Sustainability and Expansion of Small-house Nursing Homes:  
Lessons from the Green Houses ® in Tupelo, MS

Report on a Small Grant Project

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Purposive culture change may seem a contradiction in terms. But in the last decade reformers have made deliberate efforts to bring about such extensive and deep changes in the way nursing-home care is given that new deeply ingrained ways of doing things emerge and attain the built-in, almost reflexive status of a new culture. Such culture change is slow, painstaking, and difficult to generate or sustain.

This report examines the experiences of the Green Houses® in Tupelo, MS over the first five years of their existence, and particularly the period when the sponsoring organization expanded from 4 Green Houses that had operated for more than 2 years, to 10 Green Houses. We begin with challenges of the organization in implementing the first Green Houses, and then turn to the challenges in sustaining the original Green Houses and expanding the operations to the nursing home as a whole. We conclude with 12 lessons for other organizations seeking to implement and sustain small-houses nursing homes.

Background

The Green House Model

Small-house nursing homes were envisaged as dwelling places where older people with high levels of disability could receive the full range of services of licensed and certified nursing homes in normalized households where their quality of life would be enhanced by privacy and opportunities for individuality, as well as by opportunities for social interaction and participation in community. The first contemporary models for small-house nursing homes were developed theoretically as Green Houses® (a trademarked term) by William Thomas, MD as a complete reworking of the scale and physical environments of nursing homes, the organizational structure and staffing patterns, and the philosophy governing services. The first Green House project consisted of four self-contained Green Houses operating under the license of a sponsoring nursing home and the sponsoring nursing home was downsized accordingly. These Green Houses were located in a residential section of a long-term care retirement community in Tupelo, MS, and were about a 10-minute walk from the main nursing home. The first 4 Green House opened in the late spring of 2003; two of them were occupied by the residents of the nursing homes locked dementia special care unit (which then was closed) and the others were occupied by residents who wished to make the move, prioritized by their seniority in the retirement community.

Evaluation Results

In a larger research project sponsored by the Commonwealth Fund, we conducted a quasi-experimental, longitudinal study to examine the effects of the Green House model on residents, family members, and staff compared to their counterparts in 2 control settings (the original sponsoring nursing home and a nursing home of the same owner in a retirement community 70 miles away). The results of that study were positive; over a two year period, Green House residents experienced better outcomes on many dimensions of quality of life with no diminishment of health outcomes, and they and their family members were more satisfied with the settings. Front-line staff (CNAs and their equivalents in the Green House) expressed more
power to influence the well-being of the residents, felt that they knew the residents under their care better, experienced more intrinsic satisfaction with their jobs, and were more likely to remain in this employment.

**Expansion**

In May 2005, the sponsoring nursing home in Tupelo opened two additional Green Houses, and in November 2005, it opened 4 more Green Houses, reaching its intended full complement of 10 Green Houses. The new Green Houses were built for 12 residents rather than the original 10-person size. At that time, 112 of the 140 licensed bed capacity of the sponsoring nursing home was accounted for by Green Houses, and 28 beds remained in the original nursing home.

**Current Project**

Using a small grant from the Commonwealth Fund, we conducted a study in 2006 and 2007 to identify the challenges of operating a much larger complement of small-house nursing homes, and of sustaining the momentum and consolidating culture change after the initial excitement of the first few years gave way to more routine operations. We made two long site visits to the settings, one about 3 months after all the Green Houses were in operation, and one a year later, during which time we interviewed key participants, made extensive observations, and performed behavioral mapping in each Green House. The underlying questions for this largely qualitative project were:

1. How successfully were the innovations of the Green Houses implemented and sustained in the original Green Houses? What were the difficulties, and how were they addressed.

2. How did the 6 new 12-person Green Houses compare to the 10 original 4-person Green Houses?

3. What were the challenges in transforming almost the entire nursing home into Green Houses? How were the various roles required or customary in a nursing home reconfigured for the Green Houses?

4. What take-home messages do these experiences suggest for the evolution of Green Houses and small-house nursing homes?

**Findings**

**Question 1. Implementing and Sustaining Innovations in the Original Green Houses.**

Implementing the model in the first four Green Houses. The original four Green Houses were remarkably successful in implementing and refining many elements envisaged in the Green House model. The sponsoring nursing home was part of a Traceway Retirement Community in Tupelo, MS, which was comprised of independent housing (duplexes and HUD apartments), assisted living, and a 140-bed traditional nursing home. In turn, Traceway was one of 10 such Retirement Communities operated by the same Mississippi non-profit corporation. The corporate offices are also located in Tupelo, and the corporate staff was intensively engaged in providing leadership for the start-up. Because these were the first Green Houses to be developed in the United States, they also received intensive technical assistance from a National Green House
project, which, at that time, was funded by a grant from the Robert Wood Johnson Foundation to the Center for Growing and Becoming in upstate New York. Some general points about the process of start-up and the accomplishments are listed below.

- Implementing Green Houses is hard work, and the challenges vary with the scope of the project and the way it is phased in. As the innovators reflect on their accomplishments, they note that making the changes was much harder work than they had anticipated, involving myriad small decisions and continuous problem-solving. In this example, four Green Houses were opened simultaneously, but the organization continued to operate approximately 80 beds in its regular nursing home. The challenge was to manage both enterprises effectively. Ultimately, the sponsor accelerated its timetable for building additional Green Houses in an effort to avoid having a foot in both models.

