

Eden Alternative: The Texas Project

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ABSTRACT

Loneliness, helplessness, and boredom dominate the lives of many nursing home residents. Even though many regulations and programs are in place that are intended to assure *quality of care*, the confines of the nursing home environment and the widespread entrenchment of the "medical model" do not necessarily contribute to *quality of life*. Even the most modern and beautifully designed nursing homes sometimes seem to be pervaded with sterile overtones and lack the true warmth of a home.

The Eden Alternative™, a conceptual model developed by William H. Thomas, M.D., places the residents at the center of nursing home life. The nursing home is transformed into a "human habitat", an environment of diversity. Animals, plants and gardens, children and people of all ages form an integral, daily part of resident life. Residents regain a sense of worth as they care for the plants and animals and they share daily activities with the children as well as with each other.

The management style is converted from a hierarchical model to a prototype in which decisions are moved closer to the residents. Staff members are empowered to form self-directed work teams and to take responsibility for managing their own work schedules.

The Texas Eden Alternative™ project replicated Dr. Thomas's model in a different geographical location with a larger sample size. A multidisciplinary task force developed new instruments, recruited individuals willing to develop the Eden Alternative™ in their communities, and collected data. Resident and staff variables, which are known to influence the satisfaction and quality of life, were carefully gathered over a two-year time period.

Although not all of Dr. Thomas' findings were validated in the Texas study, other outcomes showed promising trends. Both cumulative findings and results at specific individual homes have implications for continued research and future policy decisions.

INTRODUCTION

Operational practices in most current Texas nursing homes mirror the "medical model". Historically, as nursing homes began to admit sicker people, the homes gradually became more like hospitals and less like homes. The move toward caring for higher acuity residents began during the late 1970's and mid 1980's as a consequence of the Medicare hospital reimbursement system known as Diagnosis Related Groups (DRG). As hospitals were pressed to discharge patients after shorter durations, nursing homes became the recipients of persons who were still too ill to return home. A concurrent trend in nursing homes involved increasing the numbers of beds in individual facilities and construction of new facilities with larger numbers of beds. Where nursing homes previously provided for forty to fifty people, the new standard model evolved to house 120 residents. Many facilities throughout Texas now house two hundred, three hundred or more people. If one ponders the numbers of staff required to provide care for 300 people and visualizes the consequent activity involved, it is not easy to imagine a home-like atmosphere prevailing in these institutions.

When a person is admitted to a nursing home, that individual experiences tremendous personal losses. These losses may include independence, a home, most personal belongings, pets, hobbies, gardens and yards, relationships, and a sense of neighborhood. These losses, coupled with the problems inherent in finding oneself located in a strange and alien environment, frequently render the person lonely, or helpless, or bored, or all three. William H. Thomas, M.D. classified loneliness, helplessness, and boredom as the three plagues of nursing homes. (Thomas, 1994) These are afflictions of the human spirit, and

they are no less detrimental than the physical ailments which precipitate admission to a nursing home.

In an effort to combat these plagues, Dr. Thomas developed a new concept of care. He called his model "The Eden Alternative" because many of the ideas that he incorporated reach back to the Biblical Eden. Upon implementing this model in an upper New York nursing home, Dr. Thomas conducted a research study (1990 through 1993) to test the impact of living and working under this practice model. Results pointed toward a potential improvement in the quality of life experienced by residents and staff.

Dr. Thomas stressed that understanding and compensating for the deficits encountered by nursing home residents is the basis for improving institutional care. He believes that in traditional nursing homes, while medical/physical concerns are addressed, the following concerns are overlooked:

- 1) The need for companionship (the antidote to loneliness).
While staff members provide treatment to residents, they perceive themselves to be too busy to provide companionship.
- 2) The need to nurture other living things (the antidote to helplessness). Humans have, for millennia, cared for other living things and have found pleasure in doing so. Most nursing homes allow only for residents to receive care. Opportunities for them to give care do not exist.
- 3) The need for variety and spontaneity in one's daily life (the antidote to boredom). Nursing homes are institutions that typically operate with regimentation and rigidity. The schedules used to accomplish the myriad of tasks required frequently result in routines that breed boredom for both residents and staff.

Dr. Thomas' initial study compared one 80-bed nursing home that implemented Eden Alternative™ principles to a control 80-bed facility. The implications of his findings (decreased staff turnover, decreased prescription drug usage, decreased mortality rate, and decreased infection rates) aroused the interest of the Institute for Quality Improvement in Long Term Health Care at Southwest Texas State University. The Institute Director and two Institute Board members traveled to New York to meet and discuss with Dr. Thomas the possibility of replicating his study in Texas using a larger population sample. Five nursing homes cooperated in supplying data over the course of two years. These five homes were provided with small grants to initiate the Eden Alternative™ philosophy in their communities. An additional home participated in the research on a non-funded basis. A total of 734 licensed beds among all six facilities comprised the basis for data collection.

Statement of the Problem

The problems of loneliness, helplessness, and boredom have been given specific definitions in the context of the Eden Alternative™.

Dr. Thomas defines the three plagues thusly:

- 1) Loneliness – the pain we feel when we want but do not have access to companionship
- 2) Helplessness – the pain we feel when we receive care but do not give care.
- 3) Boredom – the pain we feel when our lives lack variety and spontaneity. (Thomas, 1994)

Many nursing home residents suffer severely from these afflictions. The long-range goal of the Texas Eden Alternative™ Research Project was threefold:

- 1) to evaluate the outcome of bringing the Eden Alternative™ Principles into Texas nursing homes;
- 2) to assess changes in residents' quality of life; and
- 3) to provide a model for replication in other homes throughout the state.

The Eden Alternative™ is a new model of care and, as such, specific research tools designed to measure its effectiveness do not exist. Information regarding activities of daily living (ADL) status, medical status, and physical status can, however, be analyzed. Changes evidenced in these area reflect changes in quality of life.

Research Questions

The Texas Eden Alternative™ Research Project was undertaken to replicate Dr. Thomas' in another geographic location and with a larger sample. Additionally, the Eden Alternative Task Force (see p. 17) investigated data on variables not included in the original study.

The investigation was guided by the following questions:

- 1) Are Dr. Thomas' findings repeated, specifically:
 - a) decrease in average number of prescriptions per resident?
 - b) decline in nurse-aide turnover?
 - c) decrease in infection rate?
 - d) decrease in mortality rate?
 - e) decrease in psychotropic drug usage?
- 2) Are there changes in other health indicators, such as:
 - a) changes in incident rates?
 - b) changes in rates of pressure sore development?
 - c) changes in mobility rates?
 - d) changes in specific infection rates?

- e) changes in polypharmacy rates?
- 3) Are there changes in any of the following staff indicators?
 - a) employee absenteeism?
 - b) documented staff complaints?
 - c) employee injuries?
 - d) staff assuming increased responsibilities as seen in
 - i) numbers of self-directed work teams?
 - ii) numbers of people self-scheduling?
- 4) Are there changes in perceptions about resident quality of life?
- 5) Are there changes in staff viewpoints of quality of work life?

Significance of the Study

Concerns expressed by families, providers, regulators, and community leaders over the issue of quality of life for nursing home residents places a high priority on improving current standards of long term care. Residents, themselves, will agree that while their basic medical and physical needs are being met, their spiritual and emotional needs suffer greatly in today's nursing home environment. Organizations that use the Eden Alternative™ Principles address the human spiritual needs as well as physical needs by surrendering the institutional model and adopting a human habitat model in its place.

Data that support positive changes in physical/medical status and anecdotes that contribute insight into residents and staff response to the Eden Alternative™ Principles can provide a foundation from which new, more humane and effective models of long term care and management can be designed.

LITERATURE REVIEW

The Eden Alternative™ is a concept, a philosophy, a process, and a set of principles, which began as an operational model to combat the three plagues of loneliness, helplessness, and boredom experienced by institutionalized, frail elders. The model creates a "human habitat" within the nursing home and includes resident animals, the daily infusion of children into resident life, the profusion of plants and gardens, the transformation of the management style, and the consequent involvement of the local community. Because of the uniqueness and scope of the model, and because of general disregard by the medical establishment of the relevance of the three plagues, the related literature was searched by individual components of the Eden Alternative™ and is presented as such. A majority of the material reviewed approaches the involvement of patients or residents from a perspective that treats the interaction of a person with an Eden Alternative™ component (i.e. plants, animals, children) as a therapy. The Eden Alternative™ is not about therapies, as such. It is about a holistic interweaving of all of the "components" in a rich, harmonious quilt called *life*.

Animals

An animal living full-time in a nursing home is not a new idea. It has occurred sporadically throughout the history of the existence of nursing homes. However, the majority of animal interaction with nursing home elders has taken place on a "pet therapy" visitation basis. Therefore literature pertaining to "patient/animal" relationships is written from this viewpoint. The Eden Alternative™ viewpoint is adamantly opposed to "pet therapy" or "animal-facilitated therapy". The practice of intermittently allowing residents brief contact periods

with animals only serves to reinforce their isolation and further exacerbates feelings of loneliness.

Loneliness abounds in nursing home residents, and the antidote to that loneliness is companionship. (Thomas, 1994) The animal-human bond has been recorded for thousands of years. One recent study involving 128 elders charted their perceptions regarding their pets. Of the five most frequently perceived variables of the elderly-animal friendship bond, companionship received the greatest number of male (94%) and female (97%) responses. Seventy-five percent of the males and sixty-seven percent of the females carried perceptions that their dog was their *only friend*. (Peretti, 1990) Severance of the animal/owner bond upon admission to a nursing home removes the companionship that is such a vital part of life to many elders.

Resident animals have been shown to increase social integration by stimulating conversation and laughter. (Haggard, 1985) Animal antics have often provided residents with days of happy conversation. Increase in activity and mobility among residents occurs through their participation in caring for animals. This includes walking dogs, feeding the animals, and oftentimes repeated trips to staff to provide notice of the need to go buy more animal feed. Nursing home caregivers should be aware that pets are an important factor in the lives of many residents.

"The addition of pets to the environment may enhance the health status of patients. Results of increased socialization, heightened anticipation of each new day, increased physical activity and the minimization of loneliness are but a few of the many possible benefits. We can put joy into our care and smiles on our patients by utilizing the profound effect that animals have on human behavior." (Hoffman, 1991)

Research focused on the human/companion animal relationship conducted over a six-year period between 1988 and 1993 consisted

primarily of nonexperimental studies. Of the articles reviewed, four percent explored the merits of animals and nursing home residents, and these were descriptive studies. (Barba, 1995) Earlier clinical studies revealed that positive relationships between animals and humans have definite physiologic effects on the heart (Lynch, 1977), and that stroking a dog can lower blood pressure. (Baun, 1984)

Animals provide love and unqualified approval and satisfy vital emotional needs for lonely people. "Their concepts of themselves as worthwhile persons can be restored, even enhanced, by the assurance that the pets they care for love them in return." (Levinson, 1969)

Repeated references infer that healthcare practitioners give nonverbal negative cues to people for whom they are caring. Animals give nonverbal cues that are not undermining to a person's self-esteem. Animals offer nursing home residents a "form of nonthreatening, reassuring nonverbal communication and tactile comfort, and thus helped to break the vicious cycle of loneliness, hopelessness, and social withdrawal." (Fogle, 1981)

Resident animals have also produced interesting reactions from staff. Use of a dog on the rehab unit at Huntington Memorial Hospital in Pasadena, California increased staff interest in patient care and decreased withdrawal of certain staff members. (Haggard, 1985)

Plants and Gardens

The infusion of plants and gardens into the halls and grounds transforms a cold, sterile environment into a place teeming with life.

"Plants intrigue our minds, stimulate our senses, awaken our curiosities, and motivate our spirits." (Haas, 1996)

Whether or not a resident chooses to actually participate in gardening activities, the views through windows are enlivened and passages through hallways are softened by plants.

Specific interactive qualities of plants inspire involvement of residents, staff, and volunteers. Interactive qualities include sensory, functional, and responsive attributes. Sensory attributes include the color, scent, taste, touch, and memory invocation. Functional qualities refer to plants that assist people in improving physical or cognitive skills. Responsive relationships in the venue of "horticultural therapy" relate to the interaction between the plants and the elders. A gardener *responds* to her plants as she cares for them. In turn, the plant *responds* to the gardener, "regardless of the disability or condition of the caregiver." (Hass, 1996)

The ultimate goal of a horticultural therapy program is the improved mental and physical health of individuals. Benefits may be seen on four levels:

- 1) Intellectual
 - Attainment of new skills
 - Improved vocabulary and communication skills
 - Aroused sense of curiosity
 - Increased powers of observation
 - Stimulation of sensory perceptions
- 2) Social
 - Interaction within the institution
 - Interaction outside the institution
- 3) Emotional
 - Improved confidence, pride, and self-esteem
 - Opportunities to relieve aggressive drives
 - Interest and enthusiasm
 - Creativity and self expression
- 4) Physical
 - Improvement of basic motor skills
 - Increased outdoor activities (Hefley, 1973)

Regardless of ability or disability, the pursuit of gardening can enhance physical condition, can provide relief from tension, and can surround an individual with the sense of accomplishment. (Adil, 1994)

Studies in Europe and the United States have shown that certain varieties of houseplants have the ability to purify interiors and maintain clean air. Dr. Bill Wolverton found that tested houseplants removed up to 87 percent of toxic indoor air within 24 hours. (Rembert, 1998) Materials such as particleboard, plastics, synthetic fibers, indoor cleaners, carpeting, and tobacco emit volatile organic compounds (VOCs) which are harmful to humans. Particular indoor plant species have been shown to lower VOCs. Plants, therefore, have health supporting value in addition to the beauty and meaning they provide to inhabitants and workers.

Creation of a "human habitat", the concept developed by Dr. Thomas, brings staff and residents back into the realm of nature.

"For people in emotional or physical dark times of fear, anger, or depression awareness of the continuing, steady cycles around us can offer an assurance of the normalcy of our experiences. Being aware reminds us that darkness is part of a cycle, that we can move through it to lighter times. Another day is coming. Morning after night. Always. When we are indoors most of the time, this circadian rhythm can become disturbed. In institutional settings the light, temperature, sound, and activity are controlled, so an artificial rhythm is established—a rhythm created with fluorescent light and with temperatures that do not fluctuate. Missing is the cool of a fall morning that signals beginning of the season's change, and missing is the growing warmth in the day as the sun warms the earth. In losing these natural signals, we become removed from our knowledge of place and from our rhythm within the larger context of the natural world. For this reason it is nourishing to bring indoors the sensory richness of the outdoors, to bring inside the breath of the wild to renew our pulse with the world." (Reynolds, 1995)

Children

Converting a standard nursing home to a "human habitat" involves not only adding other species but also increasing variation in the age groups of people who live, work, and play at the home. Children and volunteers of *all* ages positively impact the lives of the elders by providing a scope to daily life that staff has previously been unable to furnish.

"For the 5% of this nation's older adults who reside in nursing homes, contact with the community may be reduced to major holidays, when visitors and community groups come to visit the nursing homes. In particular, contact with young people is limited for nursing home residents, who are thus deprived of an important sense of personal continuity in the growth of a new generation." (Hamilton, 1999)

Long-term commitments and ongoing contact between school students and nursing home residents enriched the lives of both the children and the elders, according to a study conducted in Phoenix, Arizona in 1988. (Hamilton, 1999) Children developed a greater understanding of aging, death and the life cycle, and they learned to communicate and empathize with ease in the presence of infirm elders. The children talked about feelings of self-worth gained by doing something important for the well being of others. Residents expressed appreciation for being involved in something emotionally meaningful. Nursing staff reported that a resident who had not spoken in years began to speak after regular visits by the children.

