



Small-House Nursing Homes

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About this Series

This Spotlight is part of the AARP Public Policy Institute's LTSS Choices initiative. This initiative includes a series of reports, blogs, videos, podcasts, and virtual convenings that seeks to spark ideas for immediate, intermediate, and long-term options for transforming long-term services and supports (LTSS). We will explore a growing list of innovative models and evidence-based solutions—at both the national and international levels—to achieve system-wide LTSS reform.

We recognize the importance of collaborating and partnering with others across the array of sectors, disciplines, and diverse populations to truly transform and modernize the LTSS system. We invite new ideas and look forward to opportunities for collaboration.

For all questions and inquiries, please contact Susan at LTSSChoices@aarpp.org.

Given COVID-19's devastating impact on long-term care facilities, more and more individuals and families are interested in finding alternatives to traditional institutional care settings. Residents of nursing homes and other long-term care facilities account for a disproportionate share (40 percent as of December 15, 2020) of coronavirus-related deaths in the United States, despite representing less than 1 percent of the population.^{1,2} A major driver of widespread transmission of COVID-19 in traditional nursing homes was the physical environment of these settings—typically large buildings with shared living spaces.^{3,4}

Even before the coronavirus pandemic, long-standing problems in traditional nursing homes, such as infection control violations, low staffing ratios, and safety concerns, led some individuals and their families to seek alternative options, including small-house nursing homes.^{5,6,7,8} Small-house nursing homes incorporate design elements that enable a safer living environment for people in need of nursing-home levels of care (see sidebar, p. 2). THE GREEN HOUSE® model, which generated national interest with its inception in the early 2000s, is the most widely researched small-house nursing home today.

This report describes key elements of the Green House model, with a focus on its housing, services and supports, workforce, and community integration. Also discussed are opportunities to expand the availability of both Green House homes and similar small-house nursing homes, as well as challenges associated with the model.

What Is the Green House Model?

Green House homes are small, residential-style living spaces for individuals in need of nursing-home levels of care. When the model's pioneer, Dr. William H. Thomas, conceived the concept of the Green House, he envisioned a decentralized, all-inclusive physical environment that enabled individuals to live healthy, empowered, and satisfying lives.⁹ The design's overall goal is to achieve a better quality of care and quality of life for residents—and higher satisfaction rates among staff and families—than that experienced in traditional nursing homes.

The Green House model consists of several distinctive elements and practices shaped by three core values: real home, meaningful life, and empowered staff (see appendix A for core values and elements essential to the Green House model).¹⁰ Unlike the traditional nursing home environment with its hospital-like elements such as medication carts and nurses' stations, Green House homes are built to look and function like homes in the community.¹¹ All registered homes in the Green House network must adhere to a set of design guidelines and quality standards associated with the model.¹²

Behind this model is the concept that a person-centered approach to services enhances a resident's quality of life. Residents decide on critical aspects of their day-to-day activities, from the types of services they want to their preferred level of interaction with other residents. In this setting, residents can get what is essential *for* them and what is important *to* them.

The staffing approach is a defining feature of the Green House model, with Certified Nursing Assistants (CNAs) holding more responsibility for and being empowered to achieve quality of care and quality of life for residents. CNAs operate as a self-managed work team, known as the Shahbazim (singular form is Shahbaz), to respond to what residents want and need. All team members are trained to provide a diverse range of supports including personal care, meal preparation, laundry, and housekeeping. This

What Are Small-House Nursing Homes?

Small-house nursing homes are residential-style living spaces primarily for individuals who require full-time levels of nursing care and assistance with daily activities.¹ Unlike traditional, large-scale nursing homes, small-house nursing homes are typically self-contained buildings occupied by fewer residents.² With small-house nursing homes, typically a cluster of small houses is licensed as a nursing facility, or they can be part of a licensed traditional nursing home. They tend to be within residential neighborhoods or located on senior living campuses. Although small-house models can vary in structural elements, a hallmark is the emphasis on privacy and homelike features.³ Rather than shared bedrooms, residents typically have private rooms with private bathrooms. Beyond the privacy of their rooms, residents can engage with others in shared community spaces such as the kitchen, dining room, lounge area, and outdoor area. As a licensed skilled nursing facility, this setting offers a range of services and supports to residents. In addition to residents having access to a clinical team, direct care workers are on hand to support them with their daily needs, providing a wide range of assistance, including personal care, laundry, cooking, and cleaning.

¹Reinhardt et al., "The Small House Model of Long-Term Care: Association with Older Adult Functioning," *The Journal of Post-Acute and Long-Term Care* 20, no. 2 (2019): 222–23, [https://www.jamda.com/article/S1525-8610\(18\)30576-0/fulltext](https://www.jamda.com/article/S1525-8610(18)30576-0/fulltext).

²University of Minnesota, "Small-House Nursing Homes (Green House®)," Long Term Care Resource Center, November 25, 2013, http://www.hpm.umn.edu/ltrsourcecenter/research/green_houses.htm.

³I Advance Senior Care, "From 'Nursing Home' to 'Home': The Small House Movement," IASC Home, April 1, 2018, <https://www.iadvanceseniorcare.com/from-nursing-home-to-home-the-small-house-movement/>.

design allows for any staff member to respond in the moment to what a particular resident needs—a noticeable difference from the model often employed by larger nursing homes, where workers typically perform only one or two functions for large numbers of residents. In larger homes, a worker must call in someone else if a resident requires something they are not tasked with performing. CNAs in Green House homes must also complete additional hours of specialized training, including dementia care and culinary education (See appendix A for more details on staffing).

What Is the Current State of the Green House Model?

Nationwide, approximately 3,200 people currently live in Green House homes. The majority of residents receive nursing care and other services and supports such as personal care, hospice care, and dementia care. Almost 9 in 10 (87 percent) Green House homes are licensed as skilled nursing facilities, and most of them are dually Medicare and Medicaid certified, allowing them to offer Medicare-covered short-term rehabilitation services as well as long-term nursing home care.

The original four Green House homes were constructed in 2003; today approximately 300 licensed homes exist in 32 states. Of those facilities, 89 percent of the homes (268) remain actively engaged in the Green House peer network.¹³ Nearly two-thirds (63 percent) of all the licensed homes are within urban communities, and 37 percent are in rural areas.

Although most Green House homes are designed as single-family, ranch-style homes, other design models exist (see appendix B for three types of Green House models). The Green House model can operate as a single, independent housing unit; however, Green House homes are typically built as a cluster of homes in a residential neighborhood or as part of a larger health care campus that includes other facilities. Over the years, the location of Green House homes has evolved to include being placed within residential neighborhoods, but many are located on the campuses of senior living communities (also known as continuing care retirement communities or, more recently, life plan communities). The Green House model has been adopted in various settings, including assisted living facilities, public housing, veteran communities, and dementia care settings.¹⁴

Most Green House partners (82 percent) are not-for-profit owners, while 18 percent are for-profit. Among the not-for-profit partners, many are faith-based organizations. Although most partners have used tax-exempt bonds to finance a Green House, others have received financing from the USDA or conventional banks, or they have undertaken capital campaigns or fundraising. In terms of payment for individual residents, the three payer sources of the Green House are private pay, Medicare, and Medicaid. Most residents pay out of pocket for services, but roughly 45 percent of residents are covered by Medicaid, according to the results of a 2017 finance survey.

Today’s Green House Homes

3,200 Residents Nationwide

- Majority receive nursing care
- Majority pay out of pocket
- 45% covered by Medicaid

300 Licensed Homes in 32 States

- 87% licensed as skilled nursing facilities
- 37% located in rural areas
- 63% located in urban areas
- 82% not-for-profit
- 18% for-profit
- 89% remain active in Green House peer network

The Evidence: Is the Green House Model Resulting in Improved Outcomes?

