chapter/60/

Study design

In partnership with the Minnesota Department of Human Services, Aging and Adult Services Division, Wilder developed a study of Customized Living services delivered in subsidized housing settings. There are four main objectives:

1. Describe the service model, cost of service delivery, outcomes, and population served by Ravoux and Hamline Customized Living programs.
2. Describe similar models in Minnesota and in other states.
3. Determine and compare the cost of Wilder's model to the cost of services required to serve clients with similar needs in alternative care settings.
4. Describe the key challenges Minnesota providers face in executing this model and recommend possible changes to sustain and strengthen the model for the future.

The study included two phases, with the following data sources and methods (Figure 1). The work originally scheduled for a third phase (Objective #4) was cancelled due to uncertainty surrounding the circumstances of shelter-in-place laws and public health guidelines related to the COVID-19 pandemic.

1. Study objectives, data sources, methods

Phase	Objective	Data sources	Method
1	#1 Describe the service model, full cost of service delivery, outcomes, and population served	Resident records from Wilder Administrative and program records from Wilder Feedback survey from Ravoux and Hamline residents	Review of records Analysis of data Summarize findings
1	#2 Describe assisted living and other similar models in Minnesota	Literature review Environmental scan Key experts and program directors in Minnesota	Review information Complete phone interviews Summarize findings
2	#3 Determine and compare the cost of Wilder's model to the cost of services required to serve clients with similar needs in alternative care settings	Industry records and cost estimates Administrative and program records from Wilder Elderly Waiver, Brain Injury Waiver, and Community Access for Disability Inclusion Waiver reimbursement data from MN Department of Human Services	Review of records and information Complete financial analysis Completed other data analysis Summarize findings
3	#4 Describe the key challenges Minnesota providers face in executing this model and recommend possible changes to sustain and strengthen the model for the future	Results of study Key stakeholders in Minnesota	Convening to present results, collect feedback Summarize findings

Key terms and definitions

Activities of Daily Living

Activities of Daily Living (ADLs) are defined as basic self-care activities. Individuals' capacity for completing ADLs may be assessed to determine their eligibility for benefits and the need for assistance. ADLs assessed in order to determine Case Mix Classification include (Minnesota Department of Human Services, 2017a):

- Dressing
- Grooming (personal hygiene)
- Bathing
- Eating
- Bed mobility (positioning)
- Transferring (mobility)
- Walking
- Toileting

Case Mix Classification

Case Mix classifications are based on completed Long-Term Care Consultation assessments that consider age and evaluate Activities of Daily Living dependencies, special nursing needs, behavior intervention needs, neuromuscular diagnoses, and ventilator dependency (Minnesota Department of Human Services, 2019b).

2. Case Mix Classification summary

Case Mix designation	Summary description
L	Very Low ADL, and age 65 or older
A	Low ADL (0-3 dependencies)
B	Low ADL, with behavior intervention needs (e.g., requires staff to provide cues, redirection, increasing frequency of intervention due to varied levels of resistance)
C	Low ADL, with special nursing needs (e.g., tube feeding, clinical monitoring, or other special treatment such as wound or skin care, catheters, respiratory therapy)
D	Medium ADL (4-6 dependencies)
E	Medium ADL, with behavior intervention needs
F	Medium ADL, with special nursing needs
G	High ADL (7-8 dependencies)
H	High ADL, with behavior intervention needs
I	Very High ADL, including high needs with eating (e.g., assistance with feeding to avoid choking, or tube feeding)

2. Case Mix Classification summary (continued)

Case Mix designation	Summary description
J	High ADL, with severe neurological impairment (e.g., nervous system disease, cerebrovascular disease, skull fracture, spinal cord injuries, or neoplasms of the brain or spine), and high behavior intervention needs
K	High ADL, with special nursing needs
V	Ventilator dependent (on Elderly Waiver)

Community-based waiver programs

Community-based waivers are Medicaid-funded programs that provide home and community-based services (HCBS) as alternatives to institutionalization. The goal of waiver programs is to promote the optimal health, independence, safety, and integration of an eligible person who would otherwise require care provided in a specialized nursing facility or neurobehavioral hospital. Participants in Minnesota's HCBS waivers must be financially eligible for Medical Assistance and meet other eligibility requirements specific to each program. Minnesota HCBS waivers that fund Customized Living services include Brain Injury (BI), Community Access for Disability Inclusion (CADI), and Elderly Waiver (EW). More information about eligibility can be found in the DHS Community-Based Services Manual (Minnesota Department of Human Services, n.d.-a).

Brain Injury Waiver (BI)

The Brain Injury Waiver is a home and community-based waiver for people who have been diagnosed with a brain injury or related neurological condition that results in significant cognitive and behavioral impairment. People must be younger than 65 at the time of opening the waiver.

Community Access for Disability Inclusion (CADI) Waiver

The CADI waiver is a home and community-based waiver for people who have a certified disability and are younger than 65 at the time of opening the waiver.

Elderly Waiver (EW)

The EW is a home and community-based waiver for people age 65 and older who require the level of care provided in a nursing facility and choose to reside in the community.

Customized Living

Customized Living is one service option available under Minnesota's HCBS waiver programs (BI, CADI, and EW). It provides an individualized package of regularly scheduled health-related and supportive services to persons who reside in a qualified, registered housing with services establishment. Services are delivered by a comprehensive home care provider licensed by the Minnesota Department of Health. Covered services include:

- Activities of Daily Living assistance
- Mental health, cognitive or behavioral concerns assistance
- Health related assistance
- Home management tasks
- Non-medical transportation
- Socialization

Instrumental Activities of Daily Living

Instrumental Activities of Daily Living (IADLs) are defined as activities that people must be able to complete in order to live independently. Individuals' capacity for completing IADLs may be assessed to determine their need for assistance. IADLs include (Minnesota Department of Human Services, 2017b):

- Light housework
- Meal preparation
- Medication management
- Shopping (groceries, clothes, etc.)
- Using the telephone
- Managing finances

Long-Term Care Consultation

Long-Term Care Consultation (LTCC) services are provided by each Minnesota county and Tribal government to help individuals who wish to remain at home make decisions about long-term care services and supports. LTCC services are also provided by managed care organizations (MCOs) for people age 65 or older who are already enrolled in Medical Assistance. Any person with long-term or chronic care needs can request and is entitled to receive a LTCC service, regardless of their age or eligibility for public programs. Results of the Long Term Care assessment are used to determine Case Mix and eligibility for benefits.

Medical Assistance

Minnesota's federal Medicaid program that provides medical care for low-income persons, including people age 65 or older and people who have a certified disability. Medicaid is funded equally by Minnesota and the federal government.

Nursing facility level of care criteria

To meet the requirements for a nursing facility level of care, a person over the age of 21 must demonstrate the need for assistance because of one or more of the following:

- Does or would live alone or be homeless without his/her current housing type **and** meets one of the following:
  - Has had a fall resulting in a fracture within the last 12 months
  - Has a sensory impairment that substantially impacts functional ability and maintenance of a community residence
  - Is at risk of maltreatment or neglect by another person, or is at risk of self-neglect
- Has a dependency in four or more Activities of Daily Living (ADLs)
- Has significant difficulty with memory, using information, daily decision-making, or behavioral needs that require intervention
- Needs the assistance of another person or constant supervision to complete toileting, transferring, or positioning, and this assistance cannot be scheduled
- Needs formal clinical monitoring at least once a day

Main objective 1

Describe the service model, cost of service delivery, outcomes, and populations served by Wilder's Customized Living programs at Ravoux and Hamline Hi-Rise buildings.

Wilder Foundation

Since 1906, the Amherst H. Wilder Foundation has been meeting the needs of vulnerable individuals and families throughout the Saint Paul East Metro area. Wilder's first direct service program, the Visiting Nurse Department, was designed to provide in-home nursing care to low-income and sick residents of Saint Paul, including many older adults. The legacy continues today with a wide variety of direct services designed to maximize the independence and quality of life for vulnerable and older adults and their caregivers. Wilder's Healthy Aging and Caregiver Services provides services and supports through Adult Day Health, Meals on Wheels, health and wellness education, caregiver support, and the Customized Living program.

Customized Living Program

Wilder's Customized Living program[3] brings customized living services, including health-related and supportive services, to older adults and adults with medical, mental health, or other disabilities who live at two Saint Paul Public Housing sites--Ravoux Hi-Rise and Hamline Hi-Rise. The goal of the program is to help residents experience independence, safety, comfort, cleanliness, dignity, and stability. The program works in partnership with the Saint Paul Public Housing Agency (SPPHA) and is one of a small number of customized living programs in Minnesota that serves residents of public housing. The target population is low-income adults who are at risk of institutionalization or nursing home placement and need access to daily health related and functional living support. People served in this program are some of the most vulnerable adults in the community.

The Customized Living program at Ravoux Hi-Rise has been in operation since 1987 and serves adults of any age. There are a total of 220 units at Ravoux Hi-Rise, with 59 designated as Wilder Customized Living units. The program at Hamline Hi-Rise has been in operation since 1995 and serves adults age 55 and older. There are a total of 186 units at Hamline Hi-Rise, with 42 designated as Wilder Customized Living units.

[3] Prior to 2018, the program was referred to as the Assisted Living program.

Congregate Housing Services Program

The Saint Paul Public Housing Agency provides the Congregate Housing Services Program (CHSP), a home management program that provides supports for residents to help them maintain their independence for as long as possible (Saint Paul Public Housing Agency, n.d.-a). Ravoux Hi-Rise is one of four sites in Saint Paul that offers CHSP services. Wilder's Customized Living program provides a higher level of support than services offered through CHSP. CHSP provides the following individualized, non-medical services to older or disabled adults:

- Service coordination for information and referral, and customized supports like transportation and appointments
- Congregate meals served once daily Monday through Friday, and twice on Saturday and Sunday
- Regular housekeeping assistance. Laundry service is also available, as needed
- A nurturing community with access to building amenities and social activities

CHSP is funded through fees that are a percentage of each resident's income, a grant from the U.S. Department of Housing and Urban Development, and matching community resources.

Eligibility criteria

To be eligible for the Wilder Customized Living program, an individual must meet public housing income eligibility[4] and live in a setting where services are offered; be eligible for BI, CADI, or EW; choose to receive customized living services from Wilder; and meet the following program-specific standards and requirements:

- Transfer independently, be continent or self-managed in bowel or bladder function
- Recognize and communicate his or her own needs
- Eat independently
- Be able to follow directions without frequent assistance, and respond to redirection
- Safely self-administer most medications, or accept medication set-up and reminders from staff. Insulin-dependent individuals must be able to inject themselves.
- Not wander
- Individuals must also comply with safety measures

[4] Annual Income of ≤$47,600 (per HUD)

- They may not:
  - Be a danger to self or others
  - Verbally or physically abuse, threaten, or intimidate others
  - Destroy property
- They must:
  - Be able to notify staff of emergencies (phone, call cord, or emergency system)
  - Wear clothes that are appropriate for the weather conditions
  - (If a smoker) be a safe smoker

Person-centered care

A person-centered approach is a key feature of Wilder's Customized Living program; it promotes choices and independence. Through Wilder's Customized Living program, residents are offered:

- Private, one-bedroom apartments with a lock on the door and a choice in decorating the apartment
- Full kitchen
- Private bathroom with shower
- The freedom to have visitors at any time, subject to public housing regulations
- Access to food throughout the day
- Community and educational activities
- Flexibility around how services are delivered
- Common areas with computers and televisions

Services

Residents receive the following services through the Customized Living program:

- Nutritious meals
- Housecleaning assistance and laundry services
- Medication set-up and monitoring
- 24-hour emergency response and assistance from on-site staff
- 24-hour on-call nursing consultation and staff supervision
- Service coordination
- Customized personal care assistance, including bathing, grooming, and dressing; medication administration; and social service support

Staffing

The following staff comprise the core Customized Living program team:

- Customized Living Manager
- Registered Nurse Case Manager
- Licensed Practical Nurse (one full-time, one part-time)
- Social Worker
- Assisted Living Aides

In addition, the program holds external contracts with an Occupational Therapist, a Physical Therapist, and a Speech Therapist.