Outcomes of a demonstration program in western Pennsylvania developed in collaboration with a local community college, a local nursing home, an area agency of aging, and a university based intergenerational program showed that 1) fifty-nine percent of participating residents reported that they were able to leave their rooms

more often than before and 2) eighty percent of the participating students became "more accepting of the aging process, of their own aging, and of nursing homes." (Newman, et. al. 1995)

A small facility in Bridgewater, Vermont received funding from the U. S. Department of Agriculture to provide residential care for elders, day care for preschoolers, and after-school care for school children. The success of the program suggests that specific regulations and accreditation standards be established by the states for combined elder-child care facilities. "Instead of compartmentalizing people by age levels and competing for funds," cooperation could provide opportunities to enhance the quality of life for both elders and children. (Chamberlain, 1994)

Management

A given nursing home may be transformed with the addition of resident animals, children routinely on the premises, and gardens galore, but the home is not a true Eden Alternative™ home unless the management model itself is transformed. The operative Eden Alternative™ Principles that apply to a transformation of the management state that the facility:

- De-emphasizes top-down bureaucratic authority in the nursing home and seeks instead to place the maximum amount of decision-making authority in the hands of the elders or those closest to the elders.
- Is blessed with leadership that places the need to improve resident quality of life over and above the inevitable objections to change. Leadership is the lifeblood of the Edenizing process, and for it there is no substitute. (Thomas, 1966)

These two principles constitute the very heart of the Eden Alternative™. Historically, employee advancement in long term care organizations has moved employees further away from direct contact with the residents. In some very large organizations top-level nursing personnel have little or no contact with residents or the direct care staff. Thus, those who know the residents best are not involved in decisions regarding their care, nor are they asked for input concerning decisions about their own work life. This distancing of decision-making from the elders and direct care staff is intensified by the wide assortment of departments, which further fragmentizes care-giving efforts.

The Eden Alternative™ solution to the separation and strife created by a departmental and hierarchical organization redistributes power through self-directed work teams and employee empowerment.

"Accountability and responsibility acceptance increase in a team-based organization." (Manion, et al, 1996) Empowerment does not mean that leaders arbitrarily and suddenly relinquish their authority and give it to front-line staff. All staff members are educated and provided with the tools needed so that they can assume responsibilities appropriate to their skill and knowledge level. In order for decisions to be successfully made, specific tools are provided, and these are:

- Information
- Supportive Environment
- Resources
- Training and Skills
- Knowledge

Leaders who successfully adopt an Edenizing management style understand that these five preconditions are paramount to each decision that is moved closer to the resident. (Thomas, 1999)

The leader, in essence, assumes the role of a coach. The coaching role is critical, particularly in the formative stages of team building. Effective coaches are aware of resistance to changing old ways and must establish an environment in which risk is rewarded and mistakes are allowed. (Manion, 1996) Without this setting, growth cannot occur.

Leadership is key to the Eden Alternative™ management style. (Eden Alternative Principle 10) The foremost rule of effective leadership is fundamental fairness. The management golden rule "Treat employees the way you want to be treated," is analogous to the Eden Alternative™ golden rule, "Do unto staff as you would have them do unto elders." Enacting the golden rule and managing with fundamental fairness means achieving balances between such opposing behaviors as:

- giving/taking
- autocracy/democracy
- autonomy/supervision
- change/stability
- aloofness/approachability
- idealism/realism
- talking/listening
- simplicity/complexity
- organization/individual
- thinking/acting (Cottringer, 1999)

Effective leadership allows a natural balance to occur among these dualities, thus creating a work environment in which people are motivated to give their best. Motivation is what people generate when they experience growth. (Johnson, 1999)

As work teams are formed and departmental lines are minimized, the work climate fosters a participative workplace. A work team is defined as a group of individuals who work interdependently toward common goals and whose members are mutually accountable for task achievement. (Kirkman and Rosen, 2000) The effectiveness of a given team is closely associated with the sense of empowerment perceived by the individual team members. Kirkman and Rosen studied 100 teams in four organizations and found that empowered teams shared four characteristics: potency (belief in themselves), meaningfulness (strong commitment to their mission), autonomy (sense of freedom, discretion, and control), and impact (ability to see the effect of their labor).

A primary key to the success of a participative workplace is ongoing communication among and within the teams. According to one study, job satisfaction was highest when workers and leaders communicated openly. (Swearingen, 1997) Ongoing efforts at communication will ease problems with resistance and misunderstanding, two barriers frequently encountered as team development progresses. As work teams evolve, each member develops the qualities of a leader: communication, risk taking, openness to new ideas, and moving from "I" to "we". (Moravec, 1999)

In order for the Eden Alternative™ to flourish, the interests and needs of staff, residents, and the community are considered. "There are many talented and gifted people working and residing in nursing homes. Many purposeful, interactional relationships flourish when interests and abilities are shared in human growth experiences." (Drew and Brooke, 1999) Drs. Drew and Brooke developed a talent survey geared to highlight people's strengths and interests for organizing work teams. Survey results were used to develop teams in which members contributed to the area of their highest interests.

The literature is replete with success stories about teams and the financial impact on organizations. Presbyterian Hospital in Dallas, Texas, after six years of self-directed work teams, reported a savings of \$4.5 million in 1998 as well as documented improvement in patient and staff satisfaction. (Beckham, 1998) Hartford Memorial Hospital in Hartford, Wisconsin, had reduced its supervisory staff by 22 positions after three years of self-governance and self-management. (Beckham, 1998) As the decade of the 1980s drew to a close, Mercy Hospital in Janesville, Wisconsin, was losing market share in 28 of 35 zip codes in its service area. Ten years later, after minimizing the hierarchy and forming teams of partners, Mercy Health System includes 40 facilities in 19 communities in two states and is listed as one of the top 100 hospitals for investment opportunities. (Bea, 1999) The team management concept is relatively new to the long term care arena, and further studies are needed to document the implementation and process of this practice in the nursing home environment.

METHODS

A task force planned the methods and procedures for the Texas Project. The initial task force was comprised of the following individuals:

- Institute Director

- Nursing home administrator

- Three Southwest Texas State University (SWT) professors

 - Health Research

 - Health Administration

 - Family and Consumer Sciences

- Two consumer representatives

- Deputy Commissioner, Texas Department of Human Services

- Professor, Nursing Education, University of Texas San Antonio

Task Force members convened every month for the first year and one-half of the project. The task force collectively designed all data analysis and survey tools, constructed workshop curricula, served as facilitators and speakers, made site visits, reviewed proposals, and provided general oversight during the initial stages of the research project.

Data Collection

Data were gathered on a monthly basis from participating facilities and from a group of control facilities with similar demographics. The monthly data collection consisted of two categories:

1. Clinical resident information
2. Staff attendance and retention information

Pre- and post- surveys were conducted regarding:

1. Quality of resident life
2. Quality of work life

Clinical resident data collection consisted of the following indicators:

Medications

- Number of residents receiving antipsychotics
- Number of residents receiving anxiolytics
- Number of residents receiving antidepressants
- Number of residents receiving hypnotics
- Number of residents on 5 or more medications

Mobility

- Number of bedfast residents
- Number of chairbound residents
- Number of ambulatory residents
- Number of restrained residents
- Number of residents with contractures

Pressure sores and skin problems

- Number of Stage I – II pressure sores (facility acquired)
- Number of Stage III – IV pressure sores (facility acquired)
- Number of skin tears

Infections

- Number of urinary tract infections (UTI)
- Number of upper respiratory infections (URI)
- Number of gastrointestinal infections (GI)
- Number of wound/skin infections
- Number of other infections

Incidents

- Number of total incidents
- Number of resident-to-resident incidents

Deaths

Eden Inventory

- Number of dogs
- Number of cats
- Number of birds
- Number of rabbits
- Number of rooms with birds
- Number of bird cages
- Number of children

Data pertaining to staff included tracking, on a monthly basis:

- Number of teams
- Numbers of self-scheduling staff members
- Number of documented staff complaints
- Number of employee injuries
- Absenteeism in all departments
- Number F.T.E. (full time equivalents), new hires and terminations in each of the following staff groups:
 - RNs

- LVNs
- Nursing Assistants/Medication Aides
- Dietary
- Housekeeping/Laundry
- Activities/Social Work

Specific definitions for all indicators and assessment tools are provided in Appendix F. (p.86)

Selection of Sample

All 1157 nursing homes in Texas were invited to a one-day seminar in which Dr. William and Judy Thomas introduced the Eden Alternative™ Philosophy. Representatives from 45 Texas nursing homes participated in the seminar with a total of 127 individuals in attendance. At the conclusion of the seminar, attendees were provided with the opportunity to submit a proposal to the Institute for financial assistance to implement the Eden Alternative™ model in their respective facilities.

Eleven proposals were submitted to the Institute. Each member of the Task Force reviewed all proposals. Each proposal was scored for responses in specific categories as delineated below:

- Vision
- Education
 - Community
 - Residents
 - Families
 - Staff
- Implementation
 - Teams
 - Environment
 - Intergenerational Activities
 - Community Involvement
 - Family Friendly Policies
- Additional Components
 - Proposed Time-line
 - Data Collection
 - Budget
 - Self-Sufficiency Plans

Documentation

- Support letter from managing body

- Medical Director

- Biographical sketches of key personnel

- Evidence of Utilization of Eden Alternative™ Principles

Of the eleven proposals received, three were eliminated due to incomplete responses or low scoring. Task Force members made site visits to the remaining eight homes. Administrators and staff were interviewed in each of the eight facilities. Five homes were provided with small grants to initiate the Eden Alternative™ in their communities. All eleven homes were offered the opportunity to participate in on-going educational programs which complemented or expanded on Eden concepts.

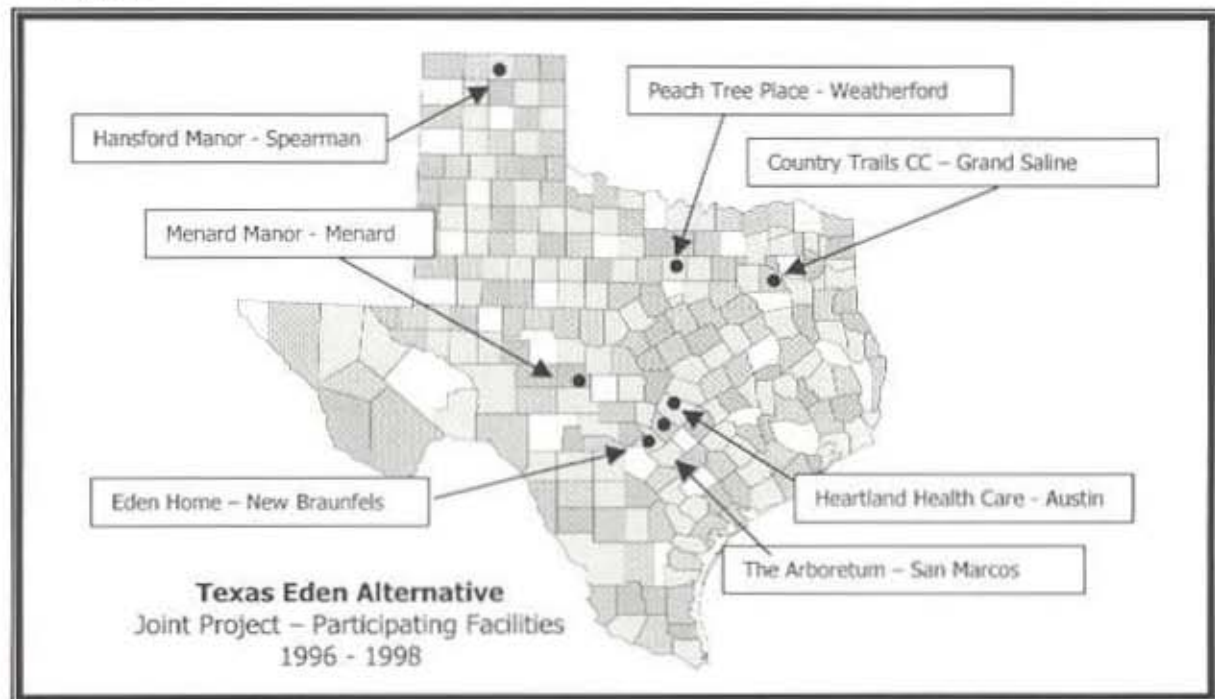
The five selected homes covered a variety of ownership and management types, one home participated on a non-funded basis, and one home participated in the educational process only. (Table 1) A total of 734 licensed beds among all six facilities comprised the basis for data collection. Variables studied by Dr. Thomas and additional outcome variables were tracked over a two-year time period.

Table 1

Home	Size	Location	Management	Profit Status	Geographic Area	Services
A	59 beds	Rural	Large Corp.	For Profit	North Texas	Alzheimer's Only
B	40 beds	Rural	County	Not-for-Profit	West Texas	
C	256 beds	Rural	Church	Not-for-Profit	S. Central Texas	C.C.R.C.; Alz. Unit
D	120 beds	Urban	Large Corp.	For Profit	Central Texas	MCR Unit
E	129 beds	Rural	Small Corp.	For Profit	Central Texas	MCR Unit; Alz. Unit
F	120 beds	Rural	Indiv. Owner	For Profit	Northeast Texas	

The selected homes covered as wide a geographic range as possible, given the locations of the facilities from which proposals were submitted. There was no representation from far west Texas or the Rio Grande Valley, as no proposals from these areas were received. The sites of the participating facilities are mapped in Figure 1.

Figure 1



Implementation

After the selection process was completed, each participating homes sent four representatives to a one-day workshop during which topics relevant to expectations of the project were discussed:

- Data Collection
- Teams
- Leadership
- Quality of Life
- Quality of Care
- Intergenerational Aspects
- Accounting Responsibilities

The meeting also served as a foundation for the key players to become introduced to each other and to begin networking. Press releases were given to the administrators for use in hometown newspapers to inform the local citizenry of their involvement in the project.

The group continued to meet quarterly throughout the two-year project period. Networking and sharing successes and challenges

formed the mainstay of successive agendas. Various topics pertinent to quality of life and Eden Alternative™ Principles were presented by a medley of speakers. Dr. Thomas was present on several occasions. Task Force members and regulators also attended these meetings.

The quarterly meetings evolved into dynamic and energizing gatherings. Indeed, this requirement of the study turned out to be the most useful for the participants. Many have stated that the Pioneer (term given to homes in the Texas project by Dr. Thomas) meetings were what sustained them and enabled them to return to their respective homes to continue the sometimes arduous task of “Edenizing”. At the conclusion of the research project, the group voted to continue to meet and network.

Analytical Design

Using previously defined clinical resident indicators and staff attendance and retention information as dependent variables, linear regression models were evaluated as indicated by adjusted R square values. Descriptive summaries (minimum, maximum, mean, and standard deviation) were obtained for each variable. All analyses were conducted at both the individual and cumulative facility levels.

Rates of occurrence of each dependent variable based on average daily resident census were tracked over the two-year study period. The use of rates allowed for comparison of findings between and among the participating homes and control facilities.

Surveys addressing staff quality of work life and resident quality of life were conducted at both the initiation and the closure of the analysis period. Simple analyses of these data consisted of obtaining

mean scores for each variable, comparing pre- and post- scores, and assessing the changes by grouped categories.

On-Going Training

One of the foremost goals of the Texas Eden Alternative™ Research Project was to develop an effective model of care which could be replicated by other facilities. This became a reality even before the conclusion of the data collection phase of the project. The Task Force designed a curriculum for a series of educational seminars. The curriculum closely mirrored the initial training developed by Dr. Thomas.