Prior to the COVID-19 pandemic, studies documented better clinical outcomes for residents in Green House homes than those for residents in traditional nursing homes. A 2015 study found that Green House home residents were 16 percent less likely to be bedridden, 38 percent less likely to have pressure ulcers, and 45 percent less likely to have catheters.¹⁵ The study also found that Green House residents had lower hospital readmission rates than did traditional nursing home residents. Other studies on Green House homes have documented the effect of the model on a broad range of measures, including quality of life and quality of care, family satisfaction, and staff satisfaction (see appendix B for a selection of research reports). Existing studies on this model are limited in scope, and further research is needed to confirm findings and determine which elements of the Green House model are most effective. Furthermore, limited research on other small-house home models, in general, makes it difficult to compare the Green House to similar approaches, such as the Household model.¹⁶

More recently, meanwhile, the COVID-19 pandemic has highlighted the potential value of the Green House model—perhaps as never before—what with the model’s smaller settings and intentional design. Green House homes are faring far better than traditional nursing homes in handling COVID-19—with 2.8 confirmed deaths per thousand residents in Green House homes through July 2020, compared with 38 deaths per thousand residents in all certified skilled nursing homes.¹⁷ Though further research is necessary, these positive preliminary results can be attributed to several factors, including the structural elements (e.g., small size, private bedrooms and bathrooms), fewer residents, and adequate infection-control measures.^{18,19}

Challenges for Expanding the Availability of Small-House Homes

Despite being around since the early 2000s and having attributes that would seem highly appealing, Green House model adoption rates remain relatively slow, resulting in only a small proportion of the residential care population (3,200 residents) living in this setting today. By comparison, 1.4 million adults resided in nursing homes as of 2018.²⁰ As discussed below, a few factors are responsible for this slow uptake.

Challenges for individuals trying to access small-house homes like Green House Homes

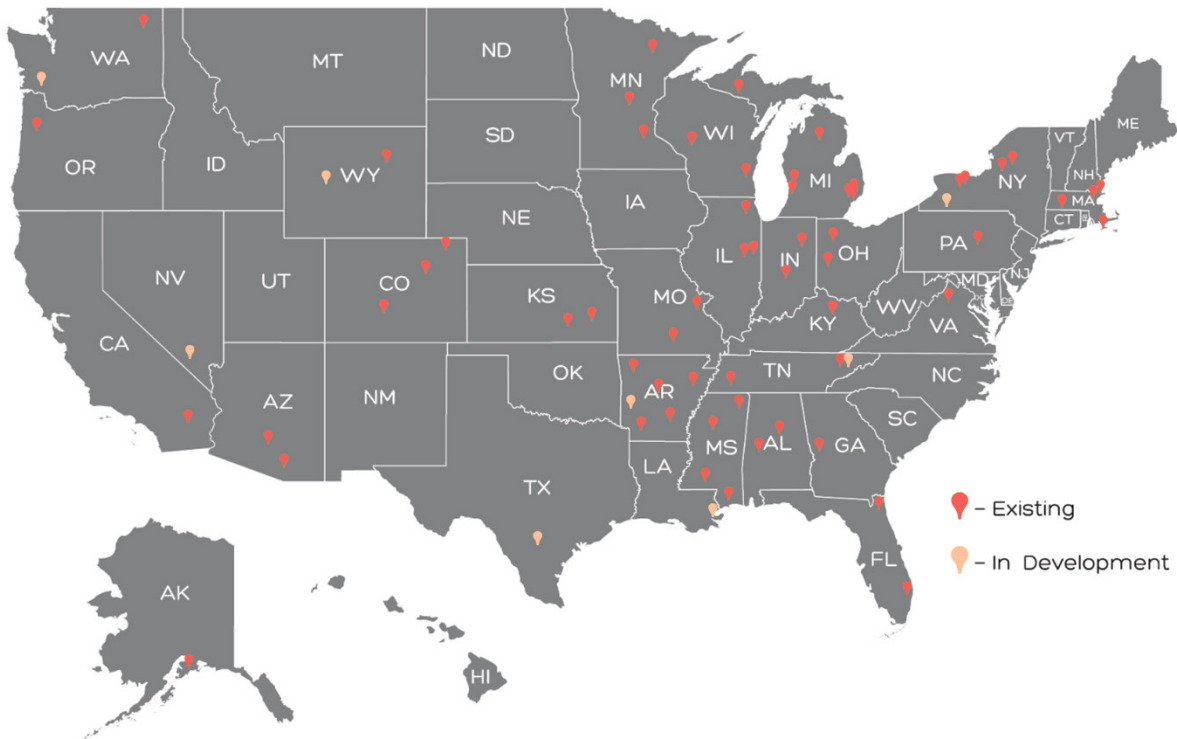
Limited Availability. For individuals and their families seeking alternatives to nursing home care, such as small-house homes, a major barrier is the limited availability of this type of care. With just 300 Green House homes spread across the country, most people in need of skilled nursing care do not have access to this setting (see figure 1). By contrast, the 15,600 traditional nursing homes operating in the United States today make access to this type of setting much more widely available.²¹

Costs. Cost may also serve as an impediment for an individual wanting to live in a Green House home, with daily rates typically ranging from \$246 to \$495.²² Although the rate very much depends on the location of the Green House home (e.g., Boston would have higher rates than Little Rock), the high cost may make this setting unaffordable for individuals and their families unless they qualify for Medicaid.²³ Like some long-stay nursing home residents, some Green House home residents will need to spend down their assets to qualify for Medicaid, which, in turn, will pay for services.

Challenges for potential providers seeking to offer or expand small-house homes

Financing. The cost of developing a Green House home is comparable to building a nursing home with private bedrooms, bathrooms, and equivalent common space. To achieve financial viability, potential

FIGURE 1: MAP OF ACTIVE GREEN HOUSE HOMES



Source: The Green House Project

providers must consider four factors: (1) development and construction costs (e.g., land, infrastructure); (2) financing (e.g., availability, type, terms); (3) revenue (e.g., payer mix and rates, market assessments); and (4) operating costs. In Green House development—as is the case in many construction situations—smaller is economical, so limiting the number of square feet in the home is important for controlling costs. Fewer square feet and properly sized spaces within the home equates to a more affordable project.

In general, an organization is better able to spread overhead costs when building more than one home. Construction costs also depend on other factors, such as whether a Green House is part of an existing residential campus. Finally, although Green House homes tend to achieve higher occupancy rates than do traditional nursing homes, and the return of investment typically pays off, an ongoing challenge for potential providers is finding and maintaining attractive financing mechanisms.

Regulations. Regulatory challenges around building new nursing homes also serve as obstacles for potential providers. For example, certificate-of-need (CON) laws—which are state regulatory approvals for building or expanding health care facilities in a given area—are known to hinder innovation in nursing homes by making it difficult for providers to get permission to build a new facility.^{24,25} Currently, most states—36, including Washington, DC—operate CON programs.²⁶ In addition to these regulations, many states have issued construction moratoria on new facilities to control nursing home bed supply.²⁷ Some argue that these regulatory measures are restrictive, discouraging private investment in both new facilities and expansion of current ones.

Workforce. Research suggests that Green House homes offer higher-than-average compensation and more training opportunities for staff. Green House homes report higher staff retention and satisfaction rates than traditional nursing homes. But like all LTSS providers, small-house home providers have to grapple with the widespread workforce challenges in this field of recruitment and retention of qualified workers; it is a field that puts workers at an elevated risk for contagious disease and injury, and it pays low wages and offers few standard employment benefits such as paid sick leave. Between 2016 and 2026, there will be an estimated 7.8 million direct care worker job openings.^{28,29} Addressing long-standing workforce shortage challenges at large will be necessary to ensure that individuals who need LTSS and their families have access to what they need in their preferred setting.

Four Policy Recommendations for Expanding the Availability of Small-House Homes

To expand access to small-house nursing homes such as Green Houses, policy makers should address the challenges inhibiting their growth. Below we outline four policy recommendations for consideration:

- **Incentivize public and private investment:** Policy makers should offer attractive financial incentives to encourage more capital investments in innovative models. For example, policy makers should consider improving current public funding streams for LTSS, starting with Medicaid. Although Medicaid is the biggest funder of nursing home care, it has the lowest payment rate among the payer sources for skilled nursing homes. Improving Medicaid reimbursement rates will help some providers balance their payer mix, making small-house homes more accessible and affordable for individuals in the long term.
- **Eliminate regulatory barriers to entry:** State policy makers should consider updating their CON laws and construction moratoria for nursing homes, to allow for greater innovation in the marketplace.
- **Strengthen the LTSS workforce:** Policy makers should establish policies that will increase the available supply of LTSS workers, particularly direct care workers, and address job-quality issues. To attract qualified workers, LTSS providers must offer higher wages that reflect the complex skills needed to perform these jobs and the benefits necessary to keep workers in them, including hazard pay, guaranteed health insurance, and sick leave. Given COVID-19's particular impact on nursing homes, new policies should also address the training needs of workers, with a specific focus on infection control and other emergency-preparedness protocols.
- **Expedite adoption of key model features associated with quality improvement:** Though longer-term investment will be necessary to make small-house models available to more people, there are key features of the Green House model that might be applied in the short term to existing nursing facilities. Policy makers should promote more research and demonstration of how key features of the Green House model (e.g., “universal worker” staffing model, private rooms) could be adopted by larger facilities.

The coronavirus pandemic not only has shined a light on deep-rooted issues with nursing homes but has revealed serious cracks and inefficiencies in our nation's LTSS infrastructure. Now more than ever, policy makers have an opportunity to redesign and refresh the LTSS system to meet the diverse needs and preferences of current and future LTSS consumers and their families. Investing in evidence-based alternatives to traditional institutional settings, such as small-house homes, is a crucial step in the right direction.

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Appendix A

Core Values and Elements Essential to the Green House

Core Values	Elements and Practices
Real Home	<ul style="list-style-type: none"> • 10–12 residents referred to as <i>elders</i>¹ • Private bedroom with full bathroom <ul style="list-style-type: none"> – Ceiling lifts in each resident room to facilitate a safe transfer to/from bathrooms, and in the spa area to support transfer to spa tub as necessary • Shared space includes a central living area with a fireplace, open kitchen, dining area with a communal dining table, and den • Easy access to outdoor and green spaces: front porches, secured courtyard • Pet-friendly
Meaningful Life	<ul style="list-style-type: none"> • Relationship-rich, elder-directed living <ul style="list-style-type: none"> – Control over day-to-day activities (e.g., sleeping times, self-care, alone time) – Informed choices to participate in formal/informal house decision making (e.g., house council meetings) – Residents have a say in their own care plan (creation, discussion, and implementation) – Formal and informal opportunities for community engagement – House councils organize activities, menus, and house routines – End-of-life process is inclusive and reflects palliative- and hospice-care principles
Empowered Staff	<ul style="list-style-type: none"> • Certified nursing assistants (CNAs), also known as Shahbazim, work as versatile workers² <ul style="list-style-type: none"> – CNAs equipped with 128 additional hours of specialized training, including culinary training, person-directed care for people with dementia, and specific policies and procedures for the Green House model – Tasks include meal preparation, laundry, and provision of personal care • Clinical team consists of a full-time nurse who works in collaboration with the self-managed work team of Shahbazim <ul style="list-style-type: none"> – The clinical team also includes other disciplines, such as dietary manager/dietitian, physical therapist, occupational therapist, speech-language pathologist, social worker, and activity director – Although the clinical team may not always be located in the home, they are nearby if needed • Consistent assignments and multifaceted roles enable staff to build meaningful relationships with residents and their families • Staff engage in collaborative decision making with residents and their families³

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Appendix B*Three Design Models of the Green House Home*

Name: Saint Elizabeth

Location: Greenwich, Rhode Island

Design Model: Single-family, ranch-style home



Name: The Woodlands at John Knox Village

Location: Pompano Beach, Florida

Design Model: Seven-story building located within a continuing care retirement community; total of 12 homes, and 4 of the 12 homes are dedicated to short-term rehab. First floor includes bistro (open to all residents, families, guests), outpatient rehab, spa, and community room.



Name: Leonard Center for Living

Location: Chelsea, Massachusetts

Design Model: First urban vertical building; total of 10 homes, with 3 of 10 homes dedicated to short-term rehab, 3 of 10 homes supporting people living with ALS and MS, and the remaining 4 for long-term care.



Appendix C

Six Selected Studies of Green House Homes

Focus Area	Study	Findings
Costs	Financial Implications of the Green House Model. Jenkins*, Robert, MSRED; Sult, Terri, MBA; Lessell, Newell, MBA; Hammer, David, MS; Ortigara, Anna, RN, MS, FAAN. <i>Seniors Housing & Care Journal</i> , 2011.	Analysis of published and other Green House studies related to financial performance, each limited in scope but with mutually reinforcing findings, provides growing evidence that the Green House model’s operations are comparable in cost to those of traditional nursing homes as well as to those nursing home providers utilizing some culture change practices. Capital costs are found to be equivalent to or less than similar culture change models but higher than traditional designs, which provide much less space per resident. Revenue from higher occupancy and more private-pay days found to be associated with Green House home implementation may offset these higher capital costs.
Family Satisfaction	Effects of Green House® Nursing Homes on Residents’ Families. Lum, Terry Y., MSW, PhD; Kane, Rosalie A., MSW, PhD; Cutler, Lois J., PhD; Yu, Tzy-Chyi, MHA, PhD. <i>Health Care Financing Review</i> ; Winter 2008/2009.	A longitudinal quasi-experimental study with two comparison groups was conducted to test the effects of a Green House nursing home program on residents’ family members. These family members were somewhat less involved in assisting residents, although family contact did not differ among the settings at any time period. Green House families were more satisfied with the resident’s care and with their own experience as family members and had no greater family burden. Issues in studying family outcomes are discussed as well as implications for roles of various personnel, including social service and activities staff.
Quality of Care/ Life	Evidence behind the Green House and Similar Models of Nursing Home Care. Zimmerman, Sheryl; Cohen, Lauren W. <i>Aging Health</i> , 2010.	In a systematic review to examine the evidence for the elements of the model, the authors concluded that the evidence supports some Green House model elements, including those related to privacy, outdoor access, residential-style kitchens and dining, and person-centered schedules of care. The evidence was mixed in other areas, including those related to the size of the home, consistent staff assignment, and the clinical staffing model, and was negative regarding the Green House’s normalized engagement practices.

Focus Area	Study	Findings
<p>Quality of Care/ Life (<i>continued</i>)</p>	<p><u>Residential Outcomes in Small-House Nursing Homes: A Longitudinal Evaluation of the Initial Green House Program.</u> Kane, Rosalie A.; Lum, Terry Y.; Cutler, Lois J.; Degenholtz, Howard B.; Yu, Tzy-Chyi. <i>Journal of the American Geriatrics Society</i>, 2005.</p>	<p>A two-year longitudinal quasi-experimental study comparing Green House residents with residents at two comparison traditional nursing home sites using data collected at baseline and three follow-up intervals. Controlling for baseline characteristics (age, sex, activities of daily living, date of admission, and proxy interview status), statistically significant differences in self-reported dimensions of quality of life favored the Green Houses over one or both comparison groups. The quality of care in the Green Houses at least equaled, and for change in functional status exceeded, that of the comparison nursing homes.</p>
	<p><u>The Green House Model of Nursing Home Care in Design and Implementation.</u> Cohen, Lauren W., MA; Zimmerman, Sheryl, PhD; Reed, David, PhD; Brown, Patrick, BS; Bowers, Barbara J., RN, PhD; Nolet, Kimberly, MS; Hudak, Sandra, RN; Horn, Susan, PhD; Thrive Research Collaborative; Grawbowski, David. <i>Health Services Research</i>, November 2015.</p>	<p>Green House homes showed substantial variation in practices to support resident choice and decision making; neither the Green House homes nor traditional nursing homes provided complete choice, and all Green House homes excluded residents from some key decisions. Green House homes were most consistent with the model and one another in elements of the living environment, such as private rooms and baths and open kitchens, and in staff-related elements, such as self-managed work teams and consistent, universal workers.</p>
<p>Staff Satisfaction</p>	<p><u>Workforce Characteristics, Perceptions, Stress, and Satisfaction among Staff in Green House and Other Nursing Homes.</u> Brown, Patrick BS; Hudak, Sandra L., RN, MSN; Horn, Susan D., PhD; Cohen, Lauren W., MA; Reed, David Allen, PhD; Zimmerman, Sheryl, PhD; and the THRIVE Research Collaborative; Bowers, Barbara; Grabowski, David; Nolet, Kimberly. <i>Health Services Research</i>, December 2015.</p>	<p>An observational study finding few significant differences between Green House and comparison nursing homes. Exceptions were Green House caregivers were older, provided twice the normalized hours per week budgeted per resident than did CNAs in comparison nursing homes, and had lower turnover. Study findings suggest that the Green House environment may promote staff longevity and does not negatively affect workers' stress, safety perceptions, or satisfaction.</p>

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