Costs of service delivery

The following costs are compiled from Wilder Foundation financial records, average tenant payment data for older and/or disabled residents in Saint Paul Public Housing, and MN DHS data for residents who have customized living claims (Figure 3).

3. Payment sources and average monthly costs for care for Wilder residents

	Average monthly cost per resident
Customized Living claims	$1,436
Public housing subsidy[5]	$550
Hamline and Ravoux resident rent	$286
Total average cost for housing and Customized Living services	$2,272

The total range of services that help care for residents of Ravoux and Hamline is funded by multiple sources. In addition to reimbursed Customized Living claims, residents' care may also be covered by a combination of the following sources:

- Federal Older Americans Act Title III funding (after HCBS waiver resources are exhausted)
- Meal fees
- Philanthropy

[5] Tenant rent payment and subsidy amount are computed as the average rent and subsidy per resident at Hamline and Ravoux. These values reflect all housing units in these properties and are not limited to the units served by Wilder.

Characteristics of program participants

From July 1, 2018, through January 31, 2019, 112 residents participated in Wilder's Customized Living program. Of these, 60% lived at Ravoux Hi-Rise and 40% lived at Hamline Hi-Rise. Figure 4 describes the demographic characteristics of program participants.

4. Characteristics of program participants (July 1, 2018 to January 31, 2019)

Characteristics	Total (N=112)
Program	
Ravoux	60%
Hamline	40%
Gender	
Male	51%
Female	49%
Race/ethnicity	
White	62%
Race or ethnicity other than White[a]	38%
Identify as Hispanic or Latino	3%
Age	
55 and over	76%
Under 55	24%
Range	22-96 years
Average	62 years
Length of participation	
Two years or less	60%
More than two years	40%
Language	
English is not primary language	3%

[a] Due to small numbers, African, African American, American Indian, Asian/Pacific Islander, Multiracial, and Other categories were combined.

Differences in population characteristics by site

The two Customized Living program sites—Hamline and Ravoux—serve populations with somewhat different characteristics. Most significant is that the Hamline program provides care only for adults age 55 and over, while Ravoux also serves younger adults with disabilities (Figure 5).

5. Age of program participants by site

Age of program participants	Hamline (N=46)	Ravoux (N=66)
55 and over	100%	59%
Under 55	0%	41%
Range	58-96 years	22-87 years
Average	71 years	56 years

Other key differences between the two sites include gender and length of participation. Nearly 60% of residents at Hamline are female, while nearly 60% of residents at Ravoux are male. Seventy percent of residents at Hamline have lived there for two years or less, compared to 53% of residents at Ravoux (Figure 6).

6. Gender and length of participation by site

Client characteristics	Hamline (N=46)	Ravoux (N=66)
Gender		
Male	41%	58%
Female	59%	42%
Length of participation		
Two years or less	70%	53%
More than two years	30%	47%

Health status of participants

Intake data are collected as part of the compliance process for home care licensing. Intake data for Ravoux and Hamline Customized Living participants indicate that:

- The top three health conditions were mental, behavioral, and neurodevelopmental diseases (58%), circulatory system diseases (27%), and endocrine, nutritional, and metabolic diseases (23%) (Figure 7).
- Of residents who reported mental or behavioral diseases, the largest proportions reported psychotic disorders (47%) and mood disorders (47%) (Figure 8).

- Of residents who reported circulatory diseases, two-thirds (66%) said they have hypertension (Figure 9).
- Nearly all residents (96%) receive medication management services and 41% receive diabetes care (Figure 10).
- Thirteen percent of residents had a recent fall before intake (Figure 11).
- Forty-five percent of residents had at least one hospitalization in 2018 (Figure 12).
- The most common reason why residents left the program in 2018 was due to a referral for more intensive services (8 residents), followed by moving out of the area (6 residents), the client declining services (4 residents), and death (4 residents) (Figure 13).

7. Health diagnoses of program participants at intake

Disease diagnoses for residents (N=106)	Percentage reporting this
Mental, behavioral, and neurodevelopmental diseases	58%
Circulatory system	27%
Endocrine, nutritional, and metabolic	23%
Nervous system	13%
Respiratory system	6%
Infectious diseases	5%
Neoplasms	5%
Digestive system	5%
Musculoskeletal system and connective tissues	5%
Genitourinary system (including kidney disease)	5%
Congenital malformations, deformations, chromosomal abnormalities	3%
Blood and blood-forming organs	<1%
Ear and mastoid process	<1%
Skin and subcutaneous tissue	<1%
Miscellaneous (including injury/poisoning, general effects of health status)	16%
Any two disease diagnoses	92%

Source. Wilder Customized Living program client intake data
Note. Some residents have multiple diagnoses. ICD-10 CM: International Classification of Diseases Diagnosis Codes (CDC.gov)

8. Detail for program participants reporting mental or behavioral diseases (N=62)

Mental, behavioral, and neurodevelopmental diseases	Percentage of residents with mental or behavioral disease diagnosis
Psychotic disorders	47%
Mood disorders	47%
Anxiety disorders	18%
Other (non-specified)	13%
Personality disorders	5%
Intellectual and developmental disabilities	2%

Source. Wilder Customized Living program client intake data
Note. Some residents have multiple diagnoses

9. Detail for program participants reporting circulatory system diseases (N=29)

Circulatory system diseases	Percentage of residents with circulatory system disease diagnosis
Hypertensive disease	66%
General (non-specified)	34%

Source. Wilder Customized Living program client intake data

10. Services recorded for program participants at intake (N=106)

Services	Percentage
Medication management (including storage, set-up, psychotropics)	96%
Diabetes care (including insulin or blood sugar checks)	41%
Skin treatment	28%
Respiratory supports (including nebulizer, oxygen, CPap/BiPap)	21%
Bed rails or grab bars	9%
Physical Therapy/Occupational Therapy/Speech Therapy	6%
Dialysis	1%
Up to 3 services	40%
Four or 5 services	46%
More than 5 services	14%

Source. Wilder Customized Living program client intake data
Note. Percentages are greater than 100 due to multiple responses

11. Events recorded for program participants at intake (N=106)

Events	Percentage
Falls	13%
Recent hospitalization	8%
Dehydration	2%

12. Number of residents with at least one hospitalization in 2018

At least one hospitalization	Number
Residents at Hamline (N=46)	16
Residents at Ravoux (N=66)	30
Total residents (N=102)	46

13. Reasons for residents' discharge in 2018

Reason	Number
Client referred to more intensive level of service	8
Client moved out of area	6
Client declined ongoing services	4
Client died	4
Client referred to lower level of service	1
Lack of contact/inconsistent attendance	1

Program participants' experiences with the program

In December 2018, Wilder Research staff conducted in-person client feedback surveys with a random sample of current residents at Ravoux Customized Living and Hamline Customized Living.[6] Residents who had been part of the program for at least 30 days were eligible to participate in the survey. The purpose of the survey was to learn about residents' satisfaction with the Wilder Customized Living program and their perspectives on how certain aspects of their lives may have changed since they began participating in the program. Characteristics of the residents who were interviewed are similar to the characteristics of all residents in the Customized Living program.

[6] Consistent with the practices of most direct service organizations, Wilder seeks routine feedback from service users as part of its program evaluation protocol. But, unlike most nonprofit service providers, Wilder Research staff are solely responsible for this work; guarantee anonymity and confidentiality for all respondents; use scientifically grounded methods for sampling, interviewing, and analyzing data; and report findings independently of the influence of direct service staff.

Changes in residents' lives

Residents were asked questions about specific changes that may have occurred in their lives since they moved to the Customized Living program, including changes in their overall health, their ability to handle day-to-day problems, and the amount of social contact they have with others.

Residents reported the following since moving to Wilder's Customized Living program:

- 48% of respondents said their overall health had improved, more than one-third (36%) said their health had stayed about the same, and 16% said their overall health had declined.
- 47% of respondents said their ability to handle problems was a little or a lot better, and 45% said it was about the same.
- 32% of respondents said they had more social contact, 44% said it was about the same, and 24% said they had less social contact.

Assessment of the program by residents

High percentages of survey respondents expressed positive views about the following aspects of the program:

- **Program staff:** At least 90% of respondents reported high levels of satisfaction with the friendliness of staff, staff respect for their privacy, being able to count on staff, and the interest staff show in them as individuals.
- **Physical environment and safety:** At least 92% of respondents reported that their rooms and surroundings were clean and comfortable, that they had the right amount of privacy, and that they felt safe.
- **Person choices:** At least 88% of respondents reported being satisfied with choosing whether or not to lock their doors; when, where, and what they eat; staff respecting their choices; and who visits and when.
- **Support for health and personal care:** At least 80% of residents said they were satisfied with the way the program helps them manage their health care needs and with their personal care assistance needs.
- **Support for individual needs and priorities:** 84% of residents said the program is doing an excellent or good job of helping them with the things they say are the most important to them about the program.
- **Social contact:** 94% of residents said they were satisfied with the opportunities they had to be with other people.

Main objective 2

Describe similar models in Minnesota.

The Wilder Foundation's model of providing HCBS waiver-funded customized living services to low-income older adults in subsidized housing (including public housing facilities) is not unique in Minnesota. There are many other housing sites in the state that combine customized living services funded through Medicaid waiver programs and some form of housing subsidy to provide supportive services to frail older adults residing in low-income housing settings. While the models differ in several ways, they all share a common goal: provide care and services that will allow a person to remain in their own housing despite health limitations and delay entering higher levels of care, particularly skilled nursing facilities.

With the growth in the low-income older adult population and increasing longevity, there will be an increasing demand for these services over the next two decades. Therefore, it is important to understand variations in the service models that currently exist, the populations now served, and the challenges providers face in operating and/or expanding these programs.[7] In addition, it is necessary to understand the cost of operating these programs, the potential financial savings to the state that may result from preventing or delaying moves to higher levels of care, and any rules or licensing considerations that may affect the ability to operate these services in the future.

This section of the report outlines and defines the components of these programs in Minnesota and describes programs that use State of Minnesota supports in combination with some type of housing subsidy in order to bring an assisted living-like experience to those in subsidized housing.