Forty-nine individuals from twenty-three nursing homes attended a two-day seminar in the spring of 1997. Two more training sessions were conducted in 1998 bringing the total number of homes participating in Eden Alternative™ training to forty-five. Family caregivers, professors, and regulators also attended these sessions.

In the spring of 1998, the Institute expanded training efforts by training not only Texas providers, but also persons from throughout the United States. The Institute was named by Dr. Thomas as the official agent for disseminating the Eden Alternative™ Philosophy in the south central United States. The Institute director became the regional coordinator for Eden Alternative™ Region VII, which encompasses Texas, Louisiana, Oklahoma, Arkansas, Colorado, and New Mexico.

RESULTS

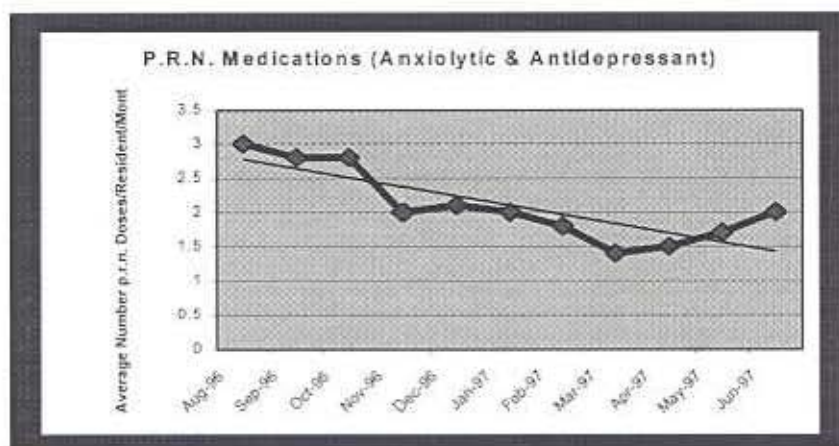
Data collected from the six participating facilities were analyzed from both cumulative and individual facility perspectives. An analysis of resident and staff data was conducted at the mid-point of the project and then again at the conclusion of the two-year project.

Resident Information – Cumulative Findings

A preliminary data analysis conducted at the midpoint of the study indicated a 33 percent reduction in the use of p.r.n. anxiolytics and antidepressants for anxiety and depression, a 44 percent drop in staff absenteeism, and a 60 percent reduction of in-house decubitus ulcers.

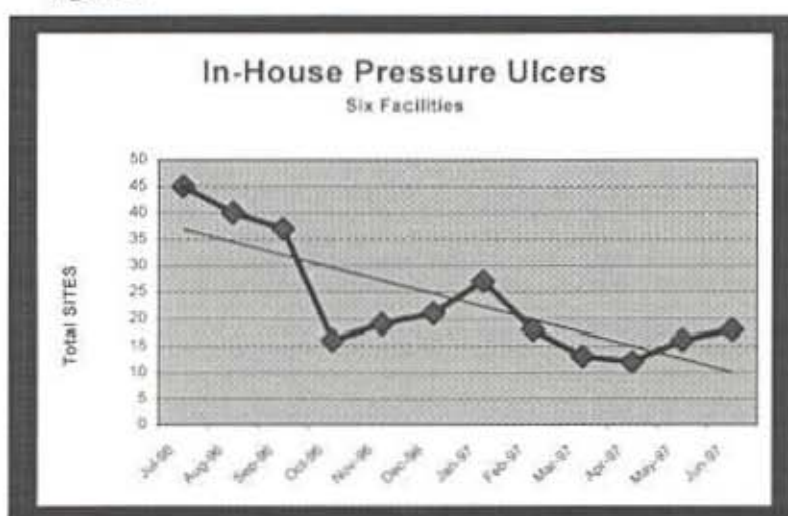
Medications given on an “as needed” basis are referred to as p.r.n. (*pro re nata*). Medications categorized as anxiolytics are given to reduce feelings of anxiety. P.r.n. medications in a nursing home may be given at the resident’s request or through a nurse’s judgment that the resident will benefit from receiving the medication as ordered by the attending physician. During the first year of the Texas Project, the administration of these medications reflected a reduction in the total of p.r.n. doses given each month. (Figure 2)

Figure 2



Decubitus ulcers, also known as bedsores or pressure sores, are painful wounds caused by the continued rubbing or pressure by part of the body against a surface such as a sheet, wheelchair cushion, or foot pedal. With few exceptions, decubitus ulcers are preventable. People who are turned, moved, repositioned, adequately nourished, and kept clean and dry do not have this form of skin breakdown. The graph (Figure 3) depicts the total number of skin breakdown *sites*, regardless of size or severity, in six facilities. A given resident may have had more than one *site* on his/her body that was afflicted.

Figure 3

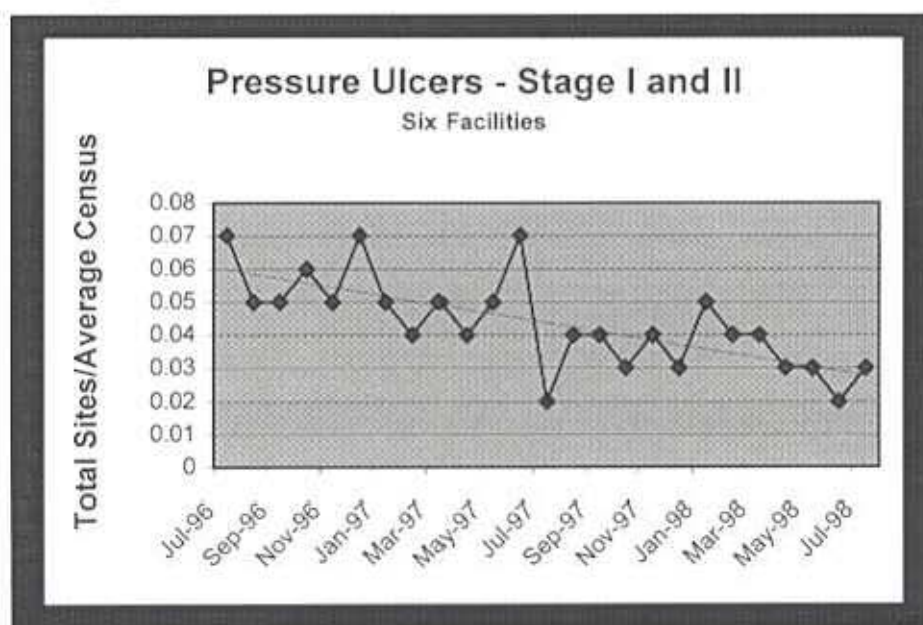


At the closure of the two-year study period, analysis revealed that pressure sore rates had maintained a downward trend and rates of bedfast residents, rates of skin infections, as well as rates of behavioral incidents had decreased.

Decubitus ulcers are medically classified according to severity. Stage I ulcers are characterized by surface reddening of the skin. Stage II ulcers involve injury to the skin and are typified by a blister or a break in the reddened area. Stage III ulcers invite serious infection, as the wound extends through all layers of the skin. Stage IV ulcers

involve underlying muscle, tendon, and bone tissues. While all pressure ulcers are serious, Stage I and II ulcers are more easily treated and are not life threatening unless untreated. For the purposes of data reporting, Stage I and Stage II ulcers were classified separately from Stage III and Stage IV ulcers. In-house Stage I – II ulcers decreased by 57 percent. (Figure 4) Rates of Stage III – IV ulcers remained stable at a very low rate of .0152.

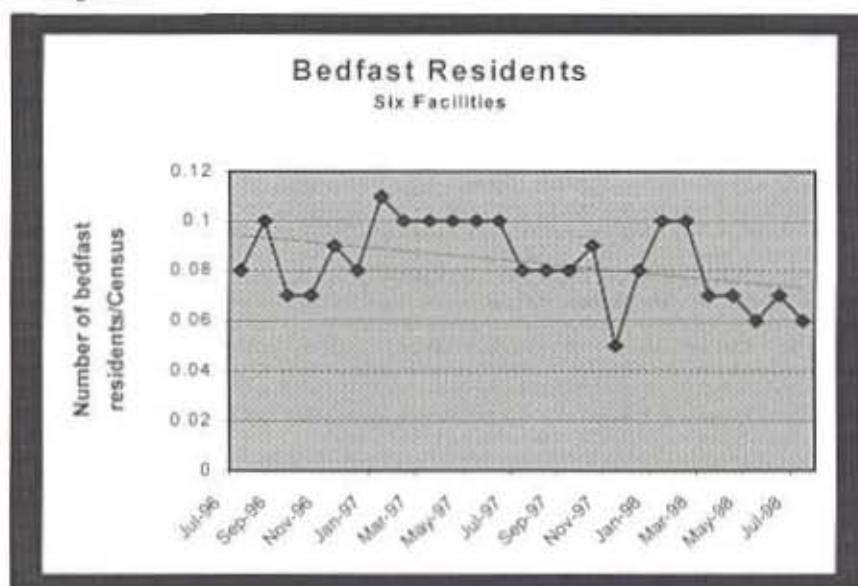
Figure 4



The cumulative rate of bedfast residents decreased by 25 percent. (Figure 5) The term "bedfast" refers to the total number of residents in the facility who have remained bedfast for 60 percent or more of the month. This definition is in keeping with definitions specified by Texas Department of Human Services, the agency that reimburses nursing homes for providing services to Medicaid recipients.

An incident in a nursing home setting is defined as the occurrence of an event that is unexpected and is potentially harmful to a person

Figure 5



(resident, staff, visitor). An incident subcategorized as behavioral in this study indicates a resident-to-resident altercation. Incidents of this type are more apt to occur in a population of dementia residents. These types of incidents decreased by 60 percent. (Figure 6)

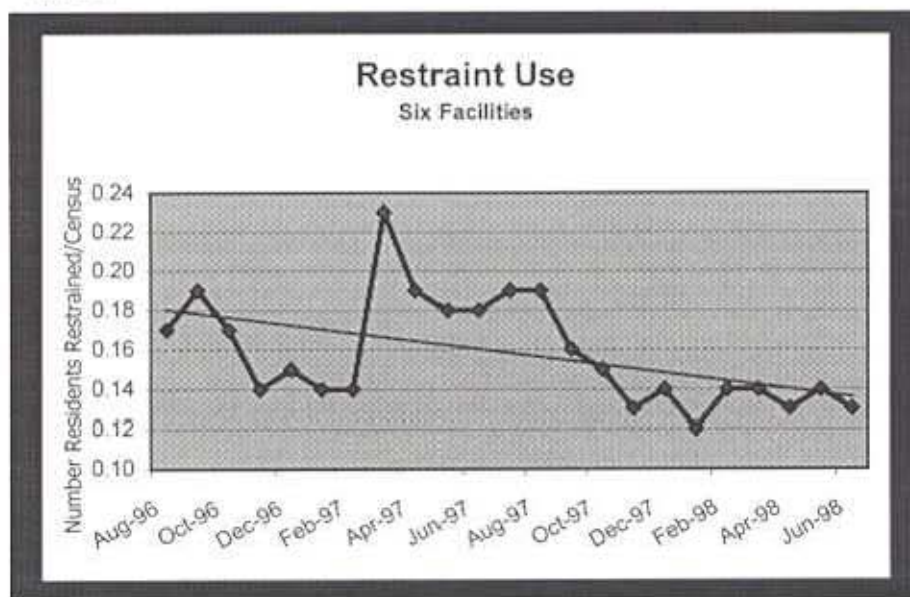
Figure 6

Data were collected only during the last eighteen months of the study.



The cumulative rate for use of restraints decreased by 18 percent. (Figure 7) Significant drops in the use of restraints at three of the six facilities account for these changes. The remaining three homes had no significant changes in restraint usage. Physical restraint usage in this study included the total number of residents restrained by geri-chair, lap-buddy, pelvic restraints, or vest restraints. Residents restrained for 60 percent or more of waking hours were counted in this number.

Figure 7



The cumulative rate of chairbound residents increased by 8 percent. The rate of urinary tract infections also increased by 29 percent.

A summary of cumulative findings of resident data is provided in Table 2. All data were analyzed. This summary lists only those variables that registered *significant* rate changes.

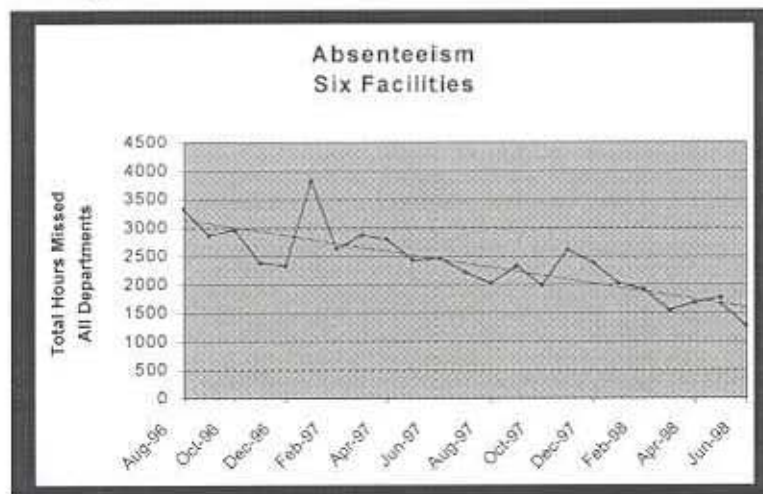
Table 2

Behavioral Incidents	60% decrease
Stage I - II Pressure Sores	57% decrease
UTIs	29% increase
Bedfast	25% decrease
Restraints	18% decrease
Census	11% increase
Chairbound	8% increase

Staff Information – Cumulative Findings

Cumulative outcomes in staffing revealed an overall reduction in absenteeism of 48 percent. This reduction is based on the total number of hours missed from work by all regularly scheduled employees in all reporting facilities. The high number of hours missed in January 1997 resulted from hours missed by only three people. These absences were from extended illnesses (two people) and an auto accident. (Figure 8)

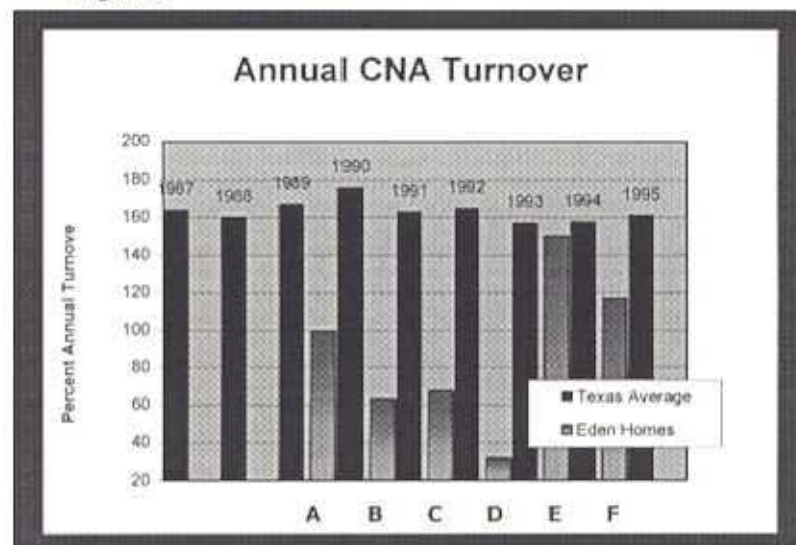
Figure 8



Examination of the turnover rate among the certified nursing assistants (CNAs) did not show a decrease over the course of the first year. However, comparison of the turnover rates of the participating facilities to the average turnover rates over an eleven month period in