The Tupelo project envisaged expansion from the outset and experienced the difficulties of working through a long organizational transition period. In retrospect, informants believe it would have been useful if most of the Green House models of service had been applied in the traditional nursing home to ready all staff for the new organizational structure and philosophy. In practice, so much intense concentration was needed simply to implement the four Green Houses that the main nursing home was barely modified, and the organization was left with the cognitive dissonance of running two very different kinds of programs using the same department heads and leadership personnel.

Many variations are possible in how an organization phases in implementation of Green Houses, with 3 major variations: implementation of a few Green House by an existing nursing home with no goals for a complete Green House operation; staggered implementation of Green Houses in an organization that intends to develop into a full or almost full Green House model over a period of time; implementation of Green House by an organization with no other nursing homes beds operating under the license. This is most feasible in a multi-level organization that currently has no nursing home, or in an organization that has a need to replace its entire nursing home and the luxury to be able to build Green Houses on another site and occupy them all in a short period of time. The sponsor of the Tupelo nursing home is embarking in partnership with a community agency on a new Green House nursing home in Yazoo, MS, where a community 40-bed traditional nursing home has received a certificate-of-need to reconstitute itself as 6 Green House serving 60 residents.

Whatever the scope and start-up plan, all these models are hard work to implement. The small-house nursing home project that is operating no other type of nursing home under the license may have more freedom to innovate and less problem with “old-model” thinking. However, experience in another location has shown that a single small-house for 10 residents operating under its own nursing home license is unlikely to be a viable starting economic model. At least two Green Houses are needed under a license to achieve economies of scale in staffing, and even more may be optimal. More data are needed to identify optimal number of small-houses in a project from a management point of view.)
• **Time and resources for start-up make a difference.** The technical assistance lavished on the first four Green Houses offered the luxury of extensive training, especially for CNA-qualified personnel who would serve as resident assistants (called Shahbazim in most Green House programs). Individuals approved for training began working as teams before the Green House construction was complete, and received intensive training from the Green House technical assistant. Also after the Green Houses were built but before they were occupied, the elder assistants had time to ready the House, make plans as a group, and practice culinary and housekeeping skills. During that period, they also forged their own code of ethics for their role, and presented it to the larger staff community. Also the original Pennsylvania-based food contractor was interested in the project and had personnel spend considerable time demonstrating cooking in each House. Finally, once the Houses were occupied, the training and coaching by the Technical Assistant was particularly important during the first few months of operations. The front-end investment appeared to have paid off even five years later. (As latter sections of this report suggest, the original teams remained the most cohesive and the elder assistants most committed to the model, whereas in the newer houses where training was curtailed, the roles were harder to develop.)

• **Initial implementation of the elder-assistant role was effective.** The original staffing pattern was 2 elder assistants on day shifts, 2 on evenings, and one at night. Allowing for time off and all shifts, about 9 to 10 full-time or part-time elder assistants constituted the permanent staff of each House. Perhaps because of the extensive training and team-building, the elder assistants in the first four Green Houses developed strong skills and sense of cohesion. They functioned as self-directed work teams, responsible for their own scheduling and for collective problem-solving mode. Elder assistant developed skills in preparing and serving food, and in communicating to residents and visitors. They exhibited pride in their work and their houses. They acted as gracious hosts for the house. For the most part, those elder assistants internalized the mission of creating a home in their Green Houses. They created a milieu where visitors were welcome. They succeeded in forming primary relationships with the 10 residents in the house and the resident’s family members. They came to know the preferences of the residents and accommodated them. Over the first two years of implementation, these elder assistants developed increasing self-confidence, and many proved capable of making eloquent public presentations to explain the model. Although it was found that a few individuals did not flourish under the increased freedom of the model and a few problems and needs for changes occurred, most members of the original teams are still employed in the Green Houses where they began.

• **The licensed nurse role played out differently in a Green House, compared to a traditional nursing home.** The first Director of Nurses (DON) for the Green Houses was uncertain about the wisdom and safety of the model, and those doubts communicated themselves to nurses who might have volunteered for Green Houses. After some initial difficulties in identifying the right personnel to serve as “charge nurses” on the clinical support teams and a change in DON, a model emerged for nursing. During the initial implementation, the nurses working in the Green Homes developed new and productive relationships with
frontline staff, which include pitching in to help with direct care while simultaneously modeling good ways to provide care or solve problems. As a result, the elder assistants felt more positive about the nurses in than did the CNAs in the two comparison sites. A very high licensed nurse staffing ratio was established at the outset—one nurse for 2 houses in both day and evening shifts, and 1 for the 4 houses on the night shift. In all likelihood this was a higher complement of nurses than were needed and it increased costs, but it allowed. In retrospect, key informants have suggested to us that nurses felt left out in the new model (supplanted in importance by CNAs) and that some of the difficulties might have been averted if nurses had been part of the development of the model and articulation of how nurses might use their skills on behalf of the main goals of the Green House.