Typology of programs

Data collected by LeadingAge Minnesota[8] and Wilder Research outline key factors that differentiate programs that deliver Customized Living services under one of Minnesota's waiver programs and operate in facilities that accept residents with some form of housing subsidy. Factors included in the descriptions of programs include:

- Type of housing subsidy
- Source of service funding for eligible participants in the setting

---

7 In "Housing as a platform for improving the outcomes for older renters," Spillman et al. (2012, p. 18) specifically recommend the development of, "a typology of housing with services models, defined by how services are provided and paid for, the types of services available, key components of the service package, and the residents served."

8 LeadingAge Minnesota is one of two trade associations representing Assisted Living programs in Minnesota, including programs offering assisted living-like services in subsidized housing for persons who qualify for EW, CADI waiver, or BI waiver.

- Percentage of income required for rent and mix of rental rates in facility
- Ownership of physical property
- 24/7 availability of on-site staff
- Specific services received by residents
- Target population and population served

Several sources contribute to the funding landscape for affordable housing or affordable assisted living, but operate in different ways. Outlined below is further information for U.S. Department of Housing and Urban Development (HUD) subsidies and Housing Supports (formerly Group Residential Housing), a non-HUD source.

HUD housing subsidy sources

Low-Rent Public Housing

U.S. Department of Housing and Urban Development (HUD) program that provides clean, safe, and affordable living for eligible lower and very low-income individuals. Residents pay 30% of their adjusted monthly income for rent and utilities (Saint Paul Public Housing Agency, n.d.-b).

Section 202 and 811 Housing for Elderly or Persons with Disabilities

The HUD Section 202[9] and 811[10] programs support the development of affordable housing for older adults and persons with disabilities and provide subsidies to reduce the cost of rent in the housing project. Residents typically pay 30% of their adjusted monthly income in these settings.

Public Housing with Project-Based Section 8 (PRAC)

HUD program that provides rent subsidies for very low-income individuals in privately owned, existing market rate housing units (Saint Paul Public Housing Agency, n.d.-c).

Section 8 Choice Voucher

HUD program that provides rent subsidies to cover costs of affordable housing with supportive services for older adults (U.S. Department of Housing and Urban Development, n.d.-b). These vouchers are portable and can be used with any housing provider that accepts such vouchers. There are long waiting lists for these vouchers.

Housing for Persons with AIDS (HOPWA)

HUD program that provides housing assistance and related supportive services for low-income persons (and their families) living with HIV/AIDS (U.S. Department of Housing and Urban Development, n.d.-a).

[9] See "Section 2020 Supportive Housing for the Elderly Program" accessed on June 17, 2020 at https://www.hud.gov/program_offices/housing/mfh/progdesc/eld202

[10] See "Section 811 Supportive Housing for Persons with Disabilities Program" accessed on June 17, 2020 at https://www.hud.gov/program_offices/housing/mfh/grants/section811ptl

Non-HUD housing subsidy source

Housing Support (formerly Group Residential Housing or GRH)

State program that pays for room and board for older adults and adults with disabilities who have low incomes, in order to reduce and prevent people from living in institutions or becoming homeless. Funds cover a variety of housing locations, including Adult Foster Care, Board and Lodges, Boarding Care Homes, or Housing with Services. In State Fiscal Year 2019, 872 providers delivered Customized Living services to 3,060 Elderly Waiver participants who also received Housing Support. [11]

Examples of Minnesota programs

Wilder Research worked with DHS and Leading Age Minnesota staff to identify a range of programs in Minnesota using Customized Living supports in combination with subsidized housing to meet the health and safety needs of low-income older adults. Programs were selected to show both the maximum amount of variability in design and to illustrate service delivery in different areas of the state. The sample is intended to be illustrative rather than exhaustive. The descriptions shown here as well as the more complete results shown in Appendix A (Fig. A2) are based on personal interviews and email exchanges initiated by Wilder Research.

Spirit Valley Assisted Living is a 20-unit assisted living program in Duluth, Minnesota. They accept residents on Elderly Waiver and use Housing Support (formerly known as Group Residential Housing) funds to serve 16 of their 20 residents. The program accepts residents who will need only the assistance of one individual for transfers or mobility support. Available services are the same for all residents and include help with Activities of Daily Living, 24/7 nursing services, medication management, shopping and errands, and other supports available as part of the Elderly Waiver (EW). They employ both personal care attendants and certified nursing assistants (CNA) for care support, and have an activities director who is also a CNA. Program staff report that it would be difficult to support the needs of persons on the lowest EW rate if it were not for other residents in the facility who receive higher EW rates or who are paying privately for their housing and care.

Oak Crest Senior Housing is a 42-unit assisted living facility that overlooks Oak Crest Golf Course in Roseau, Minnesota. Ten of the 42 units are available to residents who qualify for HUD Section 8 housing vouchers, for which individuals pay 30% of the actual rental cost.

[11] Retrieved from the Minnesota Department of Human Services Data Warehouse, July 20, 2020.

Residents receive services based on assessed need. In order to provide assisted living-level supports to the 10 residents who qualify for housing subsidies, the program uses Customized Living supports under the Elderly Waiver (EW), which may include any of the following services and supports:

- Help with bathing and dressing
- Delegated nursing functions
- Exercise and ambulation
- Grooming
- Medication set-up and administration
- Meal preparation
- Personal laundry services
- Additional housekeeping
- Nightly security checks

Program staff report that without the revenue received from private pay residents, it would be very difficult to offer these services to the 10 residents who qualify for subsidized housing and EW. In other words, it would not be possible to expand the program to other qualified low-income older adults in the community at the current payment rates. This fact is supported by a recent study completed (as required by the 2017 Minnesota Legislature) by the Minnesota Department of Human Services (DHS), with the support of Navigant and a stakeholder group. The study determined that Customized Living payment rates are not sufficient to cover the cost of the services expected under the program (Minnesota Department of Human Services, 2019a).

Clare Housing operates 200+ units of affordable housing in the Twin Cities and offers three resident-focused supportive housing options to meet residents' needs based on their health and independent living skills. Housing subsidies for extremely low-income and formerly homeless residents living with HIV come in several forms including Housing Support funds from DHS, Section 8 funds from HUD, and the Housing Opportunities for Persons with AIDS (HOPWA) Program. HOPWA is the only federally funded HUD program dedicated to the housing needs of people living with HIV/AIDS.

Clare Housing's supportive housing services are designed to meet the housing needs of all residents, especially those coming from a background of chronic homelessness. This includes those who have used emergency shelters, as well as those who have been homeless and on the street or other places not intended as housing. Evidence-informed programs offer a minimal barrier, high tolerance environment and follow a harm-reduction/health promotion service model. With the exception of the Scattered Site Housing units, all of the supportive housing units are staffed 24 hours a day by a team of caregivers, social workers, and health care workers. Clare Housing utilizes a variety of funding sources to pay for these services including Housing Supports Service Rate funding, HOPWA, HIV/AIDS funding through DHS, Disability Waivers, and private philanthropy.

Clare Housing's four Community Based Care Homes are staffed 24/7, and each serves four residents who are HIV positive, significantly disabled, and often in need of reliable care and support to live outside of a nursing home. These homes are Adult Foster Care programs (245D. licensure by

DHS[12]). Staff provides rehabilitation support to those who may be able to return to independent living and long-term care to those disabled by HIV/AIDS. In addition, the program provides end-of-life care when needed.

Individuals enrolled in the Home Care program reside in Clare Apartments (15 units using Project-based Section 8 funding) or Clare Midtown (15 units using HOPWA and Housing Support funding). This program falls under the Housing with Services registration and Clare Housing maintains a 24/7 Comprehensive Home Care License through MDH. Residents who qualify for services must be open to securing a CADI waiver to receive supportive services, such as nursing care, medication administration, hands-on assistance with Activities of Daily Living, and help with building independent living skills. CADI dollars also pay for the delivery of Mom's Meals™ for residents.

Thomas T. Feeney Manor is owned by the Minneapolis Public Housing Authority (MPHA) and represents one of the first federally designated models of assisted living/memory care operating in a public housing development. The facility is a four-story, 48 one-bedroom unit development specifically designed for older adults needing enhanced assisted living or memory care assistance. The facility is located in Heritage Park in near-north Minneapolis and is part of a newly developed senior campus that includes Heritage Park Senior Services Center and MPHA's 102-unit senior housing development, Heritage Commons at Pond's Edge.

Residents must qualify for HUD funded housing subsidies (Facility-based Section 8) and be eligible to receive Customized Living services through the EW, CADI, or BI waivers. Volunteers of America provides services and program management for residents and offers an array of supports based on those available as part of the waiver programs, similar to what would be available in market rate assisted living programs.

Ross Park Apartments is a 45-unit, HUD-subsidized apartment building owned and managed by Sleepy Eye Housing Authority. The facility is located on a large city block just outside of the Sleepy Eye, MN downtown area. To qualify for residency at Ross Park Apartments, you must be at least 62 years of age, or 18 years of age and qualify as a disabled/handicapped individual as defined by the Social Security Act, or be income-eligible and meet the annually designated HUD income limits. To qualify for a housing subsidy, a single person cannot have an annual income over $41,900.

Customized Living services in Ross Park Apartments are provided by Volunteers of America (VOA) and can include any or all of the six component services funded under one of the waiver programs including assistance with Activities of Daily Living; assistance with mental health, cognitive, or behavioral concerns; health-related assistance; home management tasks; meals; non-medical

[12] DHS licenses certain Home and Community-Based Services (HCBS) provided to people with disabilities and those over age 65. Most of the services are funded under one of Minnesota's Medicaid waiver programs. HCBS standards under Minnesota Statutes, chapter 245D, are part of a larger HCBS Waiver Provider Standards initiative to improve the dignity, health, and independence of the people served in these programs (Minnesota Department of Human Services, n.d.-b).

transportation; and socialization. Lutheran Social Services and VOA provide lunch and dinner, and residents are responsible for their own breakfasts. Services are available to residents based on need, and need is determined using Long-Term Care Consultation assessment guidelines. Eleven of the 45 residents currently qualify for waivered services and receive Customized Living supports.

Grace Place Assisted Living operates within Cedar High-Rise, a large Minneapolis Public Housing facility. Grace Place serves 50 Korean and 3 Chinese older adults living in apartments that are scattered throughout the facility. Residents must qualify for Project-Based Rental Assistance (PRAC) and be eligible for CADI or EW programs. The program offers weekly nurse visits, daily medication reminders, two Korean meals each day, weekly housekeeping and laundry, transportation for both medical and social activities outside of the facility, as well as recreational and social activities on-site. Residents who qualify may also supplement program services with assistance from a PCA. Because of the focus on Korean older adults, the program employs some bilingual staff, although the program is open to serve anyone qualifying for waivered services.

Main objective 3

Determine and compare the cost of Wilder's model to the cost of services required to serve clients with similar needs in alternative care settings; compare the characteristics of clients served by Wilder's model and others receiving customized living services in other locations.

Long-term care costs can vary widely, depending on the care needs of the individuals and the location in which the services are provided. Understanding the costs of operating these programs is particularly important due to the potential cost savings to the state that may result from preventing or delaying moves to higher levels of care.