Texas did show that all participating homes were below the state averages. One home, Facility D, operated at a 25 percent turnover rate, while the state average from 1987 to 1995 was 163 percent. (Figure 9)

Figure 9

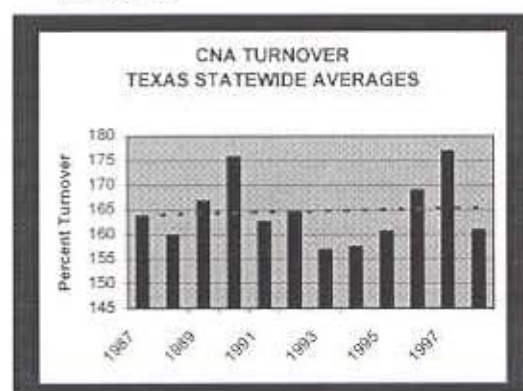


Extension of statewide CNA turnover averages through 1998 is:

- 1996 – 169%
- 1997 – 177%
- 1998 – 161%

A graphic representation of CNA turnover in Texas for the years 1987 through 1998 reveals a statewide average over the 12-year period of 165 percent. (Figure 10)

Figure 10

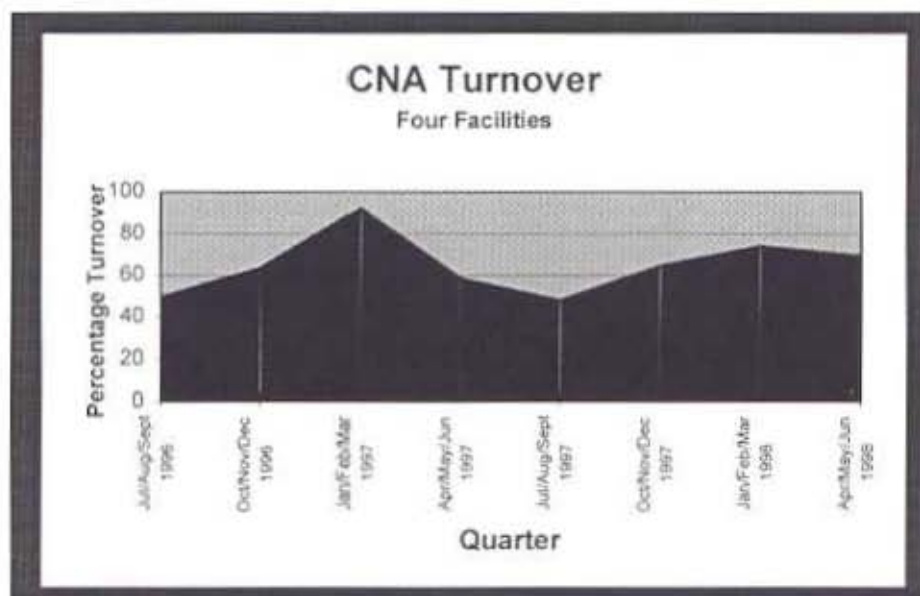


CNA turnover rates in Figures 9 and 10 are based on Texas Medicaid Cost Report Analyses.

The cumulative CNA turnover rates for the homes participating in the Texas Project did not decrease over the full two years of the study.

(Figure 11) The project turnover rate for the first year (July 1996 through June 1997) was 95 percent; the second year (July 1997 – June 1998), 111 percent. These figures are well below the state averages for the corresponding time period. Computations include only four of the facilities. Two of the homes, Facility D and F did not submit staffing data for a portion of the second year.

Figure 11



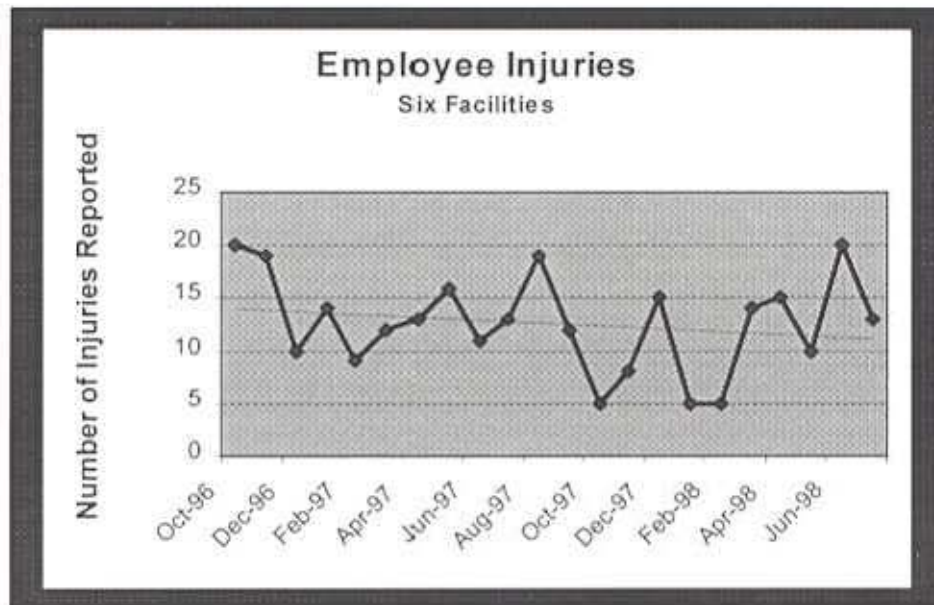
Analyses of turnover rates within the individual homes yielded patterns consistent with the overall data. No specific trends were identifiable.

In the traditional nursing home setting, the likelihood of employee injuries creates a constant hazard. The nature of the work, primarily that of the nursing assistants, places individuals at risk for injury. This issue is important to both employers and employees. Employers are concerned primarily with the physical health of their employees. However, they are also concerned about costs involved in time missed as a result of accidents and costs incurred from medical expenses.

The total number of employee injuries dropped 11 percent, includes all participating homes, and reflects actual numbers of reported employee injuries. (Figure 12) The information gathered does not

indicate the specific types of injuries, the severity of injuries, or the amount of time required for the employees to return to a full work status.

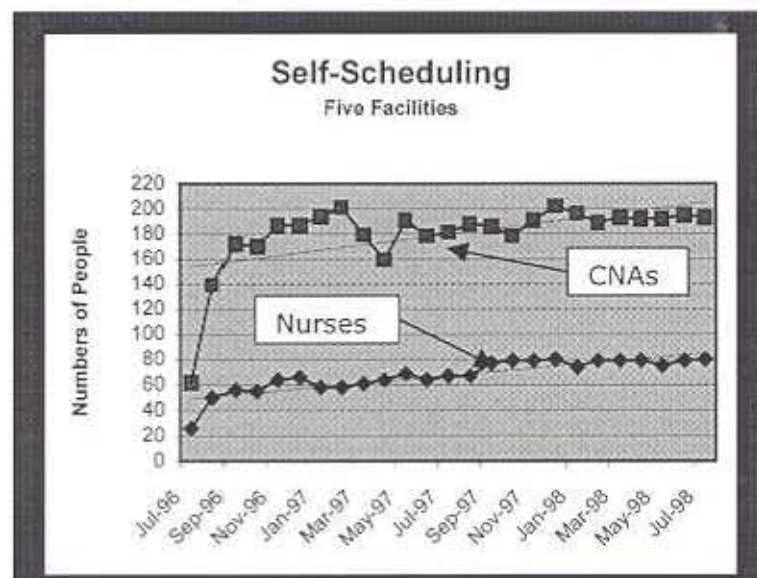
Figure 12



Self-Directed Teams and Self-Scheduling

The numbers of nurses (RNs/LVNs) and certified nursing assistants (CNAs) who took responsibility for creating and maintaining their own work schedules steadily increased over the two-year period. (Figure 13) Only five facilities are included due to a change in administration at Facility D after

Figure 13



which data regarding staffing patterns was no longer submitted to the Institute.

The number of self-directed work teams also maintained a steady upward trend. This trend closely parallels trends regarding numbers of people involved in self-scheduling. (Figure 14)

Figure 14

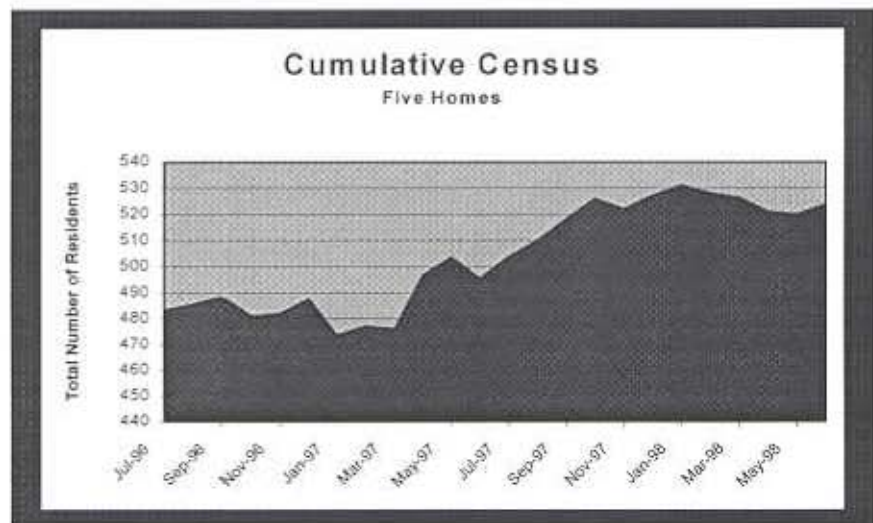


Census

An overall increase in resident census among the participating homes occurred over the course of the two years. (Figure 15) The cumulative numbers are for five of the homes. A change in management affected

reporting procedures in one facility and resulted in inaccurate reporting of the census for several months. This 11 percent upward trend in census occurred in all other homes.

Figure 15



Findings – Individual Homes

The following table presents an overview of *significant** findings of rates on an individual basis within the participating homes. In consideration of outliers, all percentage changes are based on the slope of *trendlines*.*

Graphic representations are provided for selected variables.

FACILITY A

Table 3

Variable	Increase	Decrease	High Range	Low Range	Significance
Ambulatory	33%		.86	.35	p < .001
Chairbound		89%	.43	.10	p < .001
Contractures		65%	.13	.05	p < .01
Infections (Skin)		72%	.11	.00	p < .01
Restraints		49%	.11	.05	p < .001
Decubitus Ulcers		80%	.14	.00	p < .001
Incidents	53%		.40	.09	p < .02
Skin Tears		66%	.51	.00	p < .05
Census	12%		.22	.09	

Variable – First Year Only	Increase	Decrease	High Range	Low Range	Significance
In-House Decubitus		80%	.14	.00	p < .01
Bladder/Bowel Programs	99%		.48	.00	p < .05
Incontinence		64%	.66	.17	p < .01

Variable – Second Year Only	Increase	Decrease	High Range	Low Range	Significance
Anxiolytics	33%		.21	.14	p < .05
Hypnotics	67%		.15	.03	p < .001

*Definitions located in Appendix

In order to accurately interpret the information presented in the tables, certain factors must be addressed regarding specific variables. For example, while the changes in “ambulatory”, “chairbound”, and “contractures” appear to be very positive, at least a portion of noted transformations must be attributed to changes in the clientele. At the beginning of the project study period, Facility A was transitioning from a small skilled facility to an Alzheimer’s special care facility. Residents with medical diagnoses were permitted to remain at the home as the home was becoming a total Alzheimer’s facility. With the attrition of these people and the subsequent admission of persons with a primary diagnosis of Alzheimer’s, the “ambulatory” rate naturally increased and the “chairbound” and “contractures” rates decreased.

Infection rates (Figure 16), skin tears rates, (Figure 17), restraint usage rates, (Figure 18), and decubitus ulcer rates (Figure 19) reflect attentive care on the part of caregivers at

Figure 16

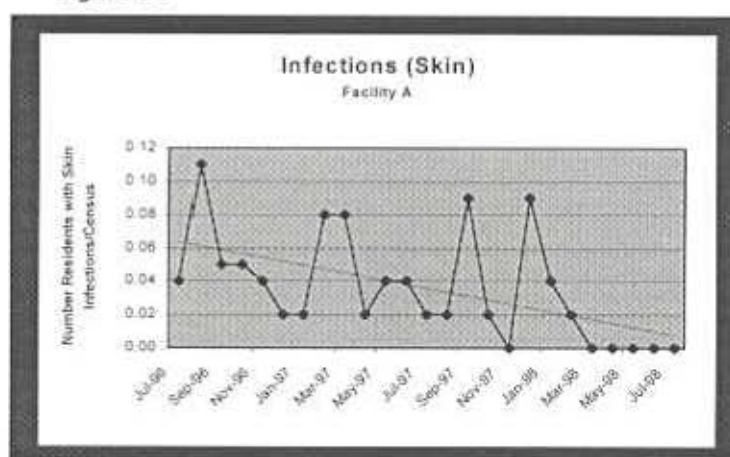
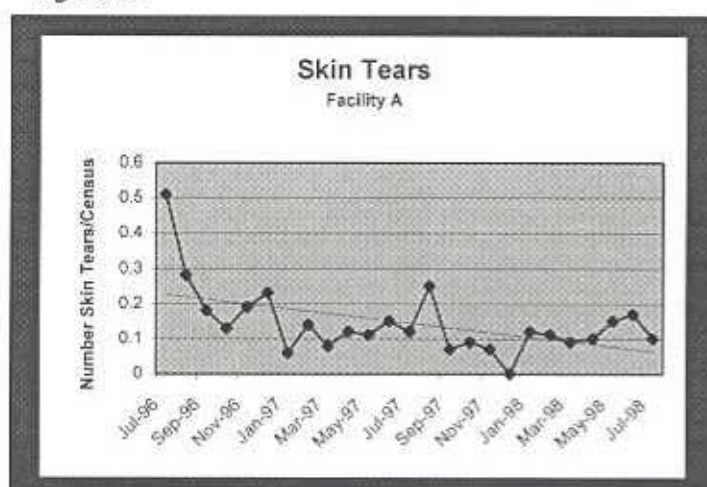


Figure 17



Facility A. Focus was placed on quality of care with concern for resident quality of life dictating approaches to care.