- **The administrator/guide role was difficult to develop, but eventually stabilized.** The Green House model specified that the elder assistants would report not to nurses but to an administrative staff member, who was called a guide. When the Green Houses opened, the administrator of the nursing home became the de facto guide. The first guide resigned (because of sick leave) before the Green Houses were occupied, and the replacement administrator took over the role without prior involvement in training and development. Later, as it became apparent that the role of guide for four Green Houses was too demanding to be integrated with running the entire nursing home and one of the registered nurses serving on the clinical support team was appointed guide. This individual was thoroughly committed to the model. Initially, however, she also was steeped in the direct nursing role and provided a lot of hands-on nursing coverage and consultation, while being less oriented to individual staff development. Over time, however, she developed skills at organizational diagnosis and individualized coaching that were needed for the guide role.

- **Clinical support team roles slowly developed, and were better articulated for some professional functions than others.** In the model, all professionals—e.g., nurses, physicians, social workers, activities personnel, rehabilitation therapists, dieticians—were construed as clinical support team members who would visit the homes, put clinical plans in place, provide advice and instruction to the elder assistants as related to their own discipline. The elder assistants were thoroughly taught the distinction between “care” and “treatment,” and the exercises during their training impressed on them where the boundaries were between care that they were empowered to give and when to refer to and seek the help of clinical personnel. These role relationships were unfamiliar to the professionals. Therapists seemed to adapt to the new roles well, and saw advantages to conducting PT and OT sessions in the natural milieu of the Green Houses rather than in the main nursing home. The medical director, who worked with a team of resident physicians, was initially skeptical, but became a supporter of the model, though he did indicate that making rounds was more complex in a Green House campus than a single nursing home. The roles of activity director and social worker were initially not particularly adapted to the Green House. The social worker remained involved in census and admission issues, helping determine who might fill vacancies in the Green House and taking inquiries from the community, and also dealing with family concerns. The latter, however, tended to be managed directly by the resident assistants, who developed
primary relationships with family members. The activities director continued with a program for residents of the parent facility, although she did try to provide some resources and ideas to elder assistants in the four Green Houses. During the first two years, the preponderance of work still occurred in the main nursing home, and central personnel and department heads were not uniformly encouraged to consider how their roles should change for Green House models.

- **The role of sage was implemented.** The role of “sage”—an outside resource for the elder assistants as an additional sounding board was filled quickly in all four houses by individuals with excellent communication skills, including the former CEO of the complex who lived in an independent living home on campus. As one of the most hypothetical parts of the model, one of the most theoretical parts of the model.

- **Houses developed their own patterns.** With the initial implementation, certain practices developed that became ensconced as new traditions. The Green Houses were named Laney, Page, Franks, and Martin House after the oldest resident in the group that first moved into each House. Each House developed a guest book that they asked visitors to sign. In Laney House and Page House, the two dedicated to dementia care, mealtimes became long events with professional support team staff (e.g. nurses, therapist, social worker) sometimes assisting with feeding. In another house, the day shift elder assistants led singing at the piano, several residents became engaged in household tasks, and the spouse of one resident became a welcome presence at every evening meal. That house gave attention to landscaping the yard, encouraging family to bring plantings from residents’ gardens, and planting a tree by the fence in memory of each deceased resident. Each House developed a somewhat different “personality,” based in part on the mix of residents and in part on the personalities and skills of the elder assistants on the clinical support team.

An enormous amount of detail was entailed in implementing Green Houses. In part because so many changes occurred all at once, certain elements envisaged in the Green Houses were implemented only partially.

- **The vision of meals in the model was not fully implemented.** The model envisaged that the elder assistants would purchase food, and cook and serve meals based on menus individualized for each House. At the outset, food purchasing was done through the central supply for the commercial kitchen (which needed to be maintained for the nursing home and the assisted living setting). The elder assistants did indeed order supplies and prepare meals, which they individualized slightly, but the menus were largely identical in each house on a given day. Furthermore, the kitchen staff assisted by doing some food preparation, such as cutting onions, or breaking down larger cuts of meet. These modifications were appreciated because the culinary skills were initially difficult to master. Although some elder assistants were experienced cooks for their own households, others had no cooking experience at all and were unfamiliar with common recipe language or measures such as cups and tablespoons, or pounds and ounces. These practices were contrary to the vision that residents would determine menu plans and that meals would incorporate their favored recipes.
• The use of technology envisaged in the model was not fully implemented. The Green Houses were expected to use state-of-the-art technology. The ceiling lifts were successfully used, but no other technological innovations were introduced, and the paperless record that was envisaged never materialized.

• The role of the elder assistants was not expanded sufficiently into purposive efforts to stimulate resident activity and quality of life. The elder assistants were responsible for all usual CNA personal care tasks, plus cooking, meal service, light housekeeping, and personal laundry. They were also expected to be the fulcrum for routine rehabilitation follow-up (replacing physical therapy aides and occupational aides in facilitating range-of-motion exercises and walking) and for activities (replacing activity aides). This produced a very large set of expectations for the elder assistants, and initially they simply did not fulfill their roles as an extension of rehabilitation services and of activities personnel. The activities role for the elder assistants may be intrinsically problematic even if there were enough time to implement them. Elder assistants are situated within the Green House and able to facilitate solo and interactive activities that the residents prefer while in the House. For the most part, the elder assistants were not in a position to leave the house unless all residents could accompany them. Individualized activities, including those occurring outside of the particular house may need to be facilitated by an external pull-out or sign-up program and by additional activity and transit aides to accompany residents. The jury is still out on whether the elder assistants in the house are optimally situated to lead an activity effort.