This section of the report looks at the costs associated with providing long-term care and includes an overview of the current market in Minnesota described by Genworth Financial, as well as a description of some of the components that may be included in providing care in subsidized housing settings. This section also includes details of the analysis of background information and cost data for residents of the Wilder programs and similar residents in other locations who had customized living claims.

Costs of long-term care

The Genworth Financial Cost of Care survey results (2019) indicate that monthly median costs of care in an assisted living facility in the Minneapolis-Saint Paul metropolitan area is over $4,700. This figure is less than half of the monthly median costs for a semi-private room in a skilled nursing facility (Figure 14).

14. Monthly median costs in Minnesota and Minneapolis-St. Paul metro area (2019)

Type of care	Minnesota	Metro area
Community and assisted living		
Adult day health care	$1,820	$1,842
Assisted living facility	$3,800	$4,782
In-home care		
Homemaker services	$5,529	$5,815
Home health aide	$5,815	$6,244
Nursing home facility		
Semi-private room	$10,076	$10,407
Private room	$11,037	$11,452

Source. Genworth Cost of Care Survey--Interactive Tables. Retrieved from: https://www.genworth.com/aging-and-you/finances/cost-of-care.html

In addition, the median national cost of skilled nursing in-home care that provides assistance with medication administration, wound care, rehabilitation, and IV therapy costs $87.50 per visit (Genworth Financial, 2019).

Providing customized living services in public housing

When Customized Living funds are used to create assisted living-like supports for older adults in public housing, they are often accompanied by other important services. The fact that these additional services are often funded from different sources helps to bolster program feasibility and rounds out the total package of supports, making it possible to care for persons with more complex needs for longer periods of time in public housing. Service recipients are not only eligible for nursing home care based on their needs, but also have a range of care needs.

Congregate Housing Services Program (CHSP)

CHSP was among the first initiatives developed by the federal government to provide comprehensive housing and supportive services within a subsidized housing environment. Beginning with their first grants in 1979, services were targeted to serve the frail older adults, non-elderly people with disabilities, and temporarily disabled individuals to live independently and prevent premature or unnecessary institutionalization. Services can include service coordination (setting up appointments, arranging transportation, making contacts with community resources, and working with the resident and other service providers to ensure needs are being met), hot meals served in a congregate setting, personal assistance, housekeeping, transportation, preventative health/wellness programs, and personal emergency response systems.

The CHSP operated successfully during the 1980s, but was changed as part of the National Affordable Housing Act of 1990 and the Housing and Community Development Act of 1992. Changes to the program included the requirement of a 50% match from grantees (local public housing authorities) and participant fees that equal at least 10% of the total program cost. New grants were awarded under this revised program in 1993 and 1994, and funding for the program ended in 1995. However, program evaluations conducted during the 1990s helped Congress to recognize the value of the existing programs and Congress has kept them going until the present with annual extension funding. This funding currently supports residents in the Ravoux Customized Living model operated by Wilder.

Other services that bolster the delivery of customized living services in public housing

In addition to CHSP, residents of subsidized housing sites may also benefit from one or more of the following:

Transportation programs for older adults and disabled individuals

Metro Mobility, a service operated by the Metropolitan Council, can be used by residents of subsidized housing to meet transportation needs for a wide range of purposes. In addition, more specialized transportation may be available for medical transportation and leisure activities.

Nutrition programs operated in subsidized housing facilities

Title III of the Older Americans Act provides grants to the Minnesota Board on Aging to provide funding to Area Agencies on Aging to operate multiple nutrition programs throughout the state, including congregate dining and home delivered meals. Although not universally available in all subsidized facilities, when present, they can help defray meal costs for residents.

Service coordination

HUD's Service Coordinator Program provides funding for the employment of service coordinators (apart from CHSP service coordination) in subsidized housing for older adults and disabled persons, and often supplements Customized Living services. The funding can be part of program operating funding or individual program grants. Service coordinators provide a range of supports, often serving as problem solvers and advocates for residents. Key roles include assessment of resident needs and supports, help to access community resources, referrals to needed services, development of health education and promotion activities, and establishing partnerships with available community-based services. In this way, the service coordinator can bring additional resources to residents without adding to the cost of Customized Living services.

Personal care assistance (PCA) based on assessed needs

Some residents receiving Customized Living services in subsidized housing also qualify for personal care assistance. Persons qualify for this service through a formal assessment process conducted in conjunction with the assessment to determine eligibility for waiver services.[13] PCA services can supplement the ADL and IADL supports delivered by Customized Living providers.

[13] Persons may qualify if they - or a responsible party acting on their behalf - are able to identify their needs; have one dependency in an ADL and/or Level I behavior; need PCA services to live in the community; manage the staff and delivery of their services to ensure their health and safety; develop a service plan; have a current and approved service agreement for PCA services; live in a home setting. See PCA manual for full details (Minnesota Department of Human Services, 2019c).

This can make it possible for a subsidized housing resident with Customized Living services to remain in their housing longer than might otherwise be possible.[14]

Comparison of Wilder residents and other residents receiving Customized Living services

Background

Wilder Research analyzed data from Long-Term Care Consultation assessments and waiver program claims for Ravoux and Hamline Hi-Rises residents and similar residents in other locations. All residents included in the analysis had claims for Customized Living through EW, CADI, and BI waivers, based on Customized Living claims from all providers in Minnesota. The purpose of the analysis was to:

- Describe the characteristics and claims amounts associated with residents of Ravoux and Hamline Hi-Rises relative to residents in other similar settings
- Assess what differences may exist between these groups of residents

Methodology

Minnesota Department of Human Services staff extracted claims data from the state database, according to expert consideration of variables, their availability, and overall relevance to this work. The dataset was pulled in November 2019 and shared via encrypted electronic transfer to Wilder Research for further analysis, following HIPAA protocols. No personally identifiable information was included in the dataset.

Included in the original dataset was information from October 2018 about:

- 98 residents at Wilder's Ravoux and Hamline Hi-Rises
- 3,776 residents with CADI or BI Waiver claims
- 9,160 residents with Elderly Waiver claims

[14] Program providers indicated that some residents needed and benefited from more frequent care provided by PCAs (as a supplement to care paid for through Customized Living) who were scheduled separately by residents or residents' county workers.

In order to compare the background, characteristics, and claims amounts for Wilder residents and other residents with Customized Living claims through CADI, BI, and EW, we constructed a revised data set. Using the Case Mix designations and waiver types of Wilder residents, we created a proportionate comparison group of 1,094 people that matches the Case Mix distribution of Wilder residents.[15] From the overall population, we randomly selected residents until we matched the proportions of each combination of the Case Mix and waiver types for Wilder residents. Full results are in Figure 15.

15. Case Mix designation for Wilder residents and comparison group who received customized living services through CADI, BI, and EW[16]

Case Mix	Wilder residents (N=79)	Comparison group (N=1,094)
Case Mix L (very low care)	8%	6%
Case Mix A (low care)	20%	21%
Case Mix B	54%	56%
Case Mix C	8%	8%
Case Mix D	4%	4%
Case Mix E	6%	6%

Findings

The findings for the Wilder residents and comparison group residents include information on costs of care and results from the Long-Term Care Consultation assessments.

Please note that results should be interpreted with caution: the findings reflect claims information from a short time span of one month, and, while proportionate for Case Mix and waiver designations, the size of the two groups is different (N=98 for Wilder residents and N=1,094 for the comparison group). Differences of more than 10 percentage points are reported in the findings.

Costs of care

The analysis of costs considers and compares the following variables for Wilder residents and the comparison group:

- Median monthly Customized Living claims through CADI, BI, and EW

[15] The sample size of the comparison group is smaller than the overall population of non-Wilder residents in the original dataset. Some combinations of Case Mix and waiver type were more common among the Wilder residents, which required that we reduce the size of the comparison group in order to reach target proportions for the sample of the comparison population.

[16] Refer to "Case Mix Classification Summary" on page 6 in this report for a more detailed description of the case mix categories.

- Median monthly amount of available and allotted funding that is unused through EW
- Median monthly amount spent by the state for care for people through EW

Customized Living claims amounts through CADI, BI, and EW

The median monthly Customized Living claim submitted by providers in October 2018 for Wilder residents was $1,436, while the median claim amount for the comparison group was $2,506 (Figure 16).

16. Comparison of median monthly Customized Living claims amounts

	Wilder residents (N=98)	Comparison group (N=1,094)
Median monthly claim	$1,436	$2,506
Range	$105-$3,353	$13-$25,376

Use of allotted funding through EW

The amount of funding available to Elderly Waiver participants is determined by Case Mix designation and reflects ADL dependencies and care needs. For both groups, Elderly Waiver participants, based on their Case Mix, had a monthly median amount of allotted funding of $3,399. In some cases, the full amount of funding allotted for an individual may not be spent entirely in a given month.[17] The median amount of unused funding for Wilder residents served through EW was $1,911 (56% of their allotted funding). In contrast, the median amount of unused funding for individuals on EW in the comparison group was $1,696 (50% of their allotted funding). (Figure 17). These differences may be due to the access residents have to non-waivered services through both Wilder and St. Paul Public Housing.

It is worth noting that the monthly median amount of $3,399 is 71% of the $4,782 reported as the current monthly market rate for care in an assisted living facility in the Twin Cities metro area (Figure 14).

[17] In a given month, individuals may have fewer needs or may not require certain services to meet their daily needs. The full amount of allotted funding remains available and can be used as individuals' needs change in subsequent months.

17. Comparison of available and unused allotted funding for people with Customized Living claims through Elderly Waiver

Median monthly amount	Wilder residents (N=23)	Comparison group (N=319)
Available	$3,399	$3,399
Unused	$1,911	$1,696
Percentage unused	56%	50%

Expenditures for EW customized living claims

For people receiving Elderly Waiver funding, the Customized Living program spent a median amount of $1,262 on claims for the Wilder residents, compared to $1,467 for the comparison group (Figure 18). In October 2018, the care provided for the comparison group cost $205 more than the care provided for Wilder residents (Figure 19).

18. Comparison of median monthly expenditures for Customized Living claims through Elderly Waiver

	Wilder residents (N=23)	Comparison group (N=319)
Median monthly claim	$1,262	$1,467
Range	$509-$3,353	$13-$3,989

19. Difference in median monthly expenditures for Customized Living claims through Elderly Waiver

Wilder residents (N=23)	Comparison group (N=319)
$1,262	$205 more ($1,467)

Long-term care assessment results

Demographics

Figure 20 shows that the two groups are similar in most respects, except that the Wilder programs serve a larger percentage of divorced older adults and a more racially diverse population.

- A higher percentage of Wilder residents were divorced (36%), compared to 24% of the comparison group.
- Overall, 82% of the comparison group said they were White, compared to 71% of Wilder residents. A very low proportion (11%) of the comparison group said they were Black or African American, compared to 24% of Wilder residents.