Figure 18

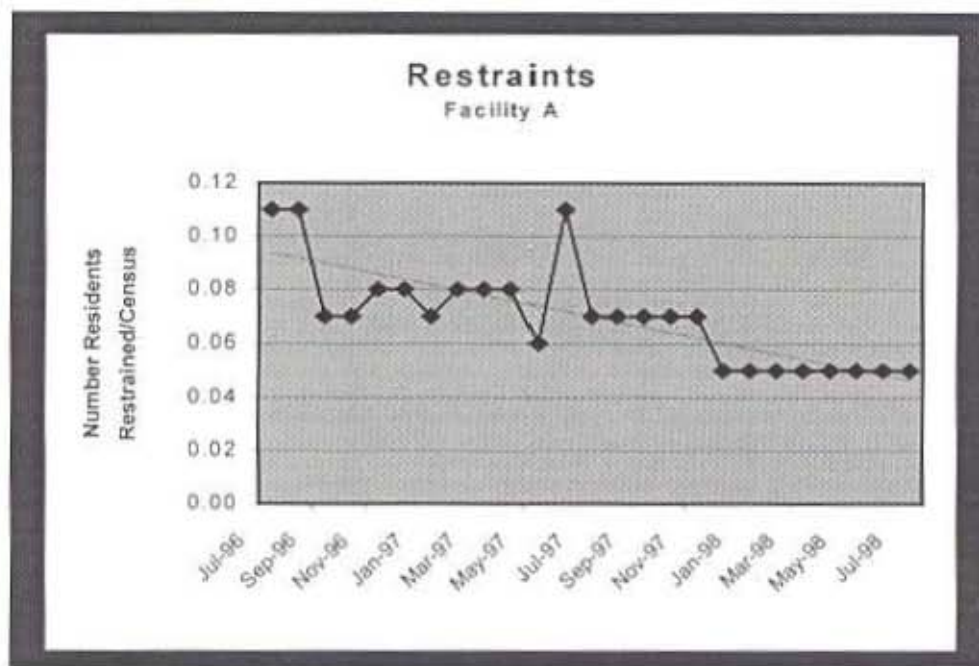


Figure 19

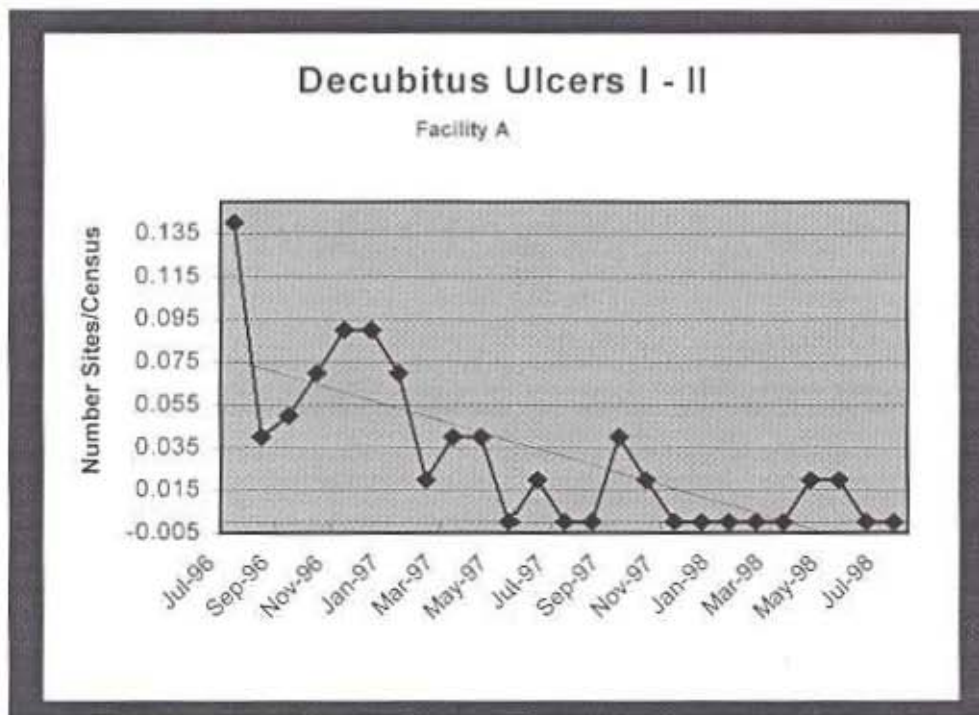
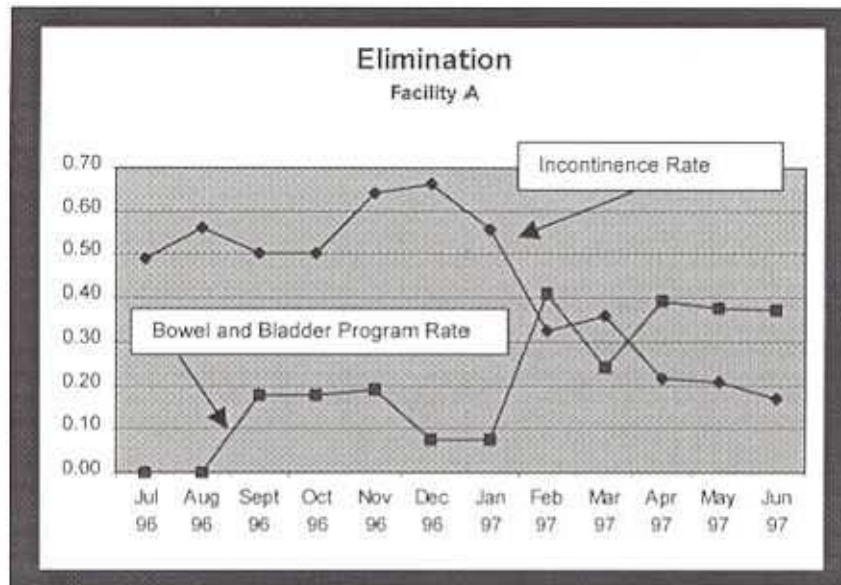


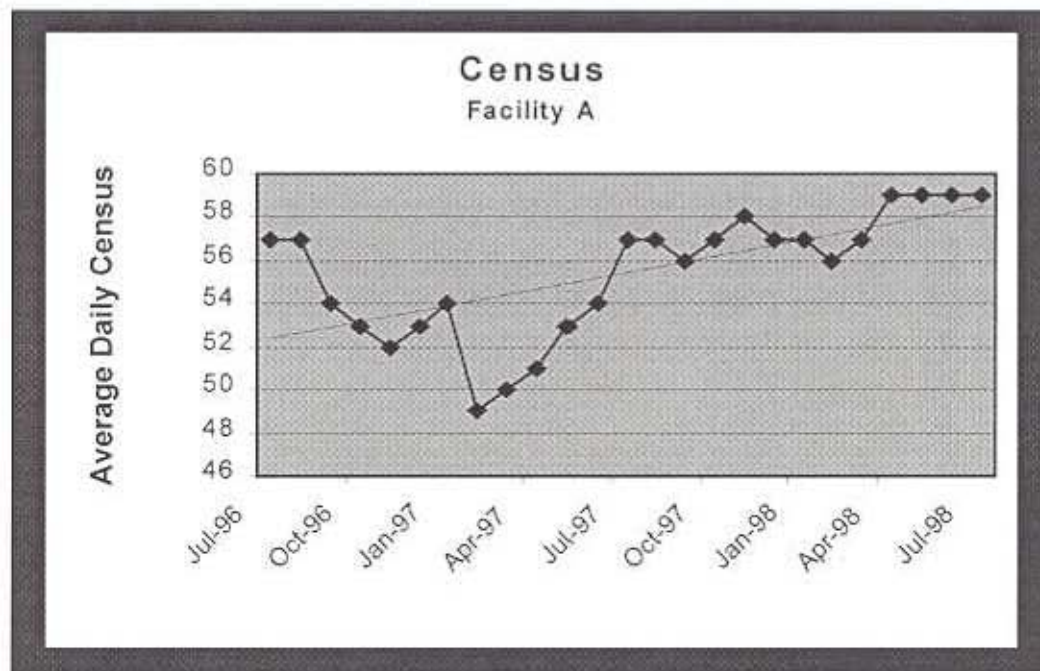
Figure 20



Comparison of the "incontinence" and "bowel and bladder program" rates indicates continued staff attentiveness. (Figure 20)

The continued upward growth in census suggests community awareness and response to the positive changes in resident life. (Figure 21)

Figure 21



FACILITY C

Table 5

Variable	Increase	Decrease	High Range	Low Range	Significance
Chairbound	Slight		.63	.68	$p < .05$
Restraints		58%	.49	.19	$p < .001$
Infections - UTI	50%		.11	.02	$p < .01$
Census	9%		223	201	

Variable – First Year Only	Increase	Decrease	High Range	Low Range	Significance
In-House Decubitus		57%	.07	.03	$p < .05$

Variable – Second Year Only	Increase	Decrease	High Range	Low Range	Significance
Antidepressants	45%		.38	.21	$p < .01$
Anxiolytics	40%		.12	.21	$p < .01$

Decreased restraint usage (Figure 23) is evident at Facility C. A sustained increase in census is shown over the two-year study period. (Figure 24)

Figure 23

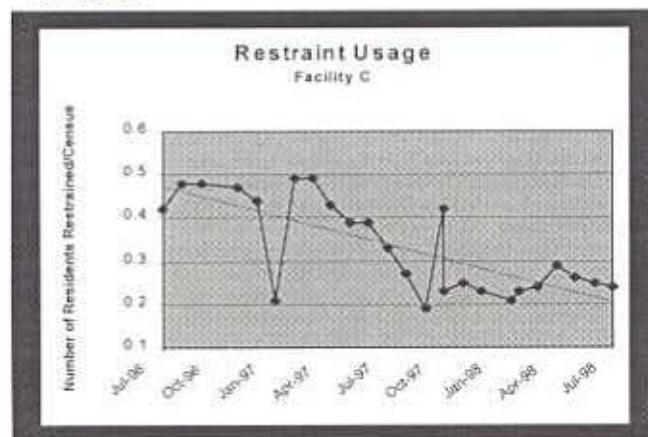
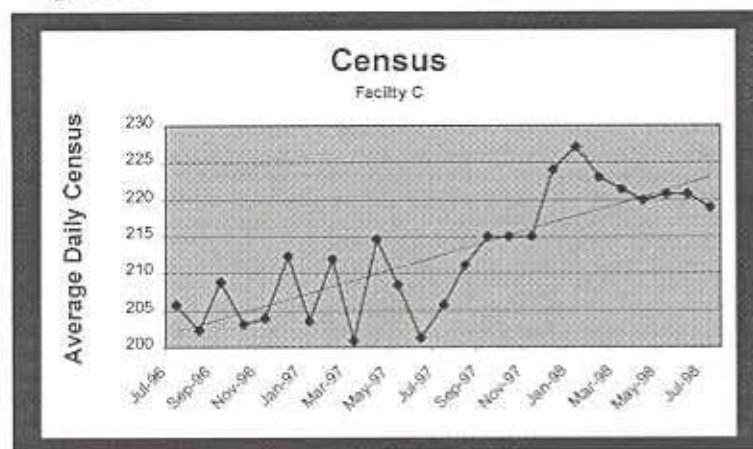


Figure 24



FACILITY D

Table 6

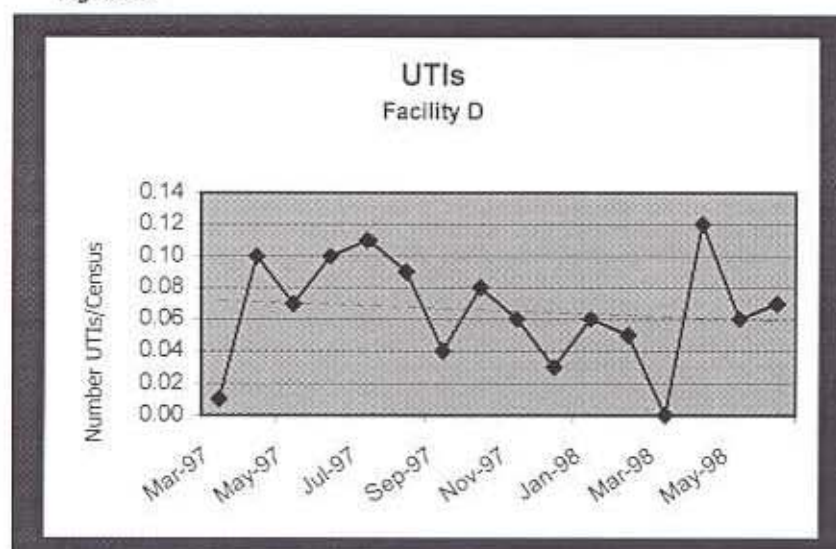
Variable	Increase	Decrease	High Range	Low Range	Significance
Chairbound	27%		.72	.5	$p < .01$

Variable – First Year Only	Increase	Decrease	High Range	Low Range	Significance
In-House Decubitus		90%	.1	.00	$p < .01$

Variable – Second Year Only	Increase	Decrease	High Range	Low Range	Significance
Infections - UTI		17%	.12	.00	$p < .001$

A 17 percent decrease in urinary tract infections (Figure 25) was realized at Facility D over the course of the last sixteen months of the study. The administrator of Facility D retired and data submission personnel changed with her retirement. There was, likely, a difference in the methodology used at the facility in reporting this particular variable. The decrease tabulated, therefore, reflects those changes that occurred after March 1997.

Figure 25



FACILITY E

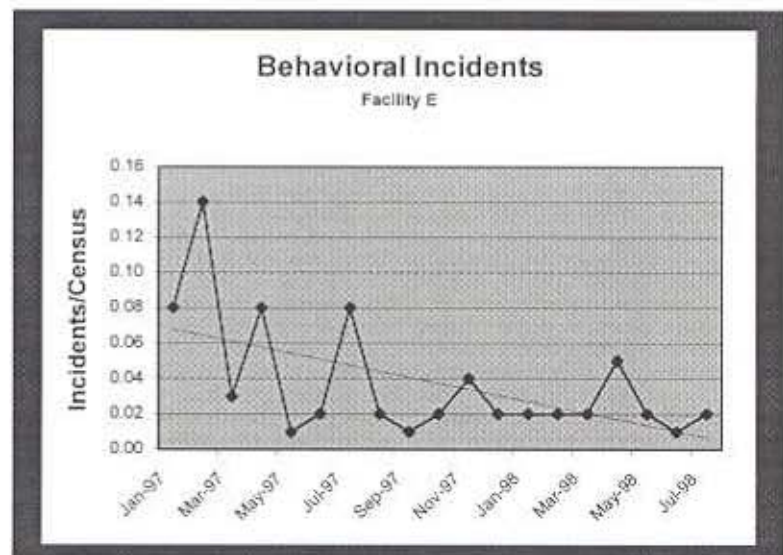
Table 7

Variable	Increase	Decrease	High Range	Low Range	Significance
Polypharmacy		35%	.63	.37	$p < .001$
Chairbound	38%		.51	.29	$p < .001$
Ambulatory		28%	.70	.49	$p < .001$
Restraints		56%	.24	.70	$p < .001$
Contractures		76%	.04	.00	$p < .01$
Stage I - II Ulcers		96%	.17	.00	$p < .001$
Stage III - IV		64%	.05	.00	$p < .05$
Resident Complaints		67%	.05	.00	$p < .01$
Behavioral Incidents		86%	.14	.01	$p < .05$
Incidents	15%		.86	.23	$p < .01$
Census	20%		107	84	

Ninety percent of the residents at Facility E are diagnosed with some form of dementia. The facility also maintains a special care unit for people with Alzheimer's disease and related dementias. As the environment of the facility became more of

a home to residents, the incidence of "resident-to-resident" altercations declined. (Figure 26) The administrator also reported that the alarm system is now infrequently triggered by disgruntled residents attempting to "go home."

Figure 26



Improvement was noted in the following clinical indicators: restraint usage (Figure 27), contractures (Figure 28), and decubitus ulcers (Figure 29).