Sustaining the model in the first 4 Green Houses. The tenure of the elder assistants remained stable in the 2 1/2 years after the evaluation was concluded in 2005. For the most part, the self-directed team models that had been put into place were sustained. Esprit de corps—doing favored roles etc.

• Quality controls were lacking on maintenance of the physical environment. We noted some slippage in housekeeping standards and increasing clutter in the kitchen, the hearth area, and the corridors. As one example, the intent was to transfer most residents from wheel chairs to dining chairs for meals, but in reality the wheelchairs were extensively used and the dining chairs pushed aside into the entry or hearth area and not returned to the table after meals. In another example, Mississippi law required that each Green House have the equivalent of a water fountain, and accordingly water dispensers were located near the kitchen counters; unfortunately, it was common to observe multiple extra supplies of water in bags on the floor.

We noticed substantial deterioration in furnishings and frequent need for repair of appliances (especially dishwashers and washing machines and dryers). Some of these problems may be attributable to housekeeping deficits (especially paint chipping and soiling of fabrics), but the more likely issue is that residential-grade appliances may not be sturdy enough for the use envisaged by Green Houses. As for the wear and tear on furnishings, the high use may render such wear inevitable and a replacement budget may be necessary.
• **Televisions was a flash point for the model.** The expectation from the model was that no television would be used in the hearth area. A television was supplied for a smaller den area, and most residents brought their own televisions. In fact, the Green House televisions were initially wheeled temporarily from the den area and to the hearth to facilitate activities such as watching a video. Eventually the televisions became permanent fixtures in the hearth areas, and in one case, two televisions were found in the same hearth area. At issue is whether the model needed correction or whether the staff needed to be more active in engaging the activity of television watching in a way that small groups of residents watch favored programs in one or another residents’ rooms or in the den area. More than 90% of residents did have their own television, though many could probably have benefited by a staff member helping them adjust the channels, reminding them of their favorite programs, and engaging in discussion of what they watched on television. Quite possibly television has become a fixture of modern life and is not necessarily a barrier to social interaction. However, if televisions are to be used in den and hearth areas, they could be more effectively positioned for viewing (flat screen televisions built into a cabinet that could be closed when not in use). Certainly few residents would be able to see the hearth television from the dining table, and thus there could be few good reasons (e.g. monitoring a storm of interest to the population) to have it on during meals. When particular residents are watching the Green House’s television, more attention is probably needed to ensure it is on the channel they wish and that they are seated where they can actually see it. Because the model had a built-in aversion to television, there was little training about how individual and community interests in various television programs could be built upon productively.

• **Slippage in the food program.** The sponsoring nursing home engaged a new Atlanta-based food service contractor towards the end of the evaluation period. This food service made specific changes: rotating menus of its own choosing that utilized prepackaged foods and included items that were not traditional to the region, adopting a line of special pureed foods, changing the larger meal from evening to noon, and interpreting choice of menu items to mean that in each house for each meal, there should be choices of entrees, a choice of salads, and a choice of desserts. (The model intended that the main items served would be chosen based on resident choices, and that alternatives could always be found in a residential kitchen, which would be bound to have on hand soups, eggs, breads, and the like.) The result of these changes was that cooking took much longer, food was prepared in huge quantities (e.g. huge sheet cakes rather than inviting looking home-made layer cakes), and massive waste was conspicuous. Rather than the house-specific recipe books envisages, the food service generated a single cookbook. One of the original Green Houses successfully resisted these changes as contrary to the original model, and continued with its own meals and recipes, whereas the others capitulated.

• **Some areas of the Green House under-utilized.** As time progressed, we noted that the den area was rarely purposefully utilized for residents. Also the Spa area was under-utilized to the point where one of the spa tub rooms was used for storage. In the Green Houses, each resident has his or her own shower in the bedroom suite, and resident assistants used those showers routinely. The spa was meant to provide an initial element
for residents who enjoy tub baths. For it to be utilized, staff would need to be proactive in introducing the idea to residents and working out various times throughout the day and evening for individual residents to use the spas.

- Dementia-specific homes remained dedicated to dementia. The Green House model was designed so that each Green House would serve a mixed population for the duration of their nursing home stays. The first two Green Houses at Tupelo were utilized to replace the Dementia Special Care Unit (SCU) because funds had been raised for a new SCU. Once Laney and Page House were established for that purpose, newly admitted residents were individuals with dementia or related disorders. First, any applicants with the types of behavioral challenges that would have led to placement in the SCU would have nowhere to go within the sponsoring nursing home other than one of the dementia-specific Green Houses. Also those making admission arrangements would hesitate to assign someone who was cognitively intact to one of those two houses. The reverse was not true, however. Martin and Franks House readily were able to integrate residents with dementia into their programs.

- Teams were sustained and staff remained stable. The self-directed work team system that began when the Houses were opened remained largely intact. After some initial transitions when some individuals were found not to flourish with the amount of autonomy provided in the Green Houses and some staff changes were made, very little turnover occurred among the elder assistant staff.

Question 2. Differences Between Old and New Green Houses

By November 2005, 10 Green Houses were in operation. The 6 new Green Houses were built to accommodate 12 residents rather than 10. The change was made in the hopes that a more efficient staffing model could be developed and to economize on the construction by building fewer Green Houses. We need to be cautious in attributing differences between the old houses and the new ones because they could be due to the different size, the different training and orientation, different wage structures for the elder assistants, and/or the actual fact of being in their first year of experience.

Design corrections were made in the new houses. The first 4 Green Houses were built without a door to the bathrooms, which was a mistaken effort to allow for cueing reminders. In actual fact, many residents, including some with dementia, disliked the absence of a door, and family members were loath to use a lavatory without a door. Since there was only one public restroom in each Green House, located near the spa area, visitors did like to make use of their relatives’ bathrooms because of the lack of a lockable door. In the original bathrooms, the showers were also located in such a way that it was impossible to keep towels, toiletries and toilet paper from getting wet when the showers were used. Amid the very positive comments of residents, family, and staff about the physical environments in the first four Green Houses, the bathrooms were widely criticized. In the new Green Houses, the showers were relocated and barn doors were used for the bathrooms. These doors were slightly lower than the ceiling so as to permit the ceiling lifts to be used to help a resident transfer to the toilet. Another correction was the relocation of the storage pantry to be closer to the kitchen.
Some design changes were less felicitous. The 12-person Green Houses generally had a larger footprint than the 10-person Green Houses. Some commentators think that the overall scale of entry areas, corridors, and the hearth area has accordingly become so large that they lost the residential feel.

The new Green Houses used armoires rather than built-in closets. These armoires are impossible for residents in wheelchairs to utilize directly. In general, closet space is an important feature for Green House nursing homes, and subsequent architectural models need to consider how to include a large enough close space to seriously store all of a residents clothing for the season and other items. The vogue for armoires during the 1990s was meant to offer greater flexibility for the location of furnishings by avoiding dedicating a wall to a closet. In fact, Green House residents are rather limited in their furniture arrangements by the location of the window and bathroom, particularly if they need to use the ceiling lifts. The armoire is a bulky piece of furniture that ultimately does not permit very much storage of hanging clothing and is inaccessible to residents.

The new Green Houses eliminated the shampoo sink in the spa areas, perhaps because they did not seem to be used a lot and because it seemed feasible to use the showers for shampoos. Once the houses were functioning without the shampoo bowls, this equipment was missed, especially by residents who could not go out to the main nursing home beauty parlor and who would have appreciated an experience more like a salon experience.

The first 4 Green Houses had wide paved front sidewalks, and were built with an overhang for the porch. This permitted vehicles to drive right up to the entrance to pick up residents in inclement weather or residents with mobility problems. The new Green Houses lacked that feature.

Staffing patterns for the 12-person Green Houses were awkward. The original thinking was that the new Green Houses could be staffed with 2.5 resident assistants on day and evening shifts rather than the 2 people staffing the smaller Houses. The fallacy of this plan was that each House tended to need the extra assistance during the same time periods. Also this plan increased the use of “floaters” who were assigned to two houses and did not seem to fit well into either House’s self-directed work teams. Some tensions developed among 3-person elder assistant teams that were partly related to different demographics and experience levels. For example, one grouping included two African American elder assistants who were both about 20 years old and one white elder assistant who was almost age 60. The interests, experiences, and patterns of interactions differed, the two younger employees formed a clique, and the older employee was constantly worrying about the quality of care they were delivering. It is hard to know whether these problems were attributable to the size of the House (though that introduced the variable of 3-person teams) or to the lack of front-end training and coaching for staff in the new houses (see below).

The self-directed work teams did not get off the ground very well. The self-directed work teams are a major undertaking, and considerable work was done to refine their functioning with the first 4 houses. A model was developed of rotating team roles including: team coordinator,
elder assistant in charge of scheduling, elder assistant in charge of food, and elder assistant in charge of housekeeping. Later an additional role was added: an elder assistant in charge of activities and quality of life. Leadership was to be elected and no elder assistant was to occupy a role for more than two monthly cycles. The teams were to meet at least weekly and all shifts were expected to attend. The elder assistants in the original 4 Green Houses had substantial training, followed by a period working together to ready their Houses for occupancy, followed by technical assistance from the National Green House Project to solve problems as they became identified. They developed comfort with their team models, including The new staff did not receive as much training. In our field visits to the new houses, elder assistants raised various operational problems but did not seem to view the team as a venue for solving the problems. In some instances, respondents were not sure who currently coordinated the team.

The thorny question of elder assistant wages. It was intended that elder assistants in the established Green Houses would provide some coaching and assistance to those in the new Green Houses, but these plans were only partly implemented. Cordial relationships across the staffs of the Houses were marred by an unintentional inequity in wages. When the first 4 Green Houses were opened, the decision was made to provide a higher salary than the usual CNA salary in recognition of the expanded role and responsibility. However, in the initial planning, seniority was not taken into account, and the new wages had to be further adjusted upwards to take into account those with long tenure. (When the first 4 Green Houses opened, there was a sharp differential between wages in the main nursing home and in the Green Houses; initially the main nursing home was understaffed and some elder assistants performed shifts in the nursing home, for which they were paid the lower wage.) When the new Houses were opened, the CNAs received a much smaller increment for serving in the Green House. At the same time, the original elder assistants were informed that they would not receive cost-of-living raises until all elder assistant salaries were equalized. Both groups thought the changes were unfair, and some staff of the new houses complained that the staff of the older houses had fewer people to care for yet got paid more. The jury is still out on the rates of compensation desirable and feasible for the elder assistants. On the one hand, there is a desire to elevate the job, and on the other hand the financial pro forma needs to work out. The only lesson to be derived from this experience is that it would be useful to plan ahead and model the likely effect of wages at various levels of implementation. It is also useful to consider the effects of different wages in the various parts of the organization, and the relationships among all wages in the organization. For example, some of the wages for elder assistants with seniority were very close to the wages for licensed practical nurses.

Question 3. Challenges in Expansion

Once the nursing home was constituted as 10 Green Houses, and the program was brought to scale, entirely new challenges arose. At this point, the main nursing-home operation was Green Houses and all staff roles and functions needed to be re-examined against this new reality. Below we highlight some issues in the full implementation.

What to do with the old nursing home. The sponsor retained 28 licensed beds in the old nursing home. Various ideas have been considered for utilization of that large building, including: developing certification and capability for post-acute care; moving the corporate
headquarters from downtown Tupelo to the building; and housing a training program for other small-house nursing homes nationally. The nursing home did indeed become Medicare certified, but at the time we concluded our field work in late 2007, only a few Medicare consumers were in the nursing home at any given time. (Possibly this service will expand as the hospitals in the area become more aware of it.) Initially, the sponsor had a specific role in national training for the National Green House project, and a portion of the facility was dedicated to classroom space for that purpose. That role has been discontinued.

All the department heads continued to have their offices in the old nursing home, which also continued to be the location for staff development training sessions and staff meetings. The commercial kitchen was still located there, and used not only to prepare meals for the nursing home but also for the assisted living setting. Only certain corridors were used for resident’s rooms and, even with that consolidation, all residents were able to have large single rooms with private partial bathrooms. A few long-term residents preferred to remain at the nursing home rather than go to a Green House, and these requests were honored. Also, there was a tendency to admit new applicants to the main nursing home before assigning them to a Green House. To some extent this was a practical expediency because Green House rooms were not always available. Social service and nursing staff might have been able to facilitate an optimal arrangement after they got to know the residents, including developing protocols whereby the residents would visit various Green Houses and express their preferences. No systematic procedures were developed to determine who would go to which Green House, however.

Post-acute care for Green House residents? Prior to the sponsoring nursing home becoming Medicare certified, residents who needed intensive rehabilitation for post-hospital services went elsewhere and returned to the nursing home after the Medicare-covered stay ended. When certification was secured, all Green House rooms were dually certified for Medicare and Medicaid. The details of post-acute care for Green House residents were still being worked out, but for the most part the residents tended to return to their Green House quarters and either be visited by therapists at the Green Houses, be transported to the therapy facilities in the main nursing home, or some combination. Therapists indicate that many aspects of the Green Houses provide a natural setting for physical or occupational therapy, though some equipment is impractical in the Green Houses and would take up too much living space. The Green House rooms are intended to be residents’ permanent homes, and a model where the residents went first to the main hospital for post-acute care might create economic difficulties in holding a specific Green House room open for the return of a resident.

Initially, in the Green House model, post-acute care was not considered. Yet many nursing home days are accounted for by post-acute care, and providers often see Medicare-funded care as an important part of their economic models. (Some new small house nursing home projects are developing Green Houses that are dedicated to post-acute care, reallocating the den space to rehabilitation equipment and trying to forge a hotel-like model.) This still begs the question of the optimal approach for long-stay residents who need a period of post-acute care.

Administrator/Guide Roles. When the full complement of Green Houses was operating, the Guide function was divided between the original guide for the 4 Houses and the administrator of the campus. Each served as Guide for 2 old houses and 3 new houses. This solution created an
unparallel structure, where the guide for half the houses was the administrator’s colleague as guide but also reported to him. A change has recently been made so that the administrator of the campus and the nursing home no longer serves as guide.

In the original Green House ideal, the guide was expected to be a coach and mentor, identifying the needs of employees related to their own development and also related to the particular needs of residents in the House. The guide was expected to coach staff in problem-solving on an individual and a group basis. The jury is still out on how many Green Houses a guide can successfully manage and the best background experience and educational preparation for the Guide. Also somewhat unclear is how a Green House Guide might interact with nurses on the clinical support team. In the usual structure, such nurses report to the Director of Nursing, and the role of the Guide with reference to them is ambiguous.

Re-defining other leadership roles. Gradually some role definitions changed to accommodate the Green Houses, but considerable further development is needed.

- The Director of Nursing role has not particularly been modified for Green House model. Some nursing roles have been curtailed, however. In previous staffing models, a nurse scheduler was employed, and that role has been discontinued.

- The MDS coordinator role still remains, and we have heard little discussion about how, if at all, that role is modified in the light of the nursing models developed for the Green House. One would expect that the elder assistants and the assigned clinical support team nurses would be in a good position to complete sections of the MDS and develop individualized care plans. Care Planning was not integrated with House-specific self-directed teams, largely because these teams were for non-licensed staff only.

- A staff-development position was filled by a nurse who developed a training curriculum and protocols for new hires with Green House requirements in mind.

- A new medical director began serving the nursing home at about the same time that the first Green Houses opened. He directs a family practice/geriatrics fellowship program, and has developed training for fellows who are assigned to one or more Green Houses. The fellows are enthusiastic about this more positive model of long-term care.

- The Director of Activities modified her role so that she spent about 50% of her time directing an activities program for the relatively few residents in the main nursing home and the remainder assisting the elder assistants with programs for the Green Houses. She largely did this by providing supplies to elder assistants, performing the required activity assessments, and giving them some suggestions for programming. She developed the custom of delivering the morning newspaper to each Green House. The additional FTE for activities had been eliminated once the Green Houses were opened on the assumption that this help was no longer needed. However, the need for someone to work at fostering individual activities and enabling Green House residents to participate in an activity program to their liking may require more activity personnel and volunteers. This would especially be useful if sign-up programs are developed for various activities (e.g. walking clubs, cards, classes, community trips, and the like); because elder assistants cannot
regularly leave the premises, other personnel would be needed to enable the activities. Some controversy exists about whether such an activity program is suited to the model that is meant to mimic real communities. “People don’t have activity programs in their own homes” is the critique of that suggestion. But in actuality, people living in regular communities or in large apartment complexes do use community centers, and health clubs.

- The Director of Social Work fulfills her customary role in performing psychosocial assessments for the Interdisciplinary Team, working with family members, and processing admissions and discharges. Relatively few adaptations were made to the role in order to facilitate psychosocial well-being in small houses, or to plan for the integration of new residents in a house, and the occasional transfer of a resident if the mix in the house does not suit his or her needs and preferences. No protocols have as yet been developed for voluntary moves from one Green House to another.

- As mentioned above, Dietary Services programs have needed to be adapted to Green Houses, and the direction that is currently being taken towards centralized menu planning is inconsistent with the model as originally developed.

- The Environmental Manager has a particularly challenging role in relationship to Green Houses to be sure that infection control practices are maintained in the individual houses. This entailed individualized teaching in the Houses.

**Institution creep.** We already noted some slippage into institutional patterns in the first 4 Green Houses. As the program expanded to 10 Green Houses, this tendency continued. For example, medication carts were expected to be eliminated in the Green Houses. Each resident had a locked unit in his or her room to store all but the refrigerated medications, and efforts were made to simplify regimens. Nonetheless, some nurses preferred to utilize a cart that would allow them to carry around the PDF, a drug masher, and other paraphernalia. Several tea trolleys were pressed into action as med carts and could be seen in the corridor.

**Insufficient storage and provision for some health-related activities.** The emphasis on creating a residential-style home was so pronounced that some nursing-home needs were insufficiently considered. Disposal of “sharps” was not properly anticipated. Incontinence products could not be easily stored in residents’ rooms or bathrooms.

**Need for financial tracking by Green House.** No system was developed to look at each Green House as a cost center and track its expenditures on labor, supplies, food, and medications. This would have been useful when only 4 Green Houses were operating, but was particularly important with 10 Green Houses. It is certainly possible that resident case mix will make some Green Houses more expensive to operate than others. Management needs information to help inform itself on necessary costs, and how to make each House most efficient.

**Unanticipated issues.** A wide range of issues came up that require solution. For example:

- **Provision for breaks for elder assistants.** The staffing pattern did not create formal break times for elder assistants. One idea was that resident assistants did not require
specific break times away from the Green Houses; they could take their lunch when residents had lunch, and they could catch breaks during low activity periods. In reality, however, meal times are particularly busy for elder assistants. Apart from legal issues about mandatory breaks, some critics argued that elder assistants needed to get away for a lunch break and several short breaks in order to give maximum attention to residents when they are on duty—otherwise they could be prone to going into “break mode” once the meals and care routines are accomplished, thus short-circuiting time for individualized interaction with residents. The clinical support team nurses could provide relief, which in turn would give those nurses first-hand experience with the residents, afford a chance for nursing assessments, and enhance their teaching.

- **Provision for spouses to share rooms.** The Green Houses are predicated on private rooms for all residents. These private rooms are each bigger than the minimum federal requirements, double rooms. During our period of study, no spouses had moved into a Green House. Ideally, perhaps spouses would have the opportunity to share a room if they wished (with an accompanying price break for the room costs) or to occupy two adjacent and preferably adjoining rooms, perhaps using one as a bedroom and one as a sitting room. At present, policies regulating nursing home supply do not permit the first option; if the Green House home permitted the room sharing and offered the resident couple a price break, another room would be empty at lesser total revenue per house, or the Green would exceed its licensed capacity. The 2nd approach, use of two rooms for the residents is difficult to manage with adjacent rooms in a model where no resident will be asked to make room transfers unless they request them. (Some newer Green House and small house projects are experimenting with designs that allow easy connection between rooms, for example, with doors similar hotels that can join rooms as needs, or with faux walls that can easily be broken out for suite sharing. With this latter concept, it is unclear who would pay for the modifications, and for changing them back to single units.

- **Need for paved sidewalks and possibly off-street parking.** The Green Houses were located on either side of a newly developed circular street in a residential area of campus. No provisions were made for paved sidewalks on that street, although paved walkways led to the front and side doors. This lack made it difficult for residents to go for walk in the area with family members or staff. The street is also narrowed by parked cars on both sides of the street. Discussions about off-street parking have included consideration of whether such provisions are institutional in nature. Paved sidewalks would constitute an additional expense at this point, but would likely be worthwhile and feasible. If off-street parking is to be part of the design, it would need to be planned from the outset.

- **Staff offices.** In some ways, the residual nursing home became a dinosaur. It was also located at considerable distance from the Green Houses where the bulk of the nursing home residents reside. The Green Houses do not have office space for department heads, and, in fact, do not have permanent offices for guides, nurses and other members of the clinical support teams, who tended to preempt the office space used by elder assistants for breaks and for record keeping. One school of thought holds that offices for clinical support staff interfere with their mingling with residents. However, for clinical support team nurses to work out of their cars also seemed dysfunctional.
Community center idea. One suggestion that would, of course, be dependent on resources, would be to build a community center in the vicinity of the Green Houses. Such a Center could have multiple purposes: it could contain health clinics and offices for clinical leaders; it could contain activity and meeting rooms for resident activities that are offered to individuals from multiple Green Houses; it could be the location for a beauty/barber shop and/or restaurant; it could be a location for in-service development; and it could contain storage space for extra furnishings and equipment that might be needed intermittently. Small scale is inherent in the Green House model, but that means that little space is available for collective activities that involve larger numbers of people. A community center would be focal point for residents to visit beyond their own Houses.

**Question 4: Take-home lessons for Other Green-House and Small House Sponsors**

It is too early for orthodoxy about Green Houses and small-house nursing homes. Models will be refined as a result of further experience. The lessons deduced so far from studying the full implementation in Tupelo are, therefore, tentative. That said, below are a dozen generalizations or lessons from the first Green House program.

1. The paradigm shift to a more socially oriented model is difficult. It requires forethought and creativity about how all traditional ways of doing things might be modified to make the Green Houses successful. It requires conscious observation of and adjustment of the model based on experience. Meal preparation is a particularly challenging part of the model that was not fully implemented in this setting.

2. The reformed physical environments of the Green Houses create conditions to make primary social relationships more likely among residents and between residents and families, residents and staff, and families and staff. However, fostering residents in their desired solo activities in the Green Houses and the larger community and encouraging group interactions takes deliberate work. These patterns will not develop automatically. Someone needs to be in charge. Moreover, the elder assistants are not well positioned to give leadership to activity away from the individual Green Houses.

3. Related to the above point, the changed physical environments help shape behavior of residents, visitors, and staff, but the full use of the environmental features cannot be left to chance. Staff needs to encourage and facilitate the full use of the building and the outdoor spaces.

4. ADL and IADL activities are no substitute for social activity. It is true that residents and staff have the opportunity to engage socially while ADL care routines such as bathing and feeding are accomplished. It is also true that some residents took pleasure in watching meal preparations or even in participating in household tasks related to cooking, cleaning, and laundry. But it was a decided minority of residents who wanted to engage in such household work, and even these residents needed other activity outlets.

5. Green Houses are also nursing homes, and must be capable of providing high quality care and complying with all mandated federal and State requirements for nursing homes. This, in turn, requires space and equipment, clear lines of accountability, and good information systems. The initial Green House projects were not always clear about where...
responsibility resided. A clinical information system is always important but perhaps more so in self-contained Houses. The challenge is to develop all these attributes of good health care in a way that is analogous to intensive home care and that does not compromise the residential milieu and the emphasis on individual resident choice and quality of life.

6. The elder assistant (Shahbaz/Shahbazim) roles afforded great opportunity for unlicensed staff to enhance their skills and exercise satisfying expanded work activities. More attention needs to be given to recruitment, initial training, and ongoing training for these roles. Additionally, all supporting professional personnel need training about the model. Continuing reflection is needed to be sure that the elder assistant role remains realistic and manageable.

7. The self-directed work teams were intended to provide a new power to empower elder assistants. Self-directed work teams were not part of the original Green House model, but were developed at the Tupelo site. Some refinements of the teams may be useful. Possibly a lead elder assistant rather than a rotating role would provide more cohesion and an opportunity for advancement among elder assistants. And although an elder assistant in each house was the titular leader for functions such as cleaning, food, or social activity, the authority and responsibility to do something about deficits was not clear.

8. Future Green Houses and small-house nursing homes need to determine whether they will offer post-acute care in Green Houses, and, if so, in dedicated Green Houses. If they do not offer it, they need provisions for post-acute care for the Green House residents.

9. The Green Houses need to grapple with whether any specialization is desired, especially for memory care units, and how such specialization can be reconciled with the vision of aging in place. Some systemizing of the admission process for a Green House community is needed with attention to whether resident choice and community choice is applicable to the context.

10. Financial accountability needs to be designed so that the expenses can be reported by House.

11. Green Houses may need to anticipate wear and tear on furnishings and appliances and establish budgets for repairs and replacements.

12. Institution creep” and reversion to old ways of doing things are perpetual risks. Systems need to be developed to identify and deter such backsliding. There is also a risk that the “culture changes” of the model will only go so far, and further evolution of thinking will be discouraged. At the same time, the prescriptions of the model itself may need to be challenged based on experience. This may lead, for example, to a creative use of television as a tool for social well-being. Other tenets of the model (e.g. the large dining table for the entire complex) may also be subject to adaptation over time.