20. Demographic characteristics of people with claims for Customized Living through CADI, BI, or Elderly Waiver

	Wilder residents (N=77-98)	Comparison group (N=629-1,094)
Gender		
Female	47%	54%
Male	53%	46%
Marital status		
Single, never married	46%	44%
Divorced	36%	24%
Widowed	10%	18%
Married	4%	7%
Married, but separated (no legal action)	3%	1%
Unknown	1%	6%
Race		
White	71%	82%
Black or African American	24%	11%
American Indian	1%	2%
Asian	3%	2%
Pacific Islander	0%	<1%
Unable to determine	1%	2%
Ethnicity		
Hispanic or Latino	1%	2%
Has a caregiver	18%	23%

Health and diagnoses

Wilder residents and the comparison group had similar results related to their health status and diagnoses. Full results are located in Appendix B (Figures B1 and B2).

- 79% of Wilder residents and 73% of the comparison group had received a mental illness diagnosis
- 30% of Wilder residents and 31% of the comparison group had frequent institutional stays
- About one-quarter of both Wilder residents (25%) and the comparison group (24%) had unstable health
- 44% of Wilder residents and 49% of the comparison group reported their overall health as good
- 39% of Wilder residents and 36% of the comparison group reported their overall health as fair

While the average numbers of admissions to the ER and hospital were similarly low for the two groups, the range in numbers of admissions varied widely (Figures B3-B6). The numbers of ER and hospital admissions in the past year were based on self-reports by residents.

- ER admissions ranged from 0 to 9 for Wilder residents and 0 to 35 for the comparison group
- Hospital admissions ranged from 0 to 5 for Wilder residents and 0 to 20 for the comparison group
- Two percent of the comparison group had more than 5 hospital admissions in the past year; those individuals had a median number of 10 admissions
- Two percent of the comparison group had more than 9 ER admissions in the past year; those individuals had a median number of 12 ER admissions

Functional capacity, behavior assessments, mental status

Characteristics of the two groups related to their functional capacity and behavior assessments were similar. Full results are located in Appendix B (Figures B7 and B8).

- Nearly all individuals (100% of Wilder residents and 99% of the comparison group) were assessed with at least one IADL dependency
- 78% of Wilder residents and 81% of the comparison group were assessed with at least one ADL dependency
- Three-quarters of Wilder residents (75%) and 79% of the comparison group had a history of frequent behavior symptoms
- In an assessment of behavior, the two groups most often were identified as needing regular interventions for behavior management (42% of Wilder residents and 41% of the comparison group), followed by behavior management for verbal abuse (22% of Wilder residents and 23% of the comparison group)

Some differences exist between the two groups regarding their mental status:

- Wilder residents were more likely than the comparison group to have been assessed as experiencing minor forgetfulness (57% vs. 46%) (Figure 21)
- Wilder residents were less likely than the comparison group to have been assessed as experiencing partial or intermittent disorientation (16% vs. 26%) (Figure 21)
- While average scores on the Orientation-Memory-Concentration Test did not indicate the presence of dementia for either group, the scores were higher for Wilder residents than for the comparison group (7.7 vs. 6.7; a score of 10 or more is consistent with the presence of dementia) (Figure 22)

21. Mental status assessment results for people with claims for Customized Living through CADI, BI, or EW

Mental status functional capacity	Wilder residents (N=81)	Comparison group (N=1,094)
Oriented	27%	27%
Minor forgetfulness	57%	46%
Partial/intermittent disorientation	16%	26%
Total disorientation	0%	1%
Comatose	0%	0%
Undetermined orientation	0%	<1%

22. Mental status evaluation results for people with claims for customized living through CADI, BI, or EW

Mental status evaluation[a]	Wilder residents (N=31)	Comparison group (N=573)
Average score	7.7	6.7

[a] Orientation-Memory-Concentration Test. A score of 10 or more is consistent with the presence of dementia. Possible score range is 0-28.

Care needs

Wilder residents and the comparison group had similar care needs related to insuring their own care, assistance with toileting, rehabilitative treatments, special treatments, and complex health care management (Figure 23).

However, a higher percentage of the comparison group compared to Wilder residents have experienced neglect, abuse, or exploitation (70% vs. 49%).

23. Care needs assessment results for people with claims for Customized Living through CADI, BI, or Elderly Waiver

(Items selected to show range of client care needs)

Care needs	Wilder residents (N=77-78)	Comparison group (N=1,080)
Has been or may be neglected, abused, exploited	49%	70%
May not ensure own care, hygiene, nutrition, safety	82%	85%
Needs assistance for toileting	8%	16%
Needs restorative or rehabilitative treatments	22%	15%
Needs direct care for special treatments	20%	13%
Needs complex health care management	10%	12%

Main objective 4

Describe the key challenges Minnesota providers face in executing this model and recommend possible changes to sustain and strengthen the model for the future.

Wilder Research and Minnesota Department of Human Services planned to meet this objective by convening a varied group of stakeholders for a public event in the spring of 2020. The event was first postponed, and then cancelled, due to uncertainty surrounding the circumstances of shelter-in-place laws and public health guidelines related to the COVID-19 pandemic.

However, those who responded to the survey of providers to create a typology of programs (Objective 2) offered the following observations:

- Some programs find it difficult to support the needs of persons on the lowest EW rate without also serving other residents who receive higher EW rates or who are paying privately for their housing and care.
- It may be difficult to expand the program to meet the needs of other qualified low-income older adults given current payment rates.
- There are currently long waiting lists for access to public housing and subsidized housing vouchers.

Despite these challenges, information gathered from Wilder program participants show a high level of satisfaction with Customized Living supports in a public housing setting.

Conclusions

The conclusions are based on three broad topics covered in the report:

1. Background information, including a summary of current literature about the growing need for solutions to address demands for affordable housing, housing subsidies, and services that will allow older adults to remain in less restrictive settings
2. A description of the models currently operating in Minnesota, including the Wilder Foundation's Customized Living program, which provides health-related and supportive services to adults in two Saint Paul Public Housing sites
3. Results of the analysis of characteristics of residents of Wilder's program and the costs of Wilder's program compared to those of similar programs

The conclusions include the following:

- Demographic trends suggest that there will be continued growth for at least the next decade in the number of low-income older adults in Minnesota and that there will be a continuing need to expand services and supports as chronic health conditions further diminish the functional abilities of those in this population.
- Many low-income older adults have had unstable housing histories, including episodes of homelessness, which, when combined with other risk factors, further increases vulnerability.
- Public housing facilities are one of the most important resources already present and deployed throughout Minnesota to help low-income residents achieve stable housing. The present study has explored how these and similar subsidized housing programs have partnered with nonprofits like Wilder to deliver Customized Living services to health challenged residents and create assisted-living like supportive housing environments.
- There are at least 25 other housing sites in the state that, like Wilder, combine Customized Living supports funded through Medicaid waiver programs and some form of housing subsidy to deliver supportive services to frail older adults residing in low-income housing settings.
- While the models differ in several ways, they all seek to allow a person to remain in their own housing despite health limitations. However, the waiver rates providers receive for clients assessed at lower case mix levels, who have lower budget amounts, are sometimes not fully adequate to cover service costs if the provider does not also serve other residents who pay privately or receive higher reimbursement amounts based on higher levels of assessed need.

- A comparison of Saint Paul Public Housing residents receiving Customized Living supports through Wilder at two program sites (Ravoux and Hamline) to a proportionate comparison group of 1,094 people identified through State claims data who also received Customized Living supports in October 2018 shows that the two groups are similar in many respects. However, the following differences were observed:
  - Wilder programs serve a larger percentage of divorced older adults
  - Wilder clients are somewhat less costly to the Customized Living program
  - Wilder clients are more racially diverse
  - Wilder clients have somewhat lower numbers of hospital or ER admissions (although these data are based on self-reports and need to be interpreted with caution)
- Differences observed between Wilder clients and the comparison group are likely due to the use of additional supports and services available through Public Housing by Wilder clients, especially the Congregate Housing Services Program (CHSP), as well as the ability of Wilder program staff to connect residents to additional resources in the wider community.
- Results support the claim that providing Customized Living services in a subsidized living setting has benefits for both the State and for the residents served by the program. Further analysis, covering a broader time span, could reveal additional patterns in groups' characteristics, and costs and expenditures by the State of Minnesota.
- The study demonstrates that Customized Living supports, in combination with subsidized Public Housing, is a cost effective strategy for supporting the health and functional needs of this population without incurring the higher costs associated with skilled care facilities.

Appendix A

Examples of Customized Living programs

(Illustrative rather than exhaustive, based on maximum variability sampling)

A1. Typology components

Component	Description
Type of housing subsidy	HUD: Low-Rent Public Housing Section 202 and 811 Housing for Elderly or Persons with Disabilities Public Housing with Project-Based Section 8 (PRAC) Section 8 Choice Voucher Housing for Persons with AIDS (HOPWA) Non-HUD: Housing Supports (formerly Group Residential Housing)
Source of service funding for eligible participants in the setting	Elderly Waiver (EW), Community Access for Disability Inclusion (CADI) Waiver, or Brain Injury (BI) waiver
Percentage of income required for rent	Typically 30% of income for a single person with a qualifying annual income below $41,900
Ownership of physical property	Public Housing Agency, Housing and Redevelopment Authority (HRA), or Private Ownership
On-site staff available 24/7	Yes or No
Services received by residents	Wide variation; typically includes some form of physical assistance with ADLs, some nutrition services, as well as medication set-up and management
Population served	All older adults, mix of persons with disabilities and older adults, culturally focused population, or other group
Mix of rental rates in facility	All qualify for housing subsidy or a mix of subsidized and non-subsidized residents
Target population	Program seeks to serve residents in a particular geography, with a specific housing history, health history, or other designated population group

A2. Typology of Customized Living programs in Minnesota

(Programs were selected to show both the maximum amount of variability in design and to illustrate service delivery in different areas of the state. The sample is intended to be illustrative rather than exhaustive.)

HUD: PRAC Subsidy

Program name	Type of housing subsidy	Source of service funding	Ownership of physical property	On-site staff 24/7	Services received by residents	Population served	Mix of subsidy residents	Target population	Daily census on waivers
Grace Place Assisted Living (in Cedar Hi-Rise) *Minneapolis*	PRAC	EW CADI	MPHA	Yes	Weekly nurse visits, daily medication reminders, 2 Korean meals/day, housekeeping/ laundry, recreational/social activities, PCA as needed, medical appointments/ social activities, transportation	Mix of older adults/adults with disabilities	100%	Low-income Korean older adults; open to anyone who qualifies for waivered services	53
Linden Wood Apartments (40 units) *Winsted*	PRAC	Not available	HUD	Yes	Not available	Low-income seniors	Not available	Age 62+ and disabled adults	6
Oak View Apartments (Highland Manor, Inc., DBA Oak Hills Living Center) (16 units) *New Ulm*	PRAC	EW	Nonprofit, community owned	Yes	Full CL required package tailored to residents' needs	Age 55+	100%	Age 55+	12
Third Avenue Towers ALP (Accessible Space, Inc.) (88 Studio & 129 1-BR units) *Minneapolis*	PRAC	CADI Also accept EW and BI	MPHA HUD Section 811 facility	Yes	Full CL required package tailored to residents' needs	Age 18+ with physical disabilities or brain injury; Age range of current residents: 48-58	100%	Age 18+ with physical disabilities or brain injury; low income	Not available

Note: The data in the typology grid are current as of June 2020

A2. Typology of Customized Living programs in Minnesota (continued)

HUD: PRAC Subsidy (continued)

Program name	Type of housing subsidy	Source of service funding	Ownership of physical property	On-site staff 24/7	Services received by residents	Population served	Mix of subsidy residents	Target population	Daily census on waivers
Thomas T. Feeney Manor (Augustana) *Minneapolis*	PRAC	EW, CADI	MPHA	Yes	Full CL required package tailored to residents' needs	Older and disabled adults	100%	Age 65+ and disabled adults	48
Weinberg Apartments (Sholom Community Alliance) (45 units) *St. Paul*	PRAC	EW	Private nonprofit	No	Full range CL services; 24/7 access by pendant to Sholom Home Assisted Living staff	Mix of ages; mostly 62+	100%	Low-income adults	2

HUD: Low rent subsidy

Program name	Type of housing subsidy	Source of service funding	Ownership of physical property	On-site staff 24/7	Services received by residents	Population served	Mix of subsidy residents	Target population	Daily census on waivers
Ross Park Apartments (45 units) *Sleepy Eye*	Low-rent public housing HUD flat rent 80% of market	EW CADI	Sleepy Eye Housing Authority	No	VOA provides full CL services; LSS (New Ulm) prepares meals; VOA delivers hot meals for lunch, frozen for dinner	Mix of adults; 95% are older or disabled adults	100%	Older and disabled adults	11

Note: The data in the typology grid are current as of June 2020

A2. Typology of Customized Living Programs in Minnesota (continued)

HUD: Section 8 choice voucher subsidy

Program name	Type of housing subsidy	Source of service funding	Ownership of physical property	On-site staff 24/7	Services received by residents	Population served	Mix of subsidy residents	Target population	Daily census on waivers
Ebenezer Tower Apartments (Ebenezer Society) (192 units) *Minneapolis*	Section 8 choice voucher	EW CADI	Ebenezer	Yes	Full CL required package tailored to residents' needs	Older and disabled adults, many previously homeless	Not available	Age 62+, low-income	20
Lyndale Manor (VOA) *Minneapolis*	Section 8 choice voucher	EW CADI	MPHA	Yes	Full CL required package tailored to residents' needs	Age 65+; some disabled younger adults	100%	Age 65+ and disabled adults	21
North Park Plaza (VOA) *New Hope*	Section 8 choice voucher	EW CADI	Private nonprofit: Volunteers of America	Yes	Full CL required package tailored to residents' needs	Age 65+; some disabled younger adults	100%	Age 65+ and disabled adults	26
Oak Crest Senior Housing (42 units) *Roseau*	Section 8 choice voucher	EW	Private	No	Services similar to those in other AL programs, and nightly security checks	Age 65+	25% subsidized; 75% private pay	Age 65+	10
Parker Skyview (VOA) *Minneapolis*	Section 8 choice voucher	EW CADI	MPHA	Yes	Full CL required package tailored to residents' needs	Age 65+; some disabled younger adults	100%	Age 65+ and disabled adults	43
River Village North Senior Apartments *Minneapolis*	Section 8 choice voucher	EW	Catholic Elder Care	Yes	AL-like services to limited # of residents	Age 62+	100%	None	5

Note: The data in the typology grid are current as of June 2020

A2. Typology of Customized Living Programs in Minnesota (continued)

Mix of housing subsidies

Program name	Type of housing subsidy	Source of service funding	Ownership of physical property	On-site staff 24/7	Services received by residents	Population served	Mix of subsidy residents	Target population	Daily census on waivers
Clare Housing (200+ units at multiple sites) *Twin Cities*	HOPWA, Housing Support, private philanthropy	Disability Waiver: DHS AIDS/HIV funding	Private	Yes	All except scattered site units are staffed 24/7 by team of caregivers, social workers, and health care workers. All CL services, and end of life care	Adults with HIV	100%	Low-income and formerly homeless adults with HIV	200
Good Shepherd Assisted Living (Good Shepherd Community) *Sauk Rapids*	Section 8 choice voucher (58 units) PRAC (87 units) Housing Support (5/53 units in market rate building)	EW, CADI	Private nonprofit ownership: 3 HUD buildings; 1 market rate building	Yes	Full CL required package tailored to residents' needs	62+ (or 55+ if disabled and need mobility unit)	100% in HUD buildings; 9% in market- rate building	Age 62+	120

Note: The data in the typology grid are current as of June 2020

A2. Typology of Customized Living Programs in Minnesota (continued)

Non-HUD: Housing Support Subsidy

Program name	Type of housing subsidy	Source of service funding	Ownership of physical property	On-site staff 24/7	Services received by residents	Population served	Mix of subsidy residents	Target population	Daily census on waivers
The Colony (156 units) *Eden Prairie*	Housing Support	EW	Private for-profit: 3 investors	Yes	All CL services, based on resident need	Average age 65; large proportion 80+	~75% GRH; 25% private pay	Age 65+	15
Crossroads Assisted Living Apartments (60 units) Country Place (20 units) *Erskine*	Housing Support	EW CADI	Private nonprofit: Pioneer Memorial Care Center	Yes	Full CL required package tailored to residents' needs	Mix of older adults/adults with disabilities/mental & chemical health diagnosis; ages 49-82 (Crossroads) ages 56-90 (Country Place)	Crossroads: 100% Country Place: ~50%	None	Not available
Goldfinch Estates (136 units) *Fairmont*	Housing Support	EW CADI	Vista Prairie Communities, owned by GEAC	Yes	Full CL required package tailored to residents' needs	55+	30% subsidized; 70% private pay	None	33
Keystone Bluffs *Duluth*	Housing Support	EW	Private, for profit group: Colony	Yes	Full CL required package tailored to residents' needs	Average age is 85	40% on GRH	None	38
Lincoln Park (Essentia Health) (28 units) *Detroit Lakes*	Housing Support	EW	Private, nonprofit	Yes	Full CL required package tailored to residents' needs	Age 62+	40% on GRH	Age 62+; open to community in general	8

Note: The data in the typology grid are current as of June 2020

A2. Typology of Customized Living Programs in Minnesota (continued)

Non-HUD: Housing Support Subsidy (continued)

Note. The data in the typology grid are current as of June 2020

Program name	Type of housing subsidy	Source of service funding	Ownership of physical property	On-site staff 24/7	Services received by residents	Population served	Mix of subsidy residents	Target population	Daily census on waivers
McCornell Court (St. Wiliams Living Center) (16 units) *Parkers Prairie*	Housing Support	EW	Private, nonprofit: St. William's church group	Yes	All CL services	65+ accepted; most residents 75+	50% housing subsidy; 50% private pay	Accept 65+	8
Spirit Valley Assisted Living (20 units) *Duluth*	Housing Support	EW Private pay	Private	Yes	24/7 RN service M-F, medication management, PCA & CNA services, assistance with ADLs, transportation for shopping/errands	Age 65+	~80%	Age 65+; require assistance from one person for transfers, other support	16

Note: The data in the typology grid are current as of June 2020

Appendix B

Tables: Comparison of Wilder residents and other residents receiving Customized Living services

B1. Health diagnoses and status for people with claims for Customized Living through CADI, BI, or EW

Assessment indicates presence or history of diagnoses or conditions	Wilder residents (N=77-81)	Comparison group (N=1,080)
Mental illness diagnosis	79%	73%
Vision-impairment diagnosis	13%	8%
TBI diagnosis	14%	12%
Frail	21%	16%
Complicated condition	23%	22%
Unstable health	25%	24%
Frequent institutional stays	30%	31%

B2. Self-reports on health for people with claims for Customized Living through CADI, BI, or EW

Self-reported evaluation of overall health	Wilder residents (N=85)	Comparison group (N=1,068)
Poor	7%	7%
Fair	39%	36%
Good	44%	49%
Excellent	11%	8%

B3. Self-reports about ER admissions in the past year for people with claims for customized living through CADI, BI, or EW

	Average number of admissions	Range
Wilder residents (N=89)	.69	0-9
Comparison group(N=1,094)	1.0	0-35

B4. Self-reports about hospital stays in the past year for people with claims for Customized Living through CADI, BI, or EW

	Average number of admissions	Range
Wilder residents (N=89)	.67	0-5
Comparison group (N=1,094)	.68	0-20

B5. Detail for self-reported ER and hospital admissions for the comparison group

	Percentage of comparison group (N=1,094)	Median number of admissions
More than 5 hospital admissions	2%	10
More than 9 ER admissions	2%	12

B6. Self-reports about nursing facility admissions in the past year for people with claims for Customized Living through CADI, BI, or EW

	Average number of admissions	Range
Wilder residents (N=89)	.36	0-3
Comparison group (N=1,094)	.27	0-4

B7. Functional assessment results for people with claims for Customized Living through CADI, BI, or EW

Assessment indicates presence or diagnosis of conditions or impairments	Wilder residents (N=77)	Comparison group (N=1,080)
IADL condition	100%	99%
ADL condition	78%	81%
Impaired cognition with diminished functional capacity	49%	56%
Sensorial impairment that diminishes functional capacity	4%	6%

B8. Behavior assessment results for people with claims for Customized Living through CADI, BI, or EW

Behavioral functional status	Wilder residents (N=77-83)	Comparison group (N=1,080-1,094)
No intervention required	17%	16%
Behavior management requires occasional intervention	18%	17%
Behavior management requires regular intervention	42%	41%
Behavior management required for verbal abuse	22%	23%
Behavior management required for physical abuse	1%	4%
Frequent history of behavior symptoms	75%	79%

Appendix C

Annotated bibliography

A comprehensive review of the literature included the following key words and phrases: aging in place, assisted living, complex health care needs, functional limitations, housing with services, low-income elderly, public housing, residential care, subsidized housing, and vulnerable older adults. The annotated bibliography provides summaries of the relevant articles.

Brown, R. T., Thomas, M. L., Cutler, D. F., & Hinderlie, M. (2013). Meeting the housing and care needs of older homeless adults: A permanent supportive housing program targeting homeless elders. *Seniors Housing Care Journal, 21*(1), 126–135. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3980491/

The environment and restrictions in many shelters do not accommodate older adults with functional limitations and can exacerbate their chronic conditions. Citing the public costs associated with homelessness of older adults, the authors point to permanent supportive housing programs as a way to address homelessness, improve health outcomes of residents, and decrease health care costs. The authors note that permanent supportive housing programs may be eligible for HUD funding, but are generally less regulated and provide less intensive services than affordable assisted living programs.

Hearth Inc. in Boston is highlighted as a successful outreach and housing model. The model has demonstrated success in helping chronically homeless older adults maintain housing, manage complex health care needs, improve their quality of life, and decrease use of costly, acute health care services.

Burt, M. R. (2015). Serving people with complex health needs: Emerging models, with a focus on people experiencing homelessness or living in permanent supportive housing. *American Journal of Psychiatric Rehabilitation, 18*(1), 42-64. https://doi.org/10.1080/15487768.2015.1001696

This article discusses the importance of stable housing for achieving a better health care experience, better health outcomes, and reduced costs, particularly for people who have experienced homelessness and often have complex, co-occurring conditions. Permanent supportive housing is highlighted as one model that can achieve these goals, with the accompanying and integrated care coordination approach. Medicaid expansion presents an opportunity for further coverage of home and community-based services for older adults and adults with disabilities.

Castle, N., & Resnick, N. (2016). Service enriched housing: The Staying at Home Program. *Journal of Applied Gerontology, 35*(8), 857-877.

The goal of this study was to determine the extent to which services and supports provided in publicly subsidized housing for low-income older adults in Pittsburgh, Pennsylvania, influenced health outcomes. The Staying at Home program provided care coordination, advance planning, medication management, and assistance with a health care diary. Researchers found that the interventions and supports resulted in a lower likelihood of hospital stays, ER visits, and transfers to nursing home care for residents of the high-rise buildings. They also noted that expanding services and supports in housing for older adults may offer a broader array of choices, even if it becomes difficult to distinguish between service-enriched programs and assisted living programs (p. 873).

Cisneros, H., & Weber, V. (2015, June 23). Home can be where the help is. *U.S. News & World Report*. https://www.usnews.com/opinion/articles/2015/06/23/how-to-help-more-seniors-age-at-home

The authors highlight the critical need to address the housing needs of the growing population of older adults, and particularly for those who are considered very low income. They believe that affordable housing is a key factor in producing positive health outcomes and has the potential to reduce overall health care costs. Providing services in conjunction with stable housing may serve to further improve health outcomes. The authors believe that providers, politicians, and funders are up to the challenge of developing effective national strategies.

CORE (Center for Outcomes Research & Education). (2013). ***Integrating housing & health: A health-focused evaluation of the apartments at Bud Clark Commons.*** Home Forward. http://www.homeforward.org/sites/default/files/2014-4-14-BCC-report-with-appendix.pdf

The Apartments at Bud Clark Commons program provides housing and supportive services for formerly homeless adults in Portland, Oregon. A program evaluation assessed cost savings, utilization of health care, health care needs, and the living environment. The authors believe that the positive outcomes highlight the critical relationship between housing and health, and argue for increased funding and program development. Key findings include:

- Significant reductions in medical costs (reimbursed through Medicaid)
- Continued connections to outpatient care, with significant reductions in inpatient and emergency care
- Significant improvements in self-reported physical and mental health
- Residents experienced challenges in gaining or maintaining sobriety, and sense of personal safety related to the congregate living environment

Ficke, R. C., & Berkowitz, S. G. (2000). ***Report to Congress: Evaluation of the HOPE for Elderly Independence demonstration program and the new Congregate Housing Services program.*** HUD User. https://www.huduser.gov/portal//Publications/pdf/HUD%20-%2011053.pdf

The authors evaluated two HUD programs that combined a housing subsidy with supportive services for frail older adults. HOPE IV residents lived in Section 8 scattered-site housing, while Congregate Housing Services Program residents lived in a variety of publicly subsidized housing configurations (congregate Section 202, Public Housing Authority, Section 236, and Rural Housing Service settings). The study compared residents' characteristics (demographics, health status, self-reported well-being and social contact levels), satisfaction with the program and services, and outcomes. The key finding from the study was that "the combination of service coordination, with supportive services from whatever source…contributed to the success of the programs" (p. 6-17).

Golant, S. M. (2008). Affordable clustered housing-care: A category of long-term care options for the elderly poor. *Journal of Housing for the Elderly, 22*(1-2), 3-44.

The author developed a typology to distinguish between affordable housing and long-term care programs that provide supports to low-income, frail, older adults. The two prototypes he discussed—affordable household-care and affordable clustered housing-care—have similar missions. However, there is little agreement within the industry about which model is the most successful.

Advocates of home and community-based services suggest that the variety of options available to older adults supports greater independence, while advocates of the congregate setting model argue that economies of scale are possible (and important, given the high costs of care). The author suggests further research to determine strengths and weaknesses of the two options as viable long-term care solutions.

Golant, S. M., Parsons, P., & Boling, P. A. (2010). Assessing the quality of care found in affordable clustered housing-care arrangements: Key to informing public policy. *Cityscape, 12*(2), 5-28.

Policy leaders are increasingly interested in quantitative evidence about the potential benefits and cost savings associated with supportive services provided for older adults in subsidized housing settings. In response to the need for evidence that goes beyond the current body of descriptive findings, the researchers designed an evaluation of four subsidized housing sites in Richmond, Virginia, based on a conceptual framework that considers structure, process, and outcomes. The goal was to determine the extent to which low-income older adults were less likely to use ambulance and emergency room services.

Jenkens, R., Carder, P. C., & Maher, L. (2005). The Coming Home Program. *Journal of Housing for the Elderly, 18*(3–4), 179–201.

Responding to a growing need for assisted living programs for low-income older adults, the pilot Coming Home program, was created to develop "high quality models of assisted living that are similar to the best practice models available for private market consumers and that can be available to Medicaid eligible residents as a nursing home alternative" (p.181). Demonstration projects were launched in Arkansas, Florida, Illinois, North Carolina, Vermont, and Washington. While results were summarized in 2005, lessons learned are still relevant today, and include the following:

- Sufficient subsidy programs need to be available for the real estate and services portions of assisted living
- Cross agency partnerships are critical to the success of affordable assisted living
- Pre-development loan programs are critical to encourage and enable mission-driven organizations to pursue an assisted living project
- Technical assistance and outreach by state agencies to community organizations achieves significant results
- Expert assistance from development and operations consultants is critical to moving demonstration projects forward
- Cost data showing the per capita savings states obtain from implementing or expanding affordable assisted living is a powerful tool in policy debates
- The concern that large numbers of eligible recipients will "come out of the woodwork" and overwhelm the system if attractive alternatives to nursing homes are available still prevent some states from implementing large-scale assisted living programs
- Low state reimbursements for assisted living often limit the interest of high quality providers to only the most mission-driven

The authors also recommend further research on reimbursement rates, cost analyses, non-traditional organizations' roles in affordable assisted living resource development, and resource needs for organizations developing affordable assisted living.

Joint Center for Housing Studies of Harvard University. (2014). *U.S. unprepared to meet the housing needs of its aging population*. [News Release.] https://www.jchs.harvard.edu/sites/default/files/jchs_housing_americas_older_adults_2014_press_release_090214_0.pdf

The news release highlights the lack of affordable housing and impact of the growing population of older adults. The authors state that "housing that is affordable, physically accessibly, well-located, and coordinated with supports and services is in too short supply" (p. 1). In particular, they note the importance of addressing the lack of coordination between housing and health care in order to help frail older adults avoid moves to more costly and restrictive settings, such as nursing homes.

Lepore, M., Knowles, M., Porter, K. A., O'Keefe, J., & Wiener, J. (2017). Medicaid beneficiaries' access to residential care settings. *Journal of Housing for the Elderly*, *31*(4), 351–366.

State and federal agencies have a growing interest in shifting Medicaid expenditures from more expensive restrictive settings to community-based housing. A number of factors affect the extent to which frail, low-income older adults may receive and rely on Medicaid funding to pay for housing that also provides long-term services and supports, including:

- Medicaid rates for residential care settings
- Medicaid used to cover services in these settings
- Adoption and design of managed long-term services and supports
- Supply of available beds in these settings
- State policies related to room and board costs in these settings
- Providers' compliance with federal home and community-based service regulations

The authors recommend further research to inform government policies, including:

- How Medicaid rates affect access to residential care settings
- How the HCBS rule affects access to these settings by frail, low-income older adults
- To what extent Medicaid beneficiaries receive quality, person-centered services

Lewin Group. (2012). *The "value added" of linking publicly assisted housing for low-income older adults with enhanced services: A literature synthesis and environmental scan*. Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health & Human Services. https://aspe.hhs.gov/system/files/pdf/76516/ValueAdd.pdf

The report leads with the following key quotation in support of housing with services for low-income older adults:

> *Publicly assisted senior housing provides the core of a potentially less costly system of affordable housing linked to services. Because publicly assisted housing also provides a critical mass of elderly residents living in close proximity to one another, this creates opportunities to achieve important economies of scale in organizing, purchasing, and delivering services, thereby increasing efficiency and affordability. (p. ii)*

The study reviewed several program models, and discussed benefits for residents, cost impacts, benefits for properties and communities, and program challenges and strategies. The study also presented information about policy barriers and recommendations for further research.

McFadden, E. S., & Lucio, J. (2014). Aging in (privatized) places: Subsidized housing policy and seniors. *Journal of Housing for the Elderly, 28*(3), 268–287.

The authors suggest that frail, low-income older adults have benefitted from the safety net provided by subsidized housing with services and supports. As the population of older adults grows, the policy response has been one of expanding public-private partnerships, but with limited reach, equity, and effectiveness. The authors offer the following suggestions:

- Reexamine HUD budget priorities with attention to making more programs available and accessible to those with complex issues in need of permanent subsidized housing and to maintaining the existing stock of public housing for the residents who live there.
- Develop a concrete action plan with partner agencies for how supportive housing may be provided and funded, so that the majority of the responsibility is not left to the private sector.
- Monitor HUD subsidized facilities selection and eviction procedures to ensure that policies do not discriminate based on perceived disability.
- Train private housing management companies on how to better serve the needs of older adults to avoid premature institutionalization and to promote resident independence.
- Maintain greater oversight over housing projects to ensure completion and structural accessibility. Give priority to projects that set aside units for older adults to increase the supply.
- Provide more federal funding assistance to service coordinators.

Minnesota Department of Human Services. (2019). *Evaluation of rate methodology for services provided under Elderly Waiver and related programs*. LeadingAge Minnesota. https://www.leadingagemn.org/assets/docs/2019_DHS_Rate_Methodology_Evaluation_FINAL.pdf

The Minnesota Department of Human Services contracted with Navigant Consulting to complete a study of the current rate-setting methodology for home and community-based services provided under Elderly Waiver, Alternative Care, Essential Community Supports, Brain Injury, and Community Access for Disability Inclusion waivers. The purpose of the study was to assess the extent to which current rates for home and community-based services were "consistent with efficiency, economy, and quality of care and…sufficient to enlist enough providers so that care and services are available under the plan at least to the extent that care and services are available to the general population in the geographic area" (p. 1).

DHS recommended Elderly Waiver rate value increases for the following residential component services:

- Medication setups by licensed nurse (58.7% increase)
- Home management/support services (56.5% increase)
- Socialization (56.5% increase)
- Individual transportation (56.5% increase)
- Home health aide (30.5% increase)
- Home care aide (27.4% increase)

Park, S., Han, Y., Kim, B., & Dunkle, R. E. (2017). Aging in place of vulnerable older adults: Person-environment fit perspective. *Journal of Applied Gerontology, 36*(11), 1327–1350.

The authors determined that the supportive environment found in senior housing helps low-income older adults age successfully. In particular, they found that low-income older adults who lived in senior housing reported better health than those who lived in regular homes in the community. They believe that these initial results make the case for future research on the mitigating effect of senior housing on the health and well-being of older adults. The authors expect that outcomes related to emergency care and nursing home placements may reveal the importance of the supportive senior housing environment on physical health and psychosocial outcomes. Additional findings could be used to support policy changes.

Redfoot, D. L., & Kochera, A. (2005). Targeting services to those most at risk. *Journal of Housing for the Elderly, 18*(3–4), 137–163.

The authors examined the growing trend of expanding federally subsidized housing programs to provide supportive services for older adults in the least restrictive settings possible. They found that state reforms have resulted in greater cost savings, fewer nursing home admissions, improved consumer choice, and higher quality of care. Key policy implications they identified include:

- Housing and service programs and agencies must coordinate in order to capitalize on economies of scale and efficiencies to provide supportive services to older adults at risk of institutionalization.
- Housing programs will need to invest funds to retrofit and remodel buildings to accommodate older adults with physical disabilities and limitations.
- State agencies that regulate supportive services must take the lead in linking housing and services.
- The desire to preserve financial resources by linking housing and services must not supersede an obligation to address quality of life and quality of the care received by older adults.

Spillman, B. C., Biess, J., & MacDonald, G. (2012). ***Housing as a platform for improving outcomes for older renters*****.** Urban Institute. https://www.urban.org/research/publication/housing-platform-improving-outcomes-older-renters

Public policy focus on the high costs to Medicaid of nursing home care for frail, low-income older adults has resulted in the development of strategies and programs that support less restrictive and costly alternatives for older adults. The authors recommend that further research be conducted to establish the costs and benefits of pairing affordable housing with supportive services. Possible research topics and questions they recommend include:

The at-risk population and scope of the access problem

How many older renters in subsidized and unsubsidized private rental housing are at risk of losing independence?

What is the gap between available housing support and public units with appropriate services and the number of people who need them?

The role of accessibility and housing quality

Which accessibility features are most effective in helping older Americans maintain their health, daily functioning, quality of life, and maximum independence?

Service models available and their effectiveness

What service models are available to support low-income older renters?

What services are available to low-income renters in publicly assisted housing developments?

Which of these models is most effective for which types of residents?

The role of neighborhood characteristics

How do neighborhood characteristics associated with "livable communities," such as access to transportation and neighborhood walkability, affect the well-being and independences of older renters?

Wilden, R., & Redfoot, D. L. (2002). ***Adding assisted living services to subsidized housing: Serving frail older persons with low incomes.*** AARP. https://www.aarp.org/home-garden/livable-communities/info-2002/aresearch-import-794-INB46.html.

This 2002 article describes efforts to assess the need for and provide assisted living services in subsidized housing settings. According to the authors, assisted living services in federally subsidized housing are successfully reaching older adults who qualify for nursing home care, and especially those who qualify for Medicaid.

The article also describes case studies of subsidized, assisted living programs, including those operated by the Minneapolis Public Housing Authority, and Saint Paul Public Housing Agency in conjunction with the Wilder Foundation. Issues confronting the broader development and sustainability of assisted living in federally subsidized programs include:

Funding: Securing limited and unpredictable funding may require a significant ongoing effort from staff

Service delivery: There are efficiencies in providing services in one location, some services are offered from a menu, and meals provision can be difficult for smaller programs or those without mandatory requirements

Effort and type of housing: States have an important role to play in expanding such programs, and collaborations between federal and private providers can benefit from a variety of contributions

Management: Effective coordination requires flexibility and creativity, and providing enhanced services to all residents does not necessarily increase liability or costs for programs

Miscellaneous: There is significant variation in regulations surrounding assisted living from state to state, and facilities often require physical updates and modifications to support assisted living services

Wilkins, C. (2015). Connecting permanent supportive housing to health care delivery and payment systems: Opportunities and challenges. *American Journal of Psychiatric Rehabilitation, 18,* 65-86.

The author makes a case for providing housing with supportive services to people who have experienced homelessness and who have complex physical and behavioral health conditions. Providing this individualized care and meeting their needs for housing has the potential to improve individuals' physical and mental health outcomes, as well as reduce health care system use of more costly interventions. Pilot projects have demonstrated that permanent supportive housing has provided improved stability for individuals, while also addressing the triple aim of health care reform—improving patients' care and health, and reducing the cost of health care. Medicaid has emerged as an important source of funding for services, and has the potential to advance financial sustainability for service delivery.

References

Brown, R. T., Thomas, M. L., Cutler, D. F., & Hinderlie, M. (2013). Meeting the housing and care needs of older homeless adults: A permanent supportive housing program targeting homeless elders. *Seniors Housing & Care Journal, 21*(1), 126–135. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3980491/

Burt, M. R. (2015). Serving people with complex health needs: Emerging models, with a focus on people experiencing homelessness or living in permanent supportive housing. *American Journal of Psychiatric Rehabilitation, 18*(1), 42–64. https://doi.org/10.1080/15487768.2015.1001696

Cisneros, H., & Weber, V. (2015, June 23). Home can be where the help is. *U.S. News and World Report*. https://www.usnews.com/opinion/articles/2015/06/23/how-to-help-more-seniors-age-at-home

CORE (Center for Outcomes Research & Education). (2013). *Integrating housing & health: A health-focused evaluation of the apartments at Bud Clark Commons*. Home Forward. http://www.homeforward.org/sites/default/files/2014-4-14-BCC-report-with-appendix.pdf

Ficke, R. C., & Berkowitz, S. G. (2000). *Evaluation of the HOPE for Elderly Independence Demonstration program and the New Congregate Housing Services Program*. HUD User. https://www.huduser.gov/portal//Publications/pdf/HUD%20-%2011053.pdf

Genworth Financial [CareScout®]. (2019). *Genworth cost of care survey 2019.* https://pro.genworth.com/riiproweb/productinfo/pdf/131168.pdf

Golant, S. M. (2008). Affordable clustered housing-care: A category of long-term care options for the elderly poor. *Journal of Housing for the Elderly, 22*(1-2), 3-44.

Golant, S. M., Parsons, P., & Boling, P. A. (2010). Assessing the quality of care found in affordable clustered housing-care arrangements: Key to informing public policy. *Cityscape, 12*(2), 24.Joint Center for Housing Studies of Harvard University. (2014). *Housing America's older adults: Meeting the needs of an aging population*. https://www.jchs.harvard.edu/sites/default/files/jchs-housing_americas_older_adults_2014_1.pdf

Lepore, M., Knowles, M., Porter, K. A., O'Keeffe, J., & Wiener, J. (2017). Medicaid beneficiaries' access to residential care settings. *Journal of Housing for the Elderly, 31*(4), 351–366. https://doi.org/10.1080/02763893.2017.1335669

Maxfield Research, Inc. (2018, February 27). *Memorandum: Update assessment of demand for affordable senior housing in Minnesota.* Minnesota NAHRO. https://minnesotanahro.wildapricot.org/resources/Documents/Maxfield%20Senior%20Housing%20Demand%20Assessment%20MN.pdf

McFadden, E. S., & Lucio, J. (2014). Aging in (privatized) places: Subsidized housing policy and seniors. *Journal of Housing for the Elderly, 28*(3), 268–287. https://doi.org/10.1080/02763893.2014.930364

Minnesota Compass. (2019). *Cost-burdened households*. https://www.mncompass.org/aging/cost-burdened-households#1-11592-g

Minnesota Department of Human Services. (n.d.-a). *Community-based services manual*. https://www.dhs.state.mn.us/main/idcplg?IdcService=GET_DYNAMIC_CONVERSION&RevisionSelectionMethod=LatestReleased&dDocName=ID_000402

Minnesota Department of Human Services. (n.d.-b). *Licensing for home and community-based services – 245D providers*. https://mn.gov/dhs/partners-and-providers/licensing/hcbs-245d/

Minnesota Department of Human Services. (2017a). *Activities of Daily Living*. https://www.dhs.state.mn.us/main/groups/county_access/documents/pub/dhs16_180273.pdf

Minnesota Department of Human Services. (2017b). *Instrumental Activities of Daily Living*. https://www.dhs.state.mn.us/main/groups/county_access/documents/pub/dhs16_180274.pdf

Minnesota Department of Human Services. (2019a). *Evaluation of rate methodology for services provided under Elderly Waiver and related programs*. https://www.leadingagemn.org/assets/docs/2019_DHS_Rate_Methodology_Evaluation_FINAL.pdf

Minnesota Department of Human Services. (2019b). *Minnesota Long Term Care Consultation Services Assessment Form.* https://edocs.dhs.state.mn.us/lfserver/Public/DHS-3428-ENG

Minnesota Department of Human Services. (2019c). *PCA manual*. https://www.dhs.state.mn.us/main/idcplg?IdcService=GET_DYNAMIC_CONVERSION&RevisionSelectionMethod=LatestReleased&dDocName=DHS16_146069

Redfoot, D. L., & Kochera, A. (2005). Targeting services to those most at risk: Characteristics of residents in federally subsidized housing. *Journal of Housing for the Elderly, 18*(3-4), 137-163. https://doi.org/10.1300/J081v18n03_06

Saint Paul Public Housing Agency. (n.d.-a). *Congregate Housing Services Program (CHSP)*. http://www.stpha.org/public-housing/congregate-housing-services-program-chsp

Saint Paul Public Housing Agency. (n.d.-b). *Public Housing.* http://www.stpha.org/public-housing

Saint Paul Public Housing Agency. (n.d.-c). *Section 8.* https://www.stpha.org/section-8/eligibility-admission

Spillman, B. C., Biess, J., & MacDonald, G. (2012). *Housing as a platform for improving outcomes for older renters*. Urban Institute. https://www.urban.org/research/publication/housing-platform-improving-outcomes-older-renters

U.S. Department of Housing and Urban Development. (n.d.-a). *HOPWA eligibility requirements.* https://www.hudexchange.info/programs/hopwa/hopwa-eligibility-requirements/

U.S. Department of Housing and Urban Development. (n.d.-b). *Section 202 supportive housing for the elderly program.* https://www.hud.gov/program_offices/housing/mfh/progdesc/eld202

Wilkins, C. (2015). Connecting permanent supportive housing to health care delivery and payment systems: Opportunities and challenges. *American Journal of Psychiatric Rehabilitation, 18*, 65-86.

Acknowledgements

The authors would like to thank the many individuals who collaborated on the development and completion of this project. Our colleagues at the Amherst H. Wilder Foundation Healthy Aging and Caregiver Services initiated this study and provided critical in-depth background and current information about the Customized Living program. We are grateful for the support and guidance of staff from the Minnesota Department of Human Services Aging and Adult Services Division, who also supplied necessary funding and key data for the analysis. Saint Paul Public Housing Agency staff provided important insight and data for a more complete understanding of the operations of subsidized housing. Finally, we wish to thank all of the service providers who responded to our questions about their programs and services. They greatly improved our understanding of the range of programs now available to assist low-income older adults with housing, health, and functioning.

We are grateful to have excellent colleagues at Wilder Research who helped us to discover current literature and sources, organize content, analyze data, and develop this report.

Wilder Research, a division of Amherst H. Wilder Foundation, is a nationally respected nonprofit research and evaluation group. For more than 100 years, Wilder Research has gathered and interpreted facts and trends to help families and communities thrive, get at the core of community concerns, and uncover issues that are overlooked or poorly understood.

451 Lexington Parkway North
Saint Paul, Minnesota 55104
651-280-2700 | www.wilderresearch.org

Wilder Research®
Information. Insight. Impact.