Figure 27

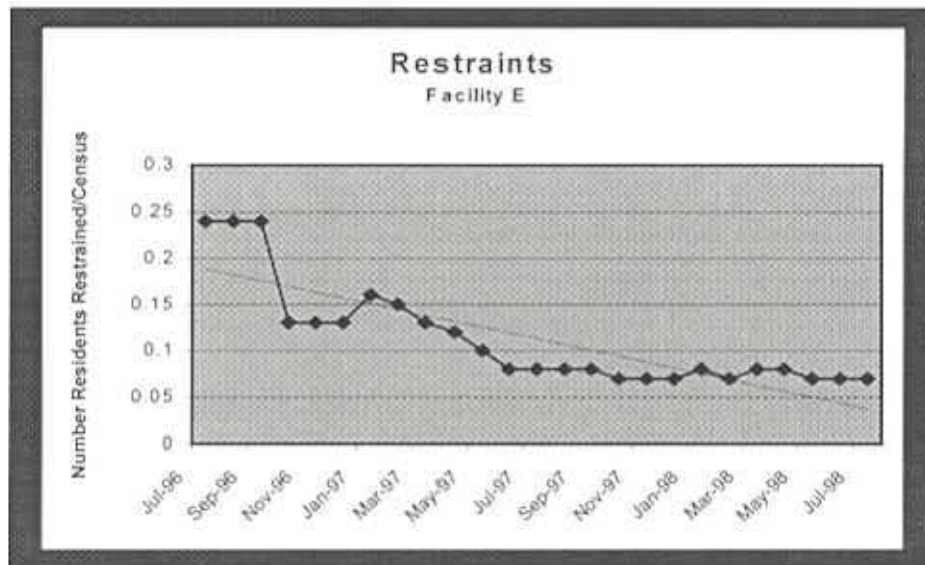


Figure 28

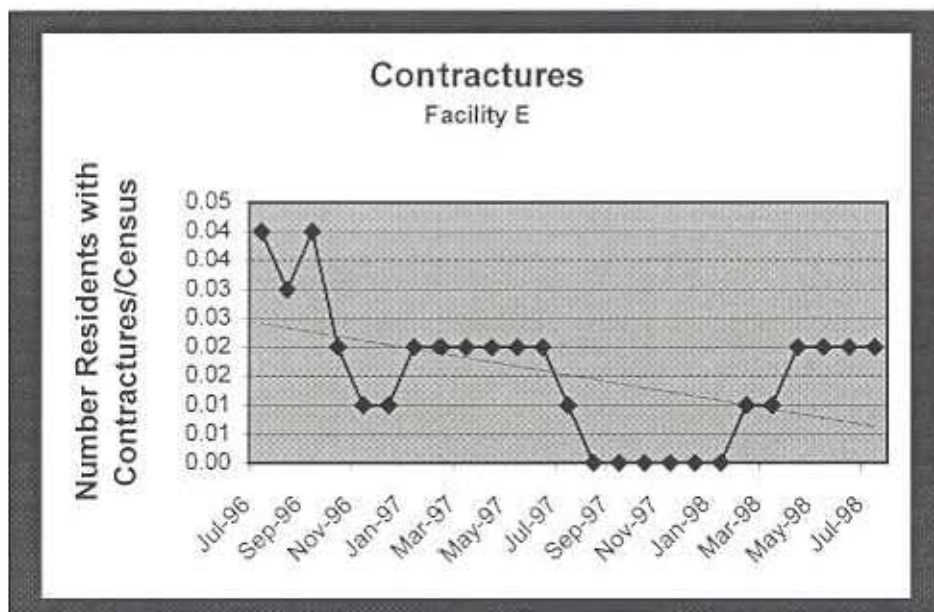
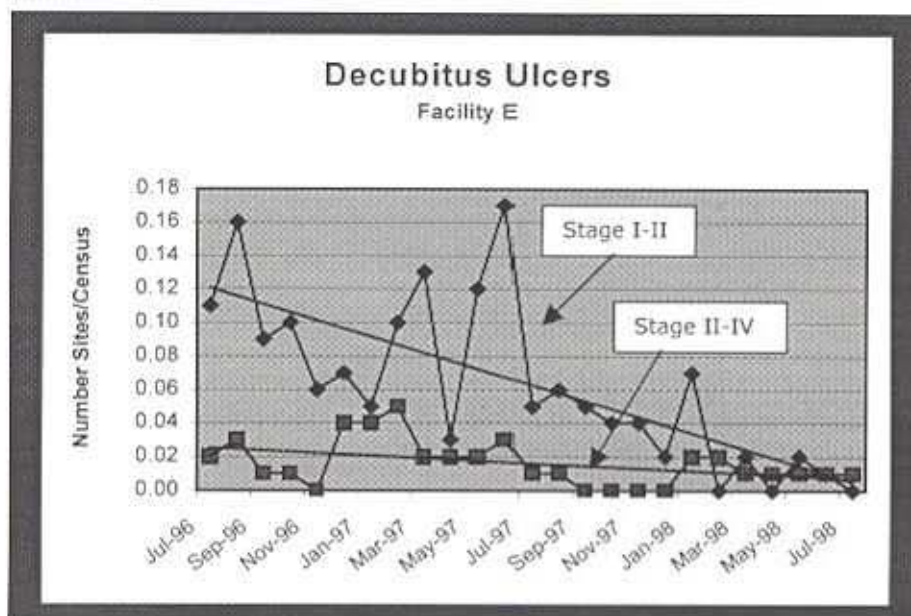
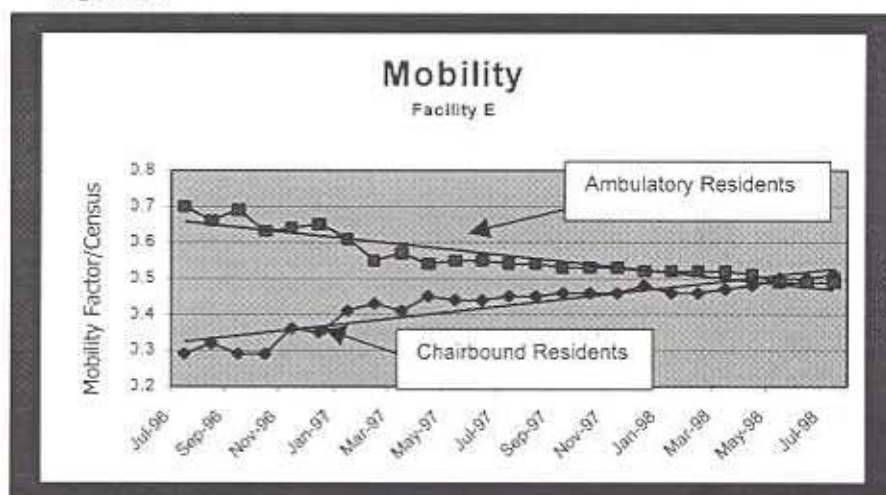


Figure 29



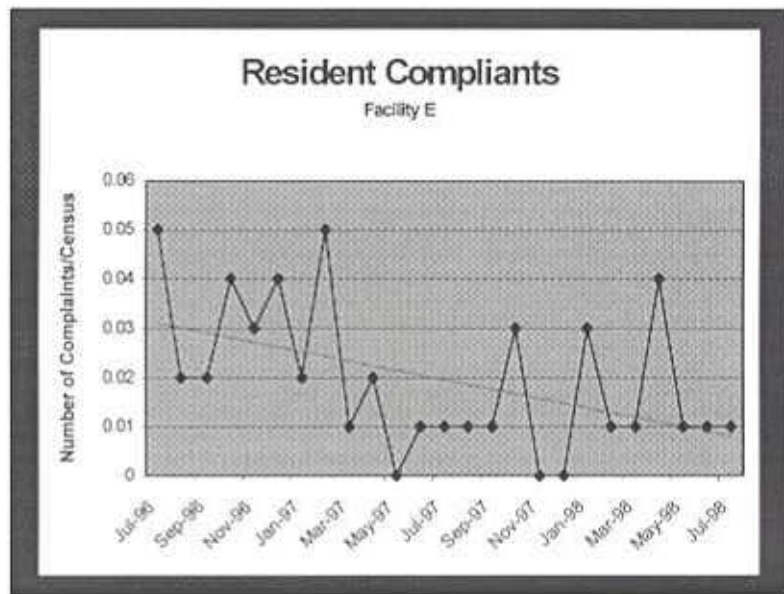
Factors pertaining to mobility issues include numbers of residents who are able to ambulate independently and numbers of residents who are dependent on wheelchairs. Due to the high percentage of residents with Alzheimer's or other dementias, these rates appear, at first glance, to be negative trends. The debilitating decline in physical abilities typical of this array of diseases provides a rationale for the direction of these lines. (Figure 30)

Figure 30



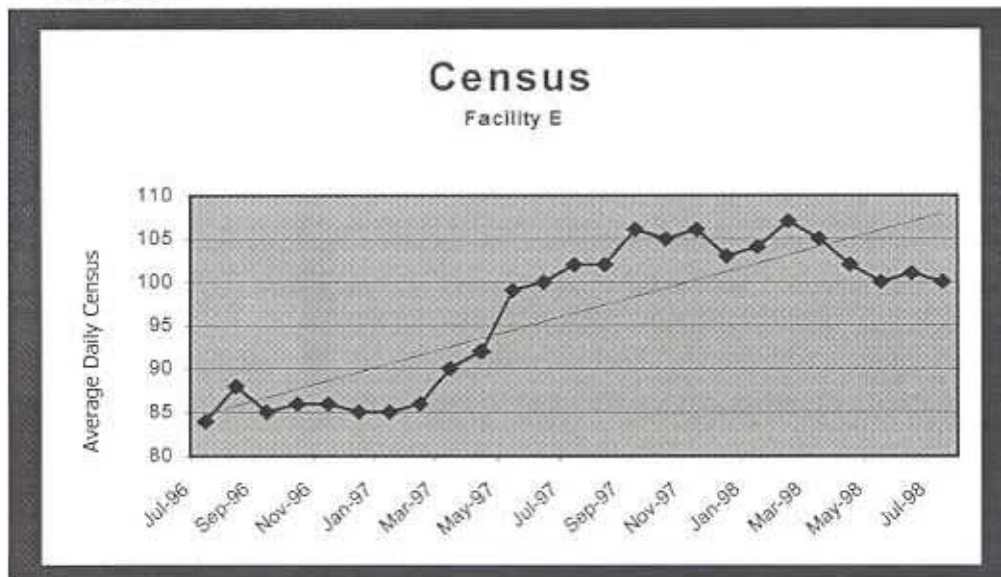
The continued downward shift in complaints registered by residents further indicates satisfaction with the changes brought about by the Eden Alternative™. (Figure 31)

Figure 31



The upward trend in census suggests community satisfaction with this particular home. (Figure 32) Even though the present owner completely updated and remodeled the physical plant in 1994, he was still plagued with overcoming years of a poor reputation in the community. As the Eden Alternative™ came to fruition, the census rate began to climb and has maintained a steady upward trend.

Figure 32



FACILITY F

Table 8

Variable	Increase	Decrease	High Range	Low Range	Significance
Bedfast		50%	.24	.09	$p < .001$
Ambulatory*		11%	.4	.25	$p < .01$
Infections - UTI*	65%		.1	.00	$p < .05$
Polypharmacy*	14%		.84	.61	$p < .001$
Census	5%		111	103	

The rate of bedfast residents at Facility F decreased by 50 percent. (Figure 33) Variables in Table 8 marked with an asterisk (*) are estimates of changes in rates. Two months of data are missing (out of twenty-four months) for

each of the three

variables. (Figure 34)

Even though the increase in UTIs appears quite dramatic, the actual rate is still quite low.

Figure 33

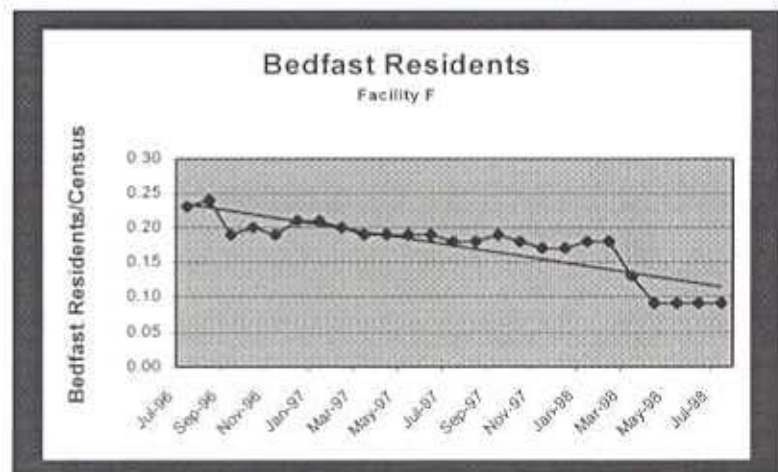
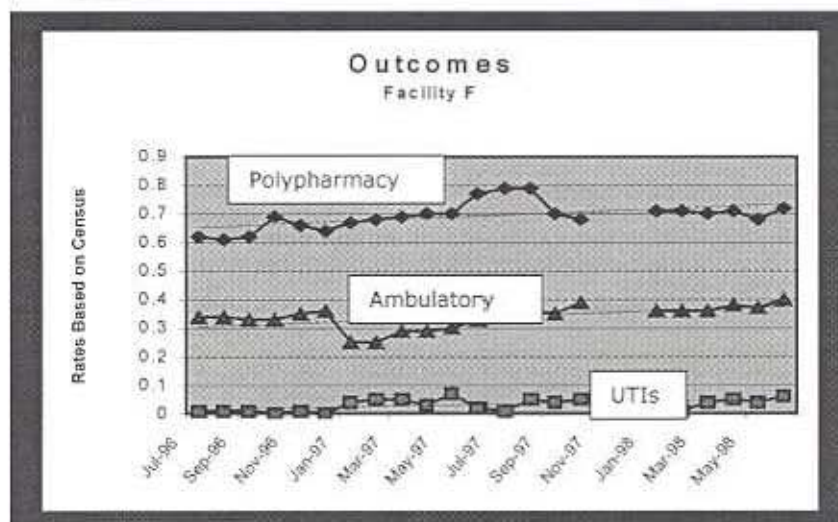


Figure 34



A tabular summary of significant results in the individual homes is presented below. (Table 9) These outcomes will be discussed in the section entitled "Discussion".

Year One

Table 9

Variable	Number of homes showing an increase (of 6 homes)	Number of homes showing a decrease (of 6 homes)
In-house Decubitus		3
Bowel/Bladder Program	1	
Incontinence		1

Year Two

Variable	Number of homes showing an increase (of 6 homes)	Number of homes showing a decrease (of 6 homes)
Hypnotics	2	
Anxiolytics	2	
Antidepressants	2	

Both Years

Variable	Number of homes showing an increase (of 6 homes)	Number of homes showing a decrease (of 6 homes)
Ambulatory	1	2
Bedfast		2
Behavioral Incidents		1
Census	5	
Chairbound	4	1
Contractures		2
Incidents	2	
Infections - UTI	2	2
Infections - Skin		1
Polypharmacy	2	1
Resident Complaints		1
Restraints		3
Skin Tears		1
Decubitus Ulcers		2

Control Facilities

The initial project designed by the Eden Alternative Task Force included monthly tracking at facilities of similar size and geographic location. The corporation which agreed to supply ongoing data, after months of delay in sending data, informed the Task Force that they would be unable to participate. Another large corporation agreed, very late in the project, to submit data on selected variables. Summary graphics on these variables are provided in Figures 35 – 38.

Figure 35



Figure 36



Figure 37

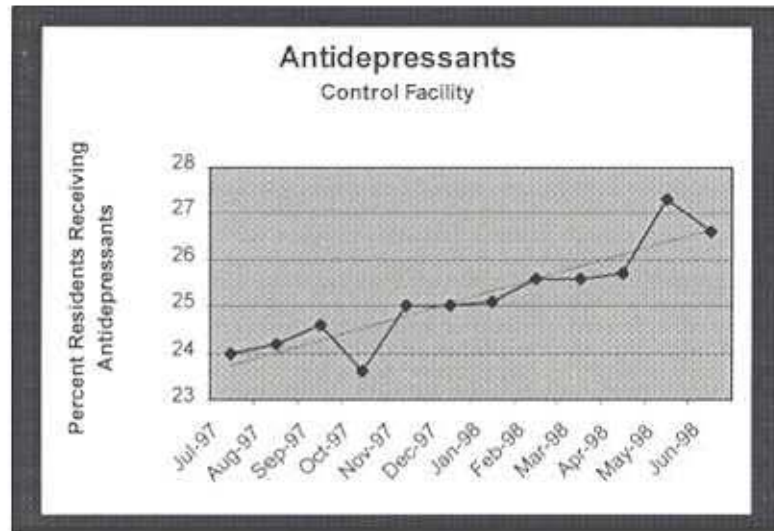
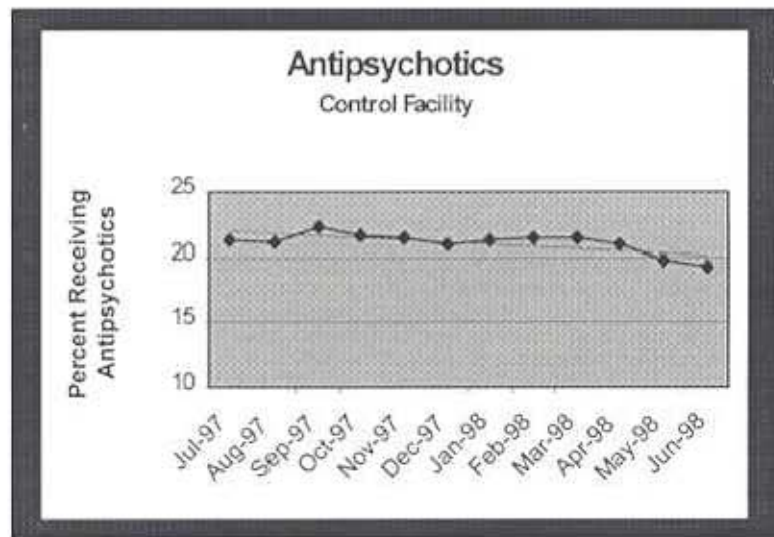


Figure 38



Data submitted by the corporation were presented in aggregate form. Each category included data from one facility. No demographic information was available on the facilities. Information for each variable could have come from one of over 100 nursing homes managed by this corporation, and it is unknown as to whether or not the submitted data applied to one facility or to four different facilities. As indicated in the graphs, data supplied covered a one-year time period.

A comparison of findings between the control facilities and the Eden facilities is summarized in Table 10. No significant changes were noted in the Eden Alternative™ homes regarding antipsychotic and antidepressant usage over the full course of the study.

Table 10

Variable	<i>Control Facility</i>	Eden Alt. Facility A	Eden Alt. Facility C	Eden Alt. Facility D	Eden Alt. Facility E	Cumulative Eden Homes
Facility Acquired Pressure Sores	23% Decrease	80% Decrease	57% Decrease	90% Decrease	80% Decrease	57% Decrease
Residents Requiring Restraints	29% Decrease	49% Decrease	58% Decrease		56% Decrease	

Employee Satisfaction Survey

Job Satisfaction surveys were mailed to all employees at the inception of the project (Survey 1) and after the closure of the data collection period (Survey 2). People who responded to Survey 2 may or may not have responded to Survey 1. The following tables provide an overview of response by department (Table 11), education (Table 12), and gender (Table 13).

Table 11

<i>Survey 1</i>		<i>Survey 2</i>	
<u>Job Classification</u>	<u>Percent</u>	<u>Job Classification</u>	<u>Percent</u>
Nursing Assistants	35.9	Nursing Assistants	31
Nurses	22.1	Nurses	31
Administrative Staff	14.5	Administrative Staff	4.8
Housekeeping/Maintenance	7.6	Housekeeping/Maintenance	19
Therapy/Rehab	6.2	Therapy/Rehab	0
Other	6.2	Other	0
Dietary Staff	4.8	Dietary Staff	14.3
Activities/Social Work	2.8	Activities/Social Work	0

Table 12

<i>Survey 1</i>		<i>Survey 2</i>	
<u>Education</u>	<u>Percent</u>	<u>Education</u>	<u>Percent</u>
High School or GED	31.1	High School or GED	30
Post Secondary	29.1	Post Secondary	35
College or 16 Years	20.5	College or 16 Years	12.5
Less than 12 years	15.9	Less than 12 years	20
Post Baccalaureate	3.3	Post Baccalaureate	2.5

Table 13

<i>Survey 1</i>		<i>Survey 2</i>	
<u>Gender</u>	<u>Percent</u>	<u>Gender</u>	<u>Percent</u>
Female	88.4	Female	90.7
Male	11.6	Male	9.3

Overall scores were equally divided between those that improved and those that declined. The largest increase (29%) in scores was in response to the statement "My work is performed within a social climate which encourages me to be a self-starter; I can be creative in completing my tasks and in working with my team." Improved scores also occurred with statements regarding pay and benefits (11%), perceived support of supervisors (7%), and opportunities to make suggestions for improving the services of the nursing home (9%).

Decreases in scores were noted in categories regarding the meaningfulness and purpose of one's work (11%) and the contribution of one's work to the overall philosophy and goals of the nursing home (9%). Decreased scores were also noted regarding the participation in decision-making, recognition by others as to the worth of one's work, and reward for work performance based on quality of care service. The changes in these scores ranged between 3 percent and 7 percent.

The scale used for this portion of the study allowed the respondents to choose among the following responses:

- Very positive
- Positive
- Fair/Neutral
- Unfavorable
- Very unfavorable

All mean scores for both pre- and post- surveys ranged between "very positive" to "neutral", with the following statements maintaining a high positive score:

"My work has meaning and purpose in the nursing home."

"My work is recognized by my residents as worthwhile."

"My work is recognized by families as worthwhile."

"My work contributes to the overall philosophy and goals of the nursing home."

"My working conditions are safe and secure; there is freedom from unnecessary harm and environmental dangers."

Statement responses that remained within a neutral range included:

"My work performance is rewarded based on standards of quality care service; I have an opportunity to get ahead in the organization on merit for a job well done."

"My work provides me with adequate pay and benefits."

Family Questionnaire

When a person becomes a resident of a nursing home, someone (usually a close relative) is designated as that person's "responsible party". The responsible party generally takes care of financial matters, provides needed clothing, visits on a regular basis, and assures that the resident's needs are seen to appropriately.

Each participating facility submitted confidential listings of the responsible parties for the residents. Questionnaires were mailed to these individuals at the beginning and end of the study period.

As a whole, scores showed that satisfaction increased over the two-year period. The survey instrument was structured to include questions in four categories: (1) satisfaction with care, (2) satisfaction with staff, (3) changes in activities, habitat and environment (plants, animals, children), and (4) perception of less institutional and more homelike surroundings (homeness).

Mean scores, both pre- and post-surveys, were well into the good/excellent range, with no scores falling into the neutral range. The categories that improved the most involved satisfaction with staff,

environmental changes, and homeness. Specific statements with percentage changes in scores are presented in Table 14.

Table 14

Questionnaire Statement	Percent Increase
The aides work in the nursing home because they enjoy working with the elderly.	9%
The aides are well trained and know what they are doing.	7%
People from the community are involved in the nursing home many times every day.	12%
I frequently observe residents playing with or caring for animals.	17%
I see children in the nursing home frequently.	23%
The surroundings are homelike.	13%
Residents' rooms look much like a room in someone's home.	14%

Respondent scores decreased (8%) in perceptions of cleanliness in response to the following statement: "The nursing home is clean." The number of visits made to the resident by the respondents increased from a mean of 1.93 times per week to a mean of 2.17 times per week.

Anecdotal Evidence

After all the data have been collected, all the numbers counted, and all the analyses computed, there remains the fact that real human lives are involved. Some things just cannot be quantified. A radiant smile on the face of an elderly woman who lights up in the presence of a cat cannot be counted. The increase in the presence of laughter in the hallways cannot be counted. The witnessing of two hearts touching as an elder and a child share jellybeans cannot be counted. It is this humanness, this intangible feeling that one senses in a true Eden Alternative™ home, that really matters. Thus, the stories about the individuals whose lives have meaning, individuals who have reasons to get up in the morning – that is the true value of this study. The language of community is shared through stories. The stories that follow impart tiny pieces of how that *community* is returned to the

people in the stories, the staff and residents who live and work in these nursing homes. Real names are not used.

Sue Ann, a quiet 82 year old who has not been able to communicate intelligibly for a number of years, was sitting in the lobby when Sam (the home's little dog) ran into the lobby and started entertaining everyone sitting there. He raced around chasing his tail, jumped onto the sofa, leaped across a chair and had everyone laughing so hard tears were flowing. The harder they laughed, the wilder Sam's antics grew until he just stopped in mid-leap and plopped himself in front of Sue Ann's wheelchair. Sue Ann, grinning widely, pointed at Sam as if to say, "Look, he came to sit by me!" Sue Ann's son, while later telling the nurses how much his mother enjoyed Sam, tearfully shared a very moving moment with them. Sue Ann had actually verbalized to her son, "I've always loved you, but I may not show it."

Joan wandered continuously about the facility. She looked sad and lost. Frequently she would break into tears for no discernible reason. A nurse aide discovered, one day, that Joan's face burst into a beaming smile whenever she saw a kitten. Thereafter, anytime Joan started crying, one could see the nurse aides searching through the halls for a kitten for Joan to hold, and Joan required fewer and fewer antidepressants.



Lillian was one of those residents that drive staff to distraction. She complained constantly to anyone who walked in the building. She accused staff of serving her poisoned food. She reported bogus complaints to the state regulatory agency, which necessitated a visit to the home by the officials. She was a very unhappy lady. After the Eden Alternative™ became well established in the home and Lillian knew that her words and feelings were important to the staff, she was elected president of the resident council and became the self-proclaimed "greeter" to visitors. She gave many tours to visitors of all ages and was photographed for a national publication in her "home".

Mary had been living in the Alzheimer's unit for many months and, as reported by her family, had talked only "nonsense" for several years. One afternoon, the local fifth grade class made its weekly visit to the home. On that particular day, the group was preparing the garden for spring planting. Mary had had much experience gardening before her illness and gravitated toward the children, who seemed somewhat at a loss as to exactly how to work in the garden.



Mary picked up a hoe and handed another hoe to the child nearest her, while other children found additional hoes to use. As Mary began working, she clearly articulated to the children how to turn the soil. The children were openly attentive and very interested in learning this new skill as they listened intently to Mary's instructions.

Birds in individual resident rooms have made a tremendous difference in residents' lives. Some comments overheard by residents about their birds follow. "I just don't know what I did before I had my bird." "This morning I put my cheek up to my bird, and he gave me a kiss." "I have to walk up to the station; my bird is out of feed." (From a resident who previously remained in his room)

Rick, a live-in parrot, seemed to squawk extra long and loud when the residents were going to their morning exercise class. Just to see what would happen, Rick was allowed out of his cage one morning and was taken into the exercise room. He looked around, found a perch, quieted down, and began flapping his wings as the residents raised their arms in rhythm with the music. Rick became a regular at the exercise class and, strangely enough, more and more residents became interested in exercising!

One particular home, which is located in a small rural town, has partnered with the local Wal-Mart in keeping the residents supplied with bedding plants. Wal-Mart initially donated 14 flats of bedding plants one

The words of one 95 year old resident:

"You tell them that this is a dang good place! There is never a dull moment around here with the animals and the children. I'd be six feet under if it wasn't for this home!"

spring. Families, staff, and residents together planted the gardens. According to the D.O.N., "everyone was kept busy all summer." The residents had a grand time picking flowers every day. The project has continued to grow. Wal-Mart recently donated 42 flats of plants and has now donated plants to other nursing homes in the same town, thus impacting the whole community.

John loves children. He visibly brightened each day that the preschoolers came to be with him. As he approached his 100th birthday, he had a special request. He asked for a birthday party with the

children. They had a grand time complete with a piñata, cake, and games.

Perhaps the most poignant story to be told has been repeated at ALL the homes involved in the study, the story of the cats. The cats in these Eden Alternative™ homes somehow know which residents are terminal. They take up a deathwatch during the last two – three days of a person's life. In one home, the "Angel Kitty" will stay with a dying resident and will not leave the room until the person has passed away. In another home, the cats take turns staying with the person. When one cat leaves, another is waiting to enter the room, and several animals participate in this vigil. Susanne, dying of cancer and never fond of animals, remained in her bed during her last days. She remarked to the staff, "I am so comfortable. I want you all to know how comforting it is to me to have this cat stay with me at this time in my life."



Remarkable stories about employee responses to the Eden Alternative™ and changes in their lives further enrich the model. One such account involves a nursing assistant who, after several years as an

exceptional caregiver, began a pattern of missing work on her scheduled weekends. Barbara, a single mom, was attempting to hide from her problems through partying and drinking binges that resulted in severe hangovers. Not only was this detrimental for her residents, but it placed hardships on her coworkers. After an especially stressful weekend, Barbara's work team gathered and, after considerable debate, voted her "off the team". Barbara voluntarily resigned. Several months later, Barbara approached the administrator and asked to be reinstated on her team. The administrator informed Barbara that she would have to take her request to the work team. Barbara met with the team and explained that she had extricated herself from an abusive relationship, had received professional help with her drinking problem, and believed that she "had her life together." The team members agreed to allow Barbara a trial period on the team. That trial period is now a year in the past, and Barbara is currently a stellar team member and a shining role model that new employees look up to. As one administrator in the Texas study stated, "the Eden Alternative is really about growing people. I have seen incredible growth with some of my staff members."

An entire book could be written about the response of staff and elders to changes brought about by the Eden Alternative™. Issues will continue to surface within communities where old ways are entrenched and innovative leaders initiate change. Some residents, families, or staff members may not like animals, children, or plants. Some people will resist and resent



changes in management styles. Not all residents will appreciate or be overtly influenced by the Eden Alternative™. However, some lives will be changed profoundly. For these dear ones, whether staff, visitors, or residents, the meaning added to their lives has no measure. Life becomes, once again, worth living.

DISCUSSION

The original research questions are grouped by topic and will be addressed from that perspective:

- 1) Are Dr. Thomas' findings repeated?

Medication Usage

Dr. Thomas study revealed a 34 reduction in the average number of prescriptions per month (polypharmacy). Of the homes participating in the Texas study, only one home (Facility E) reported data supporting a significant decrease in polypharmacy, a change of 35 percent. Two Texas homes actually reported an increase in polypharmacy rates: Facility B (12%) and Facility F (14%). When computing polypharmacy rates on a cumulative basis for all participating homes in Texas, there was no significant difference.

Dr. Thomas looked at psychotropic drug use from a perspective of percentages of residents using one, two, or three psychotropic medications. He showed a 19 percent decrease in usage of one psychotropic and an 83 percent decrease in usage of two psychotropics. A 33 percent reduction in p.r.n. anxiolytic and antidepressant medications was seen during the first year of the Texas study. Increases in anxiolytics, antidepressants, and hypnotics were seen in two Texas homes.

Several factors must be considered when viewing these statistics. Dr. Thomas served as the medical director of Chase Memorial. His holistic philosophy, his daily presence in the home, and his *knowing* the residents on a more intimate level than most nursing home practitioners, undoubtedly, had an effect on the medications prescribed. Dr. Thomas was the one writing the medication orders, and he carefully monitored resident progress and reaction. The homes

in the Texas study had many physicians involved in caring for the residents. Some of these physicians were supportive of the Eden Alternative™ environment and philosophy. Others were not. A very small number of Texas physicians were as involved as Dr. Thomas in the daily *caring* for their residents.

The increases noted in the use of psychotropic medications in the Texas homes must not be interpreted as necessarily a negative outcome. In one home, the use of these types of medications increased because residents were referred to a psychiatrist who began visiting routinely and began prescribing appropriate and well monitored medications.

Infection Rates

Dr. Thomas found an overall decrease of 50 percent in infection rates that included upper respiratory infections (URI), urinary tract infections (UTI), and other infections. In Texas, decreases were recognized in UTIs at two facilities: Facility B (62%) and Facility D (14%). Increases were noted at Facility C (50%) and Facility F (65%). Cumulative findings of the Texas homes revealed no significant change in infection rates.

Mortality Rates

When calculating mortality rates, Dr. Thomas reported 15 percent fewer deaths at Chase Memorial than at the control facility. There were no significant differences in mortality rates in the Texas Project at either the cumulative or individual level.

Nurse Aide Turnover

Dr. Thomas reported a 26 percent reduction in nurse aide turnover over the three years of his study. The cumulative turnover rate of certified nursing assistants (CNAs) for the homes participating in the Texas Project did not decrease. The project turnover rate for

the first year (July 1996 through June 1997) was 95 percent; the second year (July 1997 – June 1998), 111 percent. These figures are well below the state averages for the corresponding time period. Analyses of turnover rates within the individual homes yielded patterns consistent with the overall data. No specific trends were identifiable.

2) Are there changes in other health indicators (variables which were not included in Dr. Thomas's original study)?

Analyses of the Texas homes revealed more significant changes at the individual facility level than at the cumulative level of all participating homes. Table 2 (p. 29) provides an overview of findings, while Tables 3 – 8 give specifics regarding each home.

Incident Rates

Incident rates increased in two of the Texas homes, Facility A and Facility E. The increase at Facility A (53%) paralleled a 49 percent reduction in restraints and a 33 percent increase in ambulation. As efforts were made to reduce restraints at Facility A, a total Alzheimer's home, residents sometimes would slide out of their wheelchairs, thereby accounting for the increase in the rate of documented incidents. A simple solution to remedy this problem has now been put in place.

Behavioral incidents at Facility E decreased by 86 percent. This is notable in that Facility E houses a high percentage (90%) of people diagnosed with dementias and Alzheimer's Disease. Many times, these people act out in antagonistic ways towards other individuals. The environmental changes and resident-focused decision-making creates a calmer milieu in which residents no longer feel the need to express themselves through outward aggression.

Behavioral incidents decreased overall by 60 percent in the cumulative analysis, which included all the homes in the project. This

trend, alone, has the capacity to impact the quality of life for nursing home residents. The presence of aggressive behavior creates a constant state of fear in the people who are on the receiving end of the belligerence.

Pressure Ulcers

Pressure ulcer rates maintained a downward trend. Cumulative rates for in-house Stage I – II pressure sores were decreased by 57 percent. Rates of Stage III – IV pressure ulcers remained stable at a very low rate of 1.5 percent. The rate of decubitus ulcers at Facility A decreased by 80 percent. Facility E realized a 96 percent decrease in Stage I – II decubitus ulcers and a 64 percent decrease in Stage III – IV ulcers. This trend is related to staff who are attentive to resident needs; staff members who conscientiously turn residents, nourish them properly, and keep incontinent residents clean and dry.

Mobility

The cumulative rate for bedfast residents decreased by 25 percent. Individual changes were noted at Facility B (31% decrease) and Facility F (50% decrease).

The rate of ambulatory residents increased at Facility A (33%) and decreased at Facility E (28%) and Facility F (11%). At the beginning of the project study period, Facility A was transitioning from a small skilled facility to an Alzheimer's special care facility. Residents with medical diagnoses were permitted to remain at the home, as it was becoming a total Alzheimer's facility. With the attrition of these people and the subsequent admission of persons with a mid-stage Alzheimer's Disease, the "ambulatory" rate naturally increased and the "chairbound" and "contractures" rates decreased. Facility E had a very high percentage (90% at the time of the study) of residents diagnosed with dementia and has a special care unit for Alzheimer's residents.

Alzheimer's Disease, by definition, causes a decline in physical abilities such as walking, talking, and swallowing. A decline in ambulatory residents would, therefore, be anticipated in this type of setting.

Increases in the rate of chairbound residents occurred at Facilities B, C, D, and E. A decrease of 89 percent in chairbound residents took place at Facility A. Again, the change in clientele accounts for the decrease at Facility A, and the deteriorating nature of chronic illnesses at the remaining facilities account for the increases.

The rates at which restraints were used declined at Facilities A (49%), C (58%), and E (56%). Facility A had a mean rate of restraint usage of 7 percent, and Facility E had a mean rate of 11.2 percent over the course of the study. The national average for this time period was 20 percent, and the H.C.F.A. Region 6 (includes Texas, Louisiana, Arkansas, Oklahoma, Arkansas, and New Mexico) average was 15.8 percent. Overall use of restraints decreased by 18 percent. Public awareness has targeted the issue of nursing home restraint use over the past decade. The industry, as a whole, has been working to reduce restraint use throughout the state and country. This fact, coupled with increased staff attentiveness with the Eden Alternative™ philosophy, contributed to the changes noted.

The incidence of contractures decreased significantly at Facility A (65%), D (80%), and E (76%). This trend, again, reflects an attentive staff, a staff that makes certain that residents are receiving range-of-motion exercise, rehabilitation therapy, and periodic repositioning.

3) Are there changes in staff indicators?

A major tenet of the Eden Alternative™ is the creation of systems in which employees have greater control over their own work routines and their work schedules. Decisions are moved as close to the

residents as possible. Thus, analysis of variables specific to staff issues is indicated.

Absenteeism

A decrease of 48 percent in overall absenteeism (all employees) has immeasurable implications. The first and foremost factor influences resident quality of life. Having the same caregivers present on a daily basis assures the residents that the same individuals will be caring for them, resulting in a less confusing and more stable environment. Overtime costs are reduced for the employer, and there is less need for the use of expensive agency staff. Some facilities, in order to provide adequate personnel to care for residents, rely on outside agencies. While persons employed by the agencies may be capable workers, they have no commitment to either a specific nursing home or the residents who reside there. They work according to their own desires rather than the needs of the residents. They do not know the residents well, because they work sporadically and, sometimes, infrequently. Fewer absent staff, thus, lessens the use of agency personnel.

Staff Complaints

A conscientious nursing home leadership keeps records of complaints submitted by employees. Analysis of staff complaints yielded no significant differences throughout the study period. Administrators indicated that, as teams developed, employees became comfortable expressing and resolving concerns in the confines of team meetings.

Employee Injuries

The issue of employee injuries is important to both employers and employees. An overall decrease of 11 percent in the number of injured employees provides continuity of care to the residents and

decreases costs involved in time missed as a result of accidents and costs incurred from medical expenses.

Self-Directed Teams and Self-Scheduling

The numbers of nurses and certified nursing assistants (CNAs) who took responsibility for creating and maintaining their own work schedules steadily increased over the two-year period, and the number of self-directed work teams also maintained a steady upward trend. Use of this system which empowers employees to take control of their own assignments and work-schedules leads to a vastly improved morale and work ethic. This management style follows the Eden Alternative™ philosophy that defines caring as "helping another to grow". Management helps staff grow, and staff members help each other grow. *Everyone* helps the residents grow. This concept is the very heart of the Eden Alternative™.

4) Are there changes in staff viewpoints about quality of work life?

The results of the staff survey indicated that employees (primarily CNAs) believed that changes brought about with the Eden Alternative™ management style encouraged them to be self-starters and allowed for creativity in completing tasks and in working with teams. Workers also perceived that supervisors supported them. Previous studies (Ransom and Fox, 1994) revealed that lack of support by supervisory staff has been a big issue among nursing home workers. Direct supervision is moved, more and more, to the peer group. Employees welcomed opportunities to make suggestions for improving the services of the nursing home.

Although scores pertaining to pay and benefits showed improvement over the two years, the scores remained in a neutral range rather than a positive range. This accentuates the fact that, in

Texas, nursing home employees who do incredibly hard and extremely valuable work still receive subsistence pay.

5) Are there changes in perception about resident quality of life?

Changes in perceptions about resident quality of life included improved satisfaction with staff, improved community involvement, increased numbers of plants and animals, and more home-like surroundings. Family participation and community commitment to those working and residing in nursing homes have far-reaching effects on everyone involved. The home becomes an important and contributing part of the community instead of "that place" that no one really likes to think about. Meaning is returned to the lives of the residents while people of all ages add meaning to their own lives as they give their time and talents to the staff and residents.

Conclusion

After working with a variety of people in six nursing homes over the two-year study period, one fact glaringly surfaces. The most crucial Eden Alternative™ Principle, Principle 10, states that "Leadership is the lifeblood of the Edenizing process, and for it there is no substitute." All other Eden Alternative™ Principles hinge on Principle 10. Strong, committed, creative leadership is absolutely required for the Eden Alternative™ to grow and flourish.

Six nursing homes participated in this study. At the conclusion of the study, only two homes, Facility A and Facility E, still had the same administrators that were present at the beginning of the study. At the time of this writing, ALL homes have a different Director of Nursing. Facility A and Facility E both show more progress in improved outcomes than any of the other homes. (See Tables 3 and 7) Changes in administration in the other homes correlated with negative findings and inconsistencies in data collection. Due to these

discrepancies, in specific homes, analysis of some variables was not possible.

The leaders in Facility A and Facility E, reported (anecdotally) that frequent reminders and modeling were required to enable employees to focus on and keep residents at the center of decision-making (Principle 8). Through continued interweaving of these two Principles on a daily basis, all other Principles fall, naturally, into place.

RECOMMENDATIONS

The Texas Eden Alternative™ Research Project was conducted to extend previous research and to determine if prior findings could be replicated on a larger scale. Several issues need to be addressed regarding this study and possible future studies.

Close contact with these facilities after the closure of the data collection period accentuates a major teaching of The Eden Alternative™, the belief that this is a process, and it does take time. Administrators have reported that continued monitoring of specific variables has demonstrated changes that were not evident over a two-year data collection period. All Eden Alternative™ training sessions emphasize that training takes time, and changes should be brought into play only after adequate training. A longer study period, therefore, is indicated. A study conducted over four or even five years would be appropriate.

The original study design included control facilities of similar demographic and geographic characteristics. After the corporation that had promised data refused to supply any information, the focus shifted to a self-comparison model. Homes that participated in the project did not have information systems in place at the inception of the study. Therefore, no baselines were established prior to the implementation of Eden Alternative™ concepts.

The data collection tools were designed so that a minimum of time would be required of those collecting the data. At the beginning of the second year, one tool was altered to provide more useful and less time-consuming information in the category of medication usage. Still, information submission was often very late in arriving at the

Institute office. Some data were not received until a year after the closure of the data collection period.

Use of aggregate data from the Minimum Data Set (MDS) would alleviate the situations described above. The MDS is a document required by HCFA that is periodically submitted on all nursing home residents. It is uniform and comprehensive. Information gathered on the MDS forms is submitted electronically to central agencies throughout the country. Baselines could be easily established; individuals in the facilities would not be asked to do yet more paperwork; and data from control facilities would be more easily accessible.

The Eden Alternative™ teaches that the medical model neglects the spiritual needs of residents. Yet, the data that is collected and analyzed views medical outcomes. Survey tools that measure changes in loneliness, helplessness, and boredom (LHB) would address these spiritual issues. An effective LHB survey coupled with studies of medical outcomes might produce some very useful answers; answers to questions about ways to provide more humane living circumstances for our infirm elders.

REFERENCES

- Adil, Janeen R. (1994). Accessible gardening for people with physical disabilities. Woodbine House. Bethesda, Maryland.
- Banaszak-Holl, J. & Hines, M.A. (1996). Factors associated with nursing home staff turnover. The Gerontologist. 36(4), 512-517.
- Barba, Beth (1995). A critical review of research on the human companion animal relationship: 1988 to 1993. ANTHROZOOS, VII(1). 9 – 15.
- Baun, M.M. et al. (1984). Physiological effects of human/companion animal bonding. Nursing Research, 84: 126-9.
- Bea, Javon R. (1999). Getting excellent results. Health Forum Journal. 42(6), 40-41.
- Beckham, Renee. (1998). Self-directed work teams. The wave of the future? Hospital Materiel Management Quarterly. 20(1), 48-60.
- Bennet Clifford. (1980) Nursing home life: what it is and what it could be. New York: The Tiresias Press, Inc.
- Cervantes, Ellen, Heid-Grubman, Jeanne, & Schuerman, Charlotte K. (1995) The paraprofessional in home health and long term care. Baltimore: Health Professions Press, Inc.
- Chamberlain, Valerie M., Fetterman, Elsie, Maher, Margaret. (1994) Innovation in elder and child care: an intergenerational experience. Educational Gerontology, 19, 193-204.
- Cooper, James W. (1993) Drugs that cause falls in the nursing home. Nursing Homes, 42(4), 45-47.
- Corson, Samuel A. and Corson, Elizabeth O'Leary. (1980) Ethology and nonverbal communication in mental health: an interdisciplinary biopsychosocial exploration. New York: Pergamon Press.
- Corson, Samuel A. and Corson, Elizabeth O'Leary. (1981) "Companion animals as bonding catalysts in geriatric institutions." In

interrelations between people and pets. Edited by B. Fogle.
Springfield, Illinois: Charles C. Thomas. 146-174.

Cottringer, William. (1999). Managing fairness. Executive Excellence. 16(10). 13.

Cusack, Odean, and Smith, Elaine. (1984) Pets and the elderly.
New York: Haworth Press.

Drew, Judith C. and Brooke, Virginia. (1999) Changing a legacy:
the Eden Alternative™ nursing home. Annals of Long-Term Care. (7)3,
115-121.

Dugan, Elizabeth, and Kivett, Vira R. (1994) The importance of
emotional and social isolation to loneliness among very old rural
adults. The Gerontologist, 34(3), 340 - 46.

Feil, Naomi. (1993). The validation breakthrough: Simple
techniques for communicating with people with "Alzheimer's-type
dementia". Baltimore: Health Professions Press.

Feil, Naomi. (1993). Validation the Feil method: How to help
disoriented old-old. Cleveland, Ohio: Edward Feil Productions.

Friedmann, E., Katcher, A.H., Lynch, J.J. and Thomas, S.A.
(1980). Animal companions and one-year survival of patients after
discharge from a coronary care unit. Public Health Reports, 95: 307-
312.

Goffman, Erving. (1962). Asylums: essays on the social situation
of mental patients and other inmates. Aldine Publishing Company.

Haas, Karen L. (1996) The therapeutic qualities of plants.
Journal of Therapeutic Horticulture. (8) 61-67.

Haggard, Ann (1985). A patient's best friend. American Journal
of Nursing. December. 1375-1376.

Hamilton, Gillian, Brown, Sheri, Alonzo, Tena, Glover, Mary,
Mersereau, Yvonne, and Willson, Pamela. (1998). Building community
for the long term: an intergenerational commitment. The
Gerontologist, 39(2). 235-238.

Hendy, H. M. (1987). Effects of pet and/or people visits on nursing home residents. International Journal of Aging and Human Development. 25(4), 279-291.

Hoffman, Rosemary G. (1991). Companion animals: a therapeutic measure for elderly patients. Journal of Gerontological Social Work, 18(1/2), 195-205.

Johnson, Allen. (1999). Real empowerment. Executive Excellence. 16(9), 20.

Kirkman, Bradley L. and Rosen, Benson. (2000). Powering up teams. Organizational Dynamics, 28(3), 48-66.

Lewis, Charles A. (1996). Green nature human nature: the meaning of plants in our lives. University of Illinois Press. Urbana and Chicago.

Manion, Jo, Lