Home Economics

The Business Case for The Green House® Model



THE GREEN HOUSE PROJECT

caring homes for meaningful lives℠

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Introduction

In today's long-term care market, consumers—especially those with private resources—have more choices than ever. At the same time, the growing availability of home and community-based care services, coupled with federal and state budget constraints, are pushing down nursing home reimbursements and occupancy rates. In this challenging environment, success for nursing home operators depends on having an efficient model that gives consumers what they want in a way that stands out against the other options available.

The Green House model does exactly that. The model's dramatic reinvention of long-term care has proven to be immediately recognizable and preferred by residents and their families.

This document describes The Green House model's record of quality and financial performance. It also details recent consumer research that helps explain the consistently high occupancy rates and revenue increases associated with Green House implementations, as well as the high value that consumers place on core features of The Green House model. Finally, it explains the important business advantages of adopting the full Green House model, including all core practices.

We do not provide a detailed overview of The Green House model here. Comprehensive information on the model's core practices, including the small homes, blended work role, self-managed work teams, transformed care, and innovative service delivery approach is available at www.thegreenhouseproject.org or by calling 703–647–2311.

The Green House Model: Transforming Long-Term Care

The Green House model radically transforms institutional care to create real homes where residents and direct care staff enjoy meaningful lives, significantly enhanced control, and improved care outcomes. Key attributes of the model include:

- **High-Level Services:** Green House homes are licensed as nursing homes or other high-service residential long-term care programs. They are designed to provide services to people with the greatest health care and cognitive needs.
- **Normal Living:** Green House homes look like the neighboring homes in the community. They may be configured as single-family homes or garden-style or high-rise apartment homes as appropriate.
- **Small Homes:** Implementations consist of multiple small homes or apartments. Each home or apartment residence has up to 10 private bedrooms and bathrooms (12 with a waiver for financial necessity).
- **Innovative Workforce Model:** Self-managed teams of cross-trained direct care staff provide personal care, prepare and serve meals, and perform housekeeping and laundry duties.
- **Individualized Approach:** Flexible and small-scale operations help staff meet the needs and preferences of each resident, including those with specialized needs related to dementia, sub-acute rehabilitation, and hospice.
- **Clinical Expertise:** Expert clinical teams focus on needs assessments and deliver continual clinical services.
- **Person-Directed Care:** Integrated workforce, leadership, and operational innovations support individual choice for elders, as well as deep relationships and intentionally supported communities.
- **Efficiency:** Blended staff roles and operational flexibility provide greater financial efficiencies compared to other nursing home models.
- **Versatility:** Green House homes' small scale and flexible and efficient operations mean that they can be re-purposed easily and economically in response to changes in market demands and payment policies or tailored to meet specific care needs.

The Green House model is a deep and comprehensive culture change initiative that reliably produces better financial results. These replicable results distinguish The Green House model from more incremental or *a la carte* neighborhood and household models.

The first Green House homes opened in 2003 in Tupelo, Mississippi, in partnership with Mississippi Methodist Senior Services. As of late 2012, hundreds of Green House homes were open or in development across the United States (see www.thegreenhouseproject.org for a complete list of Green House adopters).

Satisfaction and Clinical Research

A series of peer-reviewed and published research studies[1] document and confirm the sustained improvements that The Green House model supports. Clear evidence of significant, consistent, and sustained improvements across implementation sites is unique among culture change models. These findings include:

- **Improved Quality of Life:** Green House residents report improvements in autonomy, dignity, privacy, meaningful activity, relationships, sense of individuality, emotional well-being, and enjoyment of food.
- **Improved Quality of Care:** Green House residents maintain self-care abilities longer, with less decline in their activities of daily living. Fewer residents have depression, are bedfast, get little or no activity, develop facility-acquired pressure ulcers, or have avoidable hospitalizations.
- **Improved Family Satisfaction:** Green House families are more satisfied with general amenities, meals, housekeeping, physical environment, privacy, autonomy, and health care.
- **Increased Revenues, Average Costs:** Green House homes increase operators' revenues through significant overall occupancy and private-pay gains, 6.5% and 24%, respectively,[2] coupled with operational costs that are the same as national medians.

Additional research[3] suggests Medicare and Medicare cost-savings of $1,300 to $2,300 per resident per year due to fewer hospitalizations and better maintenance of self-care capacity. Documented improvements in satisfaction and clinical outcomes, together with Medicaid and Medicare cost-savings, position Green House adopters as attractive providers for the Medicare and Medicaid markets well into the future.

1 Kane, Lum, Cutler, Degenholtz, & Yu, 2007; Sharkey, Hudak, Horn, James, & Howes, 2010; Jenkens, Sult, Lessell, Hammer, & Ortigara, 2011.

2 Jenkens et al, 2011.

3 Horn, Sharkey, Grabowski, & Barrett, 2012.

Recent Consumer Research

A nationwide survey of over 1,000 caregivers involved with decision-making for a family member[4] found that, when considering a long-term care setting, caregivers' greatest concerns are:

- Lack of individual attention—83%
- Isolation—82%
- An institutional atmosphere—82%
- Loss of independence—80%

When familiarized with The Green House model and research, 97% of caregivers believed the model would address their greatest concerns and 90% felt it was important to build more Green House homes. Asked whether The Green House model would be a better choice for their family members than where they were living currently, the results were:

- **Living at Home:** For caregivers caring for their family member at home, 68% felt that The Green House model would be better for their relative.
- **Adult Day Care:** For caregivers with their family member in adult day care, 61% felt The Green House model would be a better option.
- **Facility:** For caregivers with their family member in a residential facility, 60% believed The Green House model would be a better setting.

What caregivers said they liked most about The Green House model was that their family members would live in a real home and be treated as a real person. Asked what specific features of The Green House model would be very important to them and which they felt their family member could do without, comments included:

"I want all of these things for my mother. She deserves all of this."

"It's hard to explain until you experience it, until you see the regular long-term care compared to Green House. It's like experiencing Christmas. It's hard to put into words."

"I think everyone should tour a Green House. If they could see the difference, there would be more demand for them. It's hard to explain all the differences. It's not just one thing."

4 Edge Research, 2012.

The majority of caregivers considered all The Green House model's core practices to be very important to them. Following are the percentages of caregivers who said that a core practice was very important to them:

- **Private Rooms:** All residents having a private room with a private bath (80%)
- **Individualized Schedules:** Schedules set according to residents' personal preferences and medical needs (75%)
- **Certified:** Programs "certified" by an outside organization to meet and maintain model standards (75%)
- **Extra Training:** Direct care staff are certified nursing assistants (CNAs) with 128 hours of additional training (74%)
- **Shahbaz Role and Relationships:** Deep staff relationships with residents fostered through CNAs' blended work role and self-management (74%)
- **Real Home:** An environment designed to be a real home, with a fireplace and open kitchen (74%)
- **Improved Staff Ratios:** The Green House model's minimum five hours of direct care and licensed nurse time per resident per day (70%)
- **Aging in Place:** Homes that serve all people's needs and follow an aging-in-place approach (68%)
- **Family Table:** A single dining room table where all residents are included (63%)
- **Home Cooking:** Meals prepared and cooked in the house (61%)
- **Small:** Houses of only six to 12 people (60%)

To assess market demand, caregivers were asked first if it was important for long-term care services to be located close to their homes. Seventy-one percent identified proximity as an important factor in their selection process. They were then asked if they would be willing to travel further to obtain Green House services for their family members. Seventy-three percent of caregivers said they would be willing to travel substantially further, 15 to more than 60 miles, to obtain Green House services:

- Up to 15 miles—24%
- 15 to 29 miles—40%
- 30 to 60 miles—25%
- More than 60 miles—8%

To better understand the model's impact on the decisions of private-pay consumers, caregivers were asked if they would pay more for Green House services. Sixty-one percent of caregivers said they would be willing to pay 5% to more than 25% more to obtain Green House services:

- 5% more than typical nursing homes in your area—16%
- 10% more than typical nursing homes in your area—28%
- 25% more than typical nursing homes in your area—12%
- More than 25%—5%

Because caregivers respond so positively to The Green House model and are willing to travel further and pay more for a Green House home, traditional nursing home market boundaries and related revenues are expanded. On average, Green House adopters report a 6.5% increase in overall occupancy and a 24% increase in private-pay days in their nursing home operations following Green House adoption.

73% of caregivers are willing to drive substantially further to get Green House services for their loved ones, and 61% said they would pay more.

Does The Green House Model Make Financial Sense?

The Green House model has a dramatic impact on both quality of care and resident satisfaction. Adopter experience demonstrates that the typical Green House home's costs[5] are on a par with those of other skilled nursing facilities.

OPERATING EXPENSE/RESIDENT-DAY (2009)

Department	National Median	Green House Home
Nursing	$72.42	$127.08
Dietary	$15.47	$9.70
Laundry & Linen	$2.70	$1.57
Housekeeping	$5.17	$3.02
Plant Operations	$9.69	$9.74
Ancillary Services	$22.23	$8.30
Administration	$35.73	$33.17
Other Expenses* (Excluding Capital)	$34.10	$6.54
Total Expenses (Without Capital)	**$197.51**	**$199.13**

* The "Other Expenses" figure for the national median includes staff benefit costs while Green House staff benefits are included in the departmental expense categories.

"We've been very pleased to find our operating costs are slightly lower in the Green House homes than in our traditional nursing homes."

—**Jeff Shireman,** *CEO, Lebanon Valley Brethren Home*

Although total costs are comparable, The Green House model redistributes labor costs. Because *shahbazim* are CNAs, their labor, even when performing dietary, laundry, housekeeping, and other responsibilities, is compensated at the CNA labor rate and included under nursing costs. As a result, nursing expenses are higher in Green House homes, while dietary, laundry, housekeeping, plant operations, ancillary services, administration, and other expenses are lower.

5 Jenkens et al, 2011

What About Development Costs?

Like other deep culture change models, The Green House model requires new construction or major renovation for implementation. Significant development costs are associated with new construction and renovation. A primary cost driver is the number of square feet required. The Green House model emphasizes residentially scaled environments, coupled with strong technical assistance for design teams. The consistent result: projects requiring one of the lowest square-feet-per-person ratios for a culture change model, especially a model that provides all-private rooms and baths.

Green House homes average 659 gross square feet per resident, including all-private rooms. Other small-home models, which provide a large majority of private rooms and baths, average 748 gross square feet per person—or 14% more than Green House homes. Neighborhood and household models, many with substantial numbers of shared rooms or baths, average between 596 and 654 gross square feet per person.[6] Although neighborhood and household models are 1% to 10% smaller than Green House homes, they typically do not include the same level of physical amenities, including all-private bedrooms and bathrooms, full kitchens, and dens.

Green House adopters find that their investment is repaid with increased private-pay revenues and higher overall occupancy rates. Green House homes regularly maintain waiting lists and enjoy occupancy rates of 96% to 98%, well above the 89% national average. Private-pay censuses of 30% or more are common and adopters can further enhance private-pay revenues by pricing sought-after Green House accommodations at a premium. Some adopters have also strengthened their competitive position by developing specialized Green House homes to serve short-stay residents.

Green House implementations can also create opportunities to dramatically reshape long-term care campuses for maximum competitive advantage. The small size of a Green House home means that large institutional nursing homes can be rebuilt on multiple small sites, using an in-fill approach across the campus. This has the advantage of integrating nursing home capacity into the residential environment. It also means that the former nursing home building or site becomes available for new amenities requiring large footprints, such as independent living towers, apartment-style assisted living, and wellness centers. Green House homes' site flexibility can be critical for long-range repositioning strategies.

6 Jenkens et al, 2011

Green House homes can also support renovation strategies for existing nursing home buildings. Adding several homes to a campus allows operators to move capacity out of overcrowded nursing home buildings to create more common space and more private rooms. Many adopters have doubled or tripled the number of single-occupancy rooms in their traditional facility with a Green House implementation, enabling them to attract more sub-acute and private-pay residents. If an existing nursing home building is retained as part of a Green House project, The Green House Legacy Blueprint tool may be used to integrate Green House practices into the existing nursing home.

"There is always someone cooking and it smells good. It's a homey, warm setting. If I'm not there, the next best thing is on the other side of the door. They are there for her as quick as I am."

—Family Member of Green House Resident

Workforce Redesign

The Green House model reorganizes staff and flattens the hierarchy of a traditional nursing home. The centerpiece of this reorganization is the *shahbaz*—the manager of the home and a care partner to the residents. The *shahbazim* work in self-managed teams and perform all homemaker responsibilities including cooking, housekeeping, laundry, and other activities.

Shahbazim are CNAs who receive 128 hours of additional education in culinary skills, safe food handling, household operations, and first aid. The Green House education curriculum is a nationally regarded training program that focuses on culture change principles, Green House practices, and the individual and team skills required to work in a blended role within a self-managed work team.

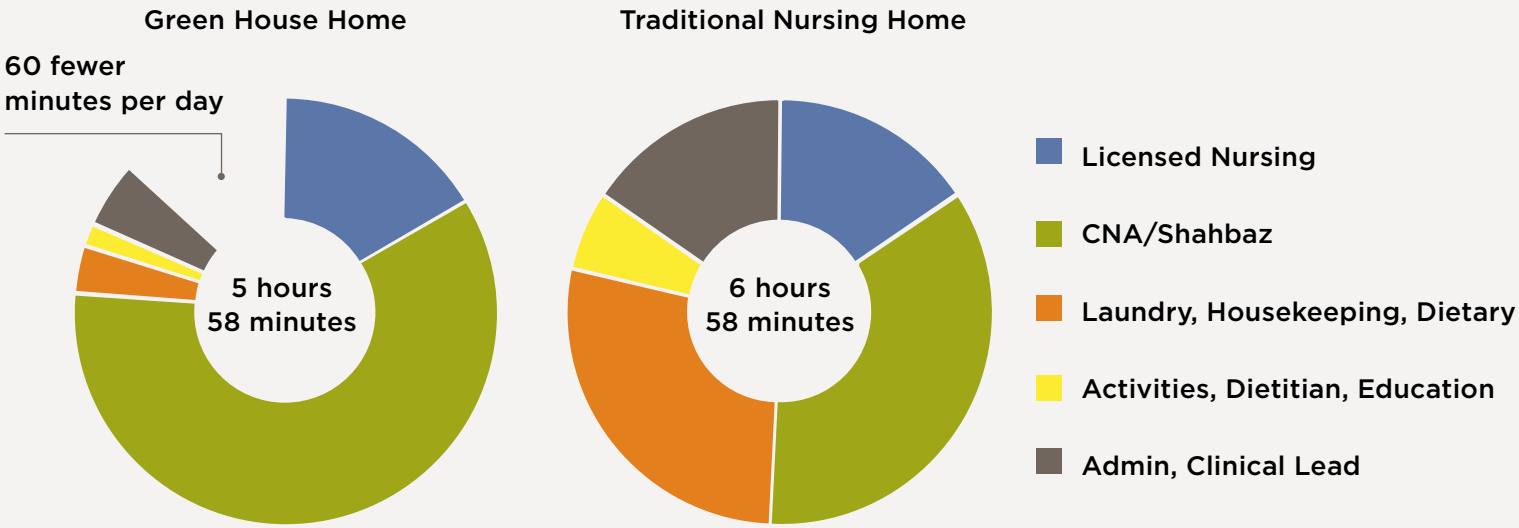
Shahbazim report strong satisfaction with their blended, self-managed role.[7] The flexibility and empowerment allow them to do more for the residents and feel a greater sense of accomplishment and value. Many Green House adopters report significant improvements in direct care staff retention as a result. Wanda Harrison, a *shahbaz* in Holland, Michigan, explains:

"I like the one-on-one aspect of my job … there is nobody who gets overlooked … I feel good about what I do."

Each self-managed team partners with a clinical support team (including licensed nursing staff) to develop and support an individualized care plan for each resident. The self-managed *shahbaz* team and the clinical team report to a leadership team that provides coaching and accountability. All organizational staff who provide services or supervision to the homes (leadership, guides, nurses, and departmental support staff) receive specialized education and training through The Green House Project's education program, including direct instruction, a train-the-trainer program, and online resources.

7 Kane et al, 2007.

AVERAGE OVERALL STAFF TIME PER RESIDENT



AVERAGE SHAHBAZ/CNA TIME PER RESIDENT

	Indirect Care	Dietary	Direct Care	Total Hours
	01:00	01:01	02:22	04:23
	01:21	01:12	01:58	04:31

Green House Home Traditional Nursing Home

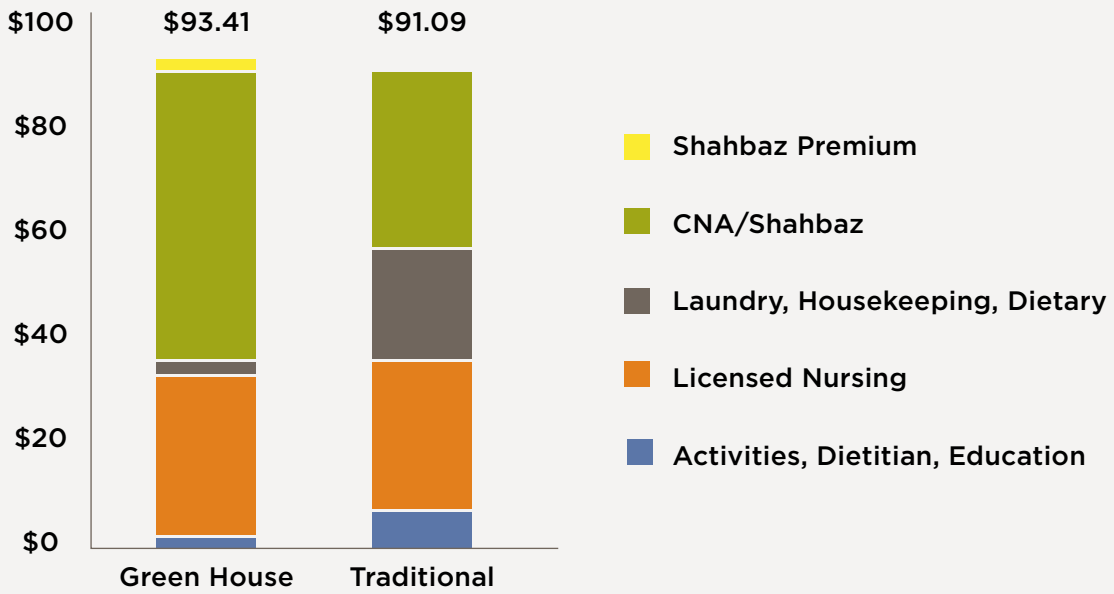
The Financial Impact of The Green House Workforce Redesign

On the surface, it may seem that the specialized task approach used in traditional nursing facilities should be more efficient and less costly than The Green House Project approach. However, strong efficiencies are derived from the blended direct care and self-managed roles that are a hallmark of The Green House work model. Published time-study research comparing Green House homes to traditionally organized nursing homes[8] found that Green House homes actually require *less* total staff time per resident-day.

Administrative time is reduced by 44 minutes per resident per day in Green House homes. The time spent on the core services (laundry, housekeeping, dietary, and direct care) is also lower in Green House homes, compared to traditional homes (16 minutes less per resident-day). The efficiency of The Green House staffing model enables *shahbazim* to provide 20% more direct care time than CNAs in a traditional nursing home while reducing total organizational time by one hour per resident per day (see Appendix 1).

8 Sharkey et al, 2010

LABOR COSTS PER RESIDENT DAY



On average, *shahbazim* are paid 50 cents more an hour than CNAs, and they earn more than dietary, laundry, and housekeeping staff would make. Yet overall labor costs are not higher in Green House homes. When total Green House labor costs are compared to those of traditional nursing homes, including licensed skilled care, direct services, and indirect support services, the overall labor costs[9] are essentially equal.

Green House homes' labor costs are in line with those of a traditional facility because the self-managed, cross-trained work teams rely less on management personnel. As a result, higher-cost management and educational personnel time can be reduced by as much as 80%, compared to the time expended per resident per day in traditional facilities. Lower CNA turnover—sometimes as much as 90% less than at traditional facilities—also keeps down costs for temporary replacement staff, overtime, and training of new staff.

9 Bureau of Labor Statistics, 2009

"The Green House model has given us the framework to create a workplace at Legacy Village where our staff feel empowered and have ownership of the home as well as the outcome of the residents' care."

—**Brenda Anderson,**
Executive Director, CDC, Bentonville/Bella Vista, Bentonville, AR

Environmental Redesign

The innovative physical design of a Green House home reinvents the traditional nursing home and is key to producing better outcomes. Each Green House home is a self-contained single-family home or apartment space.

Up to 10 residents (12 if financially necessary) live within each home, each enjoying a private bedroom and full bathroom. Meals are prepared in a fully functional open kitchen and are served at a common dining table for a social dining experience. The small scale of the home, coupled with the open kitchen, provide essential flexibility and make the blended work model practical and efficient. *Shahbazim*, even while preparing meals, can interact with residents in the adjoining dining and living room and are always just a step or two away when they are needed elsewhere in the house.

The Financial Impact Of Environmental Redesign

Like any major development project, Green House construction will require an investment of both human and financial capital. Development and construction costs may vary substantially, depending on local labor rates, site preparation costs, and the size of the project. On a per-square-foot basis, freestanding Green House homes can be expected to cost the same or even less to build than a household or neighborhood model offering similar amenities. This is because local building codes generally recognize that smaller structures with greater exiting capacity can meet life safety performance requirements using less costly approaches. Construction costs per square foot for multi-story Green House projects should be equivalent to those of household or neighborhood projects, as they rely on the same construction methods.

Although individual choices and local conditions ultimately determine the cost of building a Green House home, we can look to the experience of others for guidance. The estimated construction cost for small-house nursing home projects is approximately $154[10] per square foot. At 10 bedrooms and 659 square feet gross per resident,[11] an average Green House home's construction cost, including architect and contractor fees, will be $101,486 per resident, or $1,014,860 overall. With typical consultant and development fees, plus furniture, fixtures, and equipment estimated at 25% of construction cost, the average development costs for one Green House home will be $1,268,410.

10 Average of square-foot costs for standard nursing home building types, calculated using RS Means data for the fourth quarter of 2009.

11 The Green House home average.

THE COST OF GREEN HOUSE ENVIRONMENTAL REDESIGN

Construction Per Square Feet (2009 National Average)	$154
Total Square Feet Per Resident (Average)	659
Total Residents Per Home	10
Construction Cost Per Bed	$101,486
Total Construction Cost Per Home	$1,014,860

Which Green House Layout is Right for Your Organization?

Green House homes are designed to reflect what is familiar as a real home in the surrounding community. The first Green House homes were freestanding one-story residences. As the Green House model has spread across the country, design options have expanded to reflect the housing types found in diverse communities.

The Leonard Florence Center for Living, Chelsea, MA

Located just outside Boston on a small parcel of land in a dense urban setting, the Leonard Florence Center for Living consists of 10 Green House apartment homes of 10 bedrooms each in a six-story building. Each residential floor contains two independent Green House apartments. The first floor houses various shared amenities, including a beauty salon, deli, and bakery.

The Cottages at St. Martin's, Birmingham, AL

St. Martin's in the Pines is situated on a continuing care campus in a dense suburb of Birmingham, Alabama. The campus includes independent, assisted living, and nursing home settings. Three buildings house nine Green House apartment homes of 10 bedrooms each (three homes per building, one home per floor). The buildings are designed to look similar to the garden-style apartment buildings and single-family homes found in the surrounding residential community.

The Villages at Redford, Redford, MI

The Villages at Redford is a 33-acre campus outside Detroit, Michigan. The campus includes independent, assisted living, and nursing home settings. Based on the suburban, single-family neighborhood that surrounds the Villages, the Villages' two Green House homes are configured as separate homes of 10 bedrooms each.

Revenue Enhancements

Organizations considering Green House adoption tend to focus on the benefits the model can bring to their residents, as well as the attendant costs. What often gets overlooked is the potential for significant increases in revenue associated with Green House adoption. Green House adopters have found numerous opportunities for enhancing revenue, including:

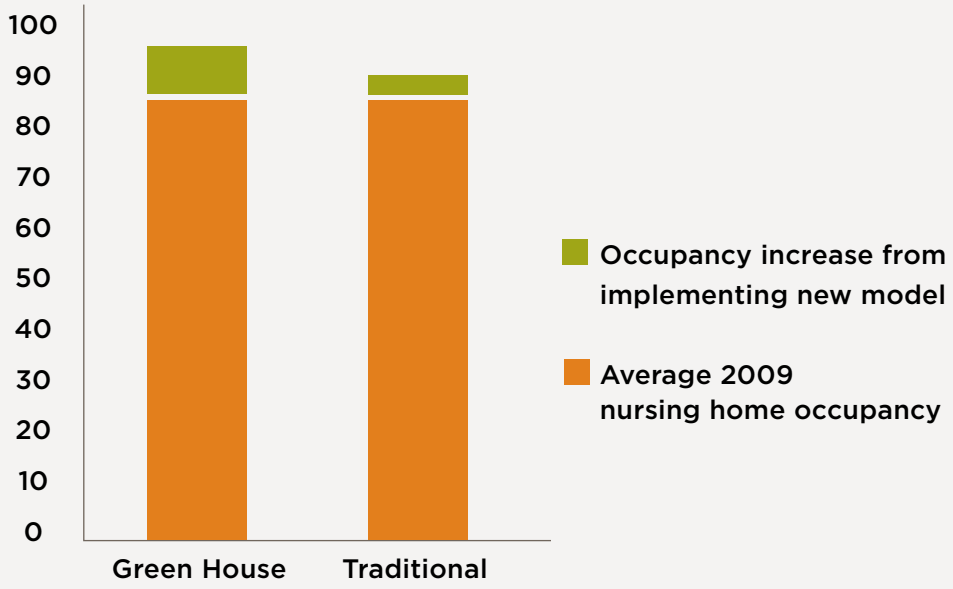
- **Higher Occupancy Rates:** The Green House model delivers more than double the occupancy increases of other culture change models.[12] Green House occupancy rates are regularly 96% to 98% and many homes have waiting lists.
- **More Private-Pay Residents:** Residents with the means to pay for their own care choose the highest quality option available. Green House adopters report an average 24% increase in private-pay days.[13]
- **Higher Private-Pay Rate:** Many adopters have found that they can command a private-pay premium for their Green House rooms compared to private rooms in their traditional buildings. The weighted average of consumers' willingness to pay more is 8.1%.[14]

12 Jenkens et al, 2011; Elliot, 2010.

13 Jenkens et al, 2011.

14 Edge Research, 2011.

NEW RESIDENTS, NEW REVENUE



- **More Single-Occupancy Rooms:** Each new Green House home adds single-occupancy rooms to an organization's stock. If certificate of need (CON) capacity is transferred to a new Green House home, double rooms in the existing traditional facility can be converted to private rooms.
- **Specialized Homes:** Some adopters have used Green House homes to create specialized programs, including sub-acute, dementia, and hospice care.
- **New Services:** Adopters have the option to convert space freed up in their traditional facilities by a Green House implementation to sub-acute care, assisted living, community-focused services, or other amenities that serve their residents and help them remain competitive.

On average, following the opening of Green House homes, occupancy rates increase 6.5% across all nursing home capacity on campus (Green House homes and any legacy buildings).[15] This increase is more than double the 3% increase that research has associated with implementing other culture change approaches.[16] This finding is even more striking because, for most operators, the new Green House homes represent only a small portion of total beds.

15 Jenkens et al, 2011.

16 Elliot, 2010.

New resident-days resulting from Green House implementation at an average 120-bed nursing home: 2,847.

Raising Census to Pay for Your Green House Home

Although operational costs in Green House homes are in line with those of good-quality traditional nursing homes, building a Green House home does require new revenue to offset capital costs. For many operators, the source for this new revenue already exists.

The average nursing home had an occupancy rate of 88.5% in 2009.[17] For an average 120-bed facility, an 88.5% occupancy rate amounts to 5,037 empty bed-days per year. Green House adopters have occupancy rates of 95%-plus,[18] reducing empty bed-days by almost two-thirds.

Filling empty beds increases revenues and adds significantly to the bottom line, especially because a substantial portion of nursing home costs are fixed and do not vary with changes in census. For example, costs associated with real estate, administration, maintenance, and even some level of direct staff wages are only modestly, if at all, affected by census. For a typical nursing home, 45% of daily operating costs are fixed and 55% are variable.[19] For an average nursing home with total costs per resident-day of $200 in 2009, fixed costs were approximately $90 per day, and the variable (or marginal) cost of serving each new resident was $110 per day.

Total fixed costs do not increase from filling empty beds. When calculating net income from increased occupancy, only variable costs need to be deducted from new revenue. Consider:

- At a variable cost of $110 per day, each new private-pay resident at the average 2009 private-pay rate of $219 per day[20] would contribute $109 per day in net revenue.
- If a provider is in a market where the average Green House private-pay premium of 8.1%[21] is available, the private-pay rate in the Green House homes would be $237 per day. At $237 per day, each new private-pay Green House resident will contribute $127 per day in net revenue.
- At the average 2009 Medicaid daily reimbursement of $167 per day,[22] each new Medicaid resident contributes $57 per day in net revenue.

17 Jenkens et al, 2011.

18 Jenkens et al, 2009.

19 Wade & Hendrickson, 2008.

20 MetLife, 2010.

21 Edge Research, 2012.

22 AHCA, 2011.

What Does it all Add Up To? An Illustration

Adopting The Green House model provides long-term strategic advantages and financial benefits due to increased occupancy and program flexibility. The following example[23] illustrates a potential repositioning strategy for a typical 120-bed nursing home building with average occupancy in a typical market place.

The example assumes that the existing nursing home:

- Remains at a total capacity of 120 residents (120 beds)
- Serves only long-term care residents[24]
- Has been well maintained
- Offers good-quality care
- Is at the national median occupancy rate of 88.5%
- Has the national average of 22% of residents using private payment sources (Kaiser Family Foundation, 2010) living in private-occupancy rooms and paying the national average of $219/day
- Has Medicaid-funded residents living in the remaining 78% of occupied beds, reimbursed at the national average of $167/day
- Has operating costs of $200/day, with 45% fixed costs and 55% variable

This example illustrates the impact of building three long-term care Green House homes of 10 residents each and the example assumes that the completed project:

- Transfers required CON capacity from the existing home to the new Green House homes
- Increases private-occupancy rooms from 26 to 82 by adding 30 private rooms in the Green House homes and converting 30 double-occupancy rooms in the existing nursing home
- Increases overall occupancy (private-pay and Medicaid) by 6.5 percentage points, adding 2,847 resident days, consistent with the average experience of Green House adopters

23 The example uses 2009 cost and revenue inputs (the latest available across all input categories) unless otherwise indicated.

24 For simplicity, the illustration assumes that no Medicare services are provided. Green House homes are an excellent setting for sub-acute services and compete very well for market share. Adding sub-acute Green House homes would further enhance the financial performance of the illustration.

- Maintains total Medicaid resident-day capacity at the same or greater level than pre-Green House levels
- Commits 50% of Green House beds to Medicaid
- Increases occupancy for residents paying privately by 24%—consistent with the average experience of Green House adopters—increasing private-pay residents from 22% to 25% of the new resident-day total (adding a net of 2,047 private-pay days)
- Maintains the private-pay rate of $219/day[25] for residents paying with private sources in the existing nursing home
- Charges a private-pay rate premium of 8.1% in The Green House home ($237/day), reflecting the average payment increase caregivers say they would pay for Green House services
- Receives the national average Medicaid rate of $167/day
- Has $110/day variable costs associated with each new resident-day
- Experiences average national nursing home construction costs of $143 to $165 per square foot,[26] depending on construction type.

25 MetLife, 2010.

26 RS Means, 2012.

Green House Home Implementation Example

PROJECT STATISTICS

	Pre Green House Home	Post Green House Home	Δ
Beds-Total	120	120	0
Legacy	120	90	-30
Green House Homes	0	30	30
Private (Single-Occupancy) Rooms-Total	26	86	60
Private Rooms	22%	72%	227%
Occupancy Rate	88.5%	95.0%	7.3%
Bed Days-Total	38,763	41,610	2,847
Legacy	38,763	31,208	-7,556
Green House Homes	0	10,403	10,403
Variable Cost/Person/Day	$110	$110	$0
Private-Pay Residents	22%	25%	16%

REVENUE ENHANCEMENTS

Rates	Pre Green House Home	Post Green House Home	Δ
Percent Private-Pay Premium in Green House Homes	n/a	8.1%	8.1%
Medicaid Rate/Day	$167	$167	$0
Private-Pay Rate			
Legacy	$219	$219	$0
Green House Home	n/a	$237	$18
Revenue	**Pre Green House Home**	**Post Green House Home**	**Δ**
Medicaid	$5,049,268	$5,182,921	$133,652
Private-Pay	$1,867,601	$2,408,091	$674,142
Total Revenue	$6,916,870	$7,591,011	$674,142
Total New Revenue	$0	$674,142	$674,142
Variable Costs Due to New Days	n/a	$313,170	$313,170
Net New Revenue	n/a	$360,972	$360,972

DEVELOPMENT COSTS

Estimated	Low	Medium	High
Construction Cost/Square Feet (Including Architect & Contractor Fees)	$143	$154	$165
Gross Square Feet/Resident	659	659	659
Residents/Home	10	10	10
Percent Fees & FFE	25%	25%	25%
Total Costs/Home	$1,179,281	$1,268,410	$1,357,540
Total Costs-3 Homes	$3,537,842	$3,805,231	$4,072,620

DEBT COSTS

Estimated	Low	Medium	High
Percent Debt	80%	80%	80%
Interest	5.5%	5.5%	5.5%
Amortization/Years	30	30	30
Debt Payment/Year (Including Principal)	$191,960	$206,468	$220,977
Interest Cost/Average Per Year	$100,396	$107,983	$115,571
Depreciation (Per Amortization Period)	$117,928	$126,841	$135,754
Interest and Depreciation	$218,324	$234,825	$251,325

RETURN ON EQUALITY

Estimated	Low	Medium	High
Percent Equity	20%	20%	20%
Equity Cost	$707,568	$761,046	$814,524
Net Revenue After Interest and Depreciation	$142,648	$126,147	$109,646
Return on Equity	**20.16%**	**16.58%**	**13.46%**

The charts above show a significant gain in net revenue for a typical nursing home after accounting for increased variable costs of care associated with new resident-days and new debt. This net increase results in an annual return of 13.5% to 20% on the equity invested in new Green House homes. Adopters whose markets support additional private-pay rate and occupancy gains from a Green House implementation may see even greater returns on equity. To understand how The Green House model may benefit a specific organization's operation, individual analysis will be required.

The Green House Team and Network Advantage

Adopting The Green House model means more than embracing a new architectural design. Successful outcomes, including better financial returns, require a completely new organizational structure and operational approach. Without full transformation, quality outcomes and marketing gains will not be maximized and operational efficiencies will be lost.

Complete transformation can be a daunting journey, especially if your organization lacks a road map and support services along the way. Joining The Green House Project ensures a set of proven directions and the support needed at every turn to accomplish your goals.

The Green House Project offers access to a proven model, an array of field-tested tools, customized education, a project management plan, and sponsored research to help ensure the success of your project. Partners also benefit from the experience and mentoring of the Green House community through peer interaction, conferences, webinars, and one-on-one assistance. The Green House team's expertise, coupled with the clarity of The Green House model, helps adopters make a smooth transition, avoid costly missteps, and achieve consistently superior outcomes.

The Next Step: Contact The Green House Project

Every nursing home operation is unique. To learn more about The Green House model and further explore its potential benefits for your organization, please contact The Green House Project at www.thegreenhouseproject.org or 703–647–2311. Green House program staff can help you assess whether a Green House project is a good fit for your organization and tailor a Green House implementation to meet your needs.

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Alaska

Appendix 1:
Labor Time and Costs in Green House Homes Compared to Traditional Facilities

A recent study[27] compared labor hours in Green House homes and in affiliated traditional facilities and in a comparison group of non-affiliated, traditional facilities. The study identified hours expended per resident-day by direct service staff, including nursing, laundry, housekeeping, dietary, and activities/enrichment personnel. Per-resident-day administrative and clinical lead time expenditures were self-reported by the facilities. Applying 2009 national average wage rates[28] in the nursing home sector for the relevant occupations to the hours identified in this study indicates a total cost for Green House operations of $90.96 per resident per day, compared to $91.09 for a traditional facility. Including the 5% average ($.50) per-hour premium for *shahbazim,* reflecting their management responsibilities, increases The Green House model cost to $93.41 (see table, "Labor Time and Cost").

Appendix 2:
Green House Staffing Patterns

To ensure quality and consistency of care, The Green House Project has developed minimum nurse staffing standards (CNAs and LPN/RNs) for Green House homes. As the table to the right illustrates, the recommended staffing pattern depends on the size of The Green House home.

Licensed nurses (approximately one hour per resident per day), in partnership with *shahbazim* (four hours per resident per day), provide a total of approximately five direct care staffing hours per resident per day. Other clinical professionals visit The Green House home on a routine basis and as required by the needs of the residents and regulatory standards (see table, "Green House Staffing Patterns").

27 Sharkey et al, 2010

28 Bureau of Labor Statistics: www.bls.gov/oes/current/naics4_623100.htm

LABOR TIME AND COST

		Time per Resident Day			Hourly Cost		
Work Flow Title	Hourly Wage*	Green House	Traditional	Difference GH vs. Trad.	Green House	Traditional	Difference GH vs. Trad.
Registered Nurse	$32.80	27min	23min	+4min	$14.76	$13.45	+$1.31
Licensed Practical Nurse	$23.43	42min	36min	+6min	$16.40	$15.00	+$1.41
CNA/Shahbaz	$13.26	4h 10m	2h 36m	+94min	$55.17	$33.69	+$21.49
Shahbaz Premium	$0.59	N/A	N/A	N/A	$2.45	$–	+$2.45
Housekeeping	$12.28	5min	32min	–26min	$1.11	$6.51	–$5.40
Laundry	$10.92	4min	13min	–10min	$0.65	$2.40	–$1.75
Dietary	$10.89	5min	1h 10m	–65min	$0.87	$12.63	–$11.76
Dietitian	$27.29	2min	5min	–3min	$0.82	$2.18	–$1.36
Activities	$14.49	2min	17min	–14min	$0.58	$4.06	–$3.48
Staff Education	$29.19	1min	2min	–1min	$0.58	$1.17	–$0.58
Admin & Clinical Lead	$41.13	20min	1h 4m	–44min	$13.99	$44.01	–$30.03
Total (Excluding Admin)		5h 38m	5h 54m	–16min	$93.41	$91.09	+$2.32
Total (Including Admin)		5h 58m	6 h 58m	–60min	$107.40	$135.10	–$27.71

*Source: Bureau of Labor Statistics (Includes an 18% benefit load)

GREEN HOUSE STAFFING PATTERNS

	1st Shift	2nd Shift	3rd Shift	Hours Per Day
12 Bed Homes				
Shahbaz	3.0	2.0	1.0	4.0
Licensed Nurse	0.5	0.5	0.3	1.0
10 Bed Homes				
Shahbaz	2.0	2.0	1.0	4.0
Licensed Nurse	0.5	0.5	0.3	1.1

Appendix 3: Fixed Costs

Nursing home expenses have fixed and variable costs. Fixed costs do not vary based on the number of residents served; examples include interest payments and property taxes. Variable costs rise or fall depending on census; examples include food and medication. Some variable costs are semi-variable in that they do not vary continuously but only increase when certain census thresholds are met. Examples include direct care staff hours, which may not increase with the addition of one or two residents but will need to increase with three or four additional residents. Most costs in a nursing home are variable.[29]

The proportion of a nursing home's variable costs depends on an individual facility's operating strategy and cost structure. Generally speaking, approximately 55% of a nursing home's costs are variable and 45% are fixed. For a typical nursing home with an operating expense of $200 per resident-day, the variable cost per resident-day would be $110 (.55 x $200). This variable cost represents the marginal cost associated with each additional resident served.

29 Wade & Hendrickson, 2008

TYPICAL NURSING HOME COST STRUCTURE

	Fixed	Variable	Including
Direct Services 41% of cost	25%	75%	Director of Nursing, MDS Coordinator, Direct Care Staff, Dietary Staff, Food, Care Supplies, Drugs
Indirect Services 29% of cost	37%	63%	Equipment, Supervisory Staff, Laundry, Housekeeping, Supplies, Utilities, Maintenance
General & Administrative 20% of cost	84%	16%	Staff, Supplies, Insurance, Malpractice
Building & Equipment 10% of cost	100%	0.5	Depreciation, Interest

"Any number of people can design or build the architecture, but that doesn't bring about the revolutionary change in culture that The Green House Project provides. The Green House Project has the expertise and structure to help manage our process in a manner that gives our project the highest possibility of success."

—**John Ponthie,** *Summit Health Resources*, Arkansas

THE GREEN HOUSE PROJECT

caring homes for meaningful lives℠

To learn more about The Green House model,
visit our website, *www.thegreenhouseproject.org*.

Contact us at 703–647–2311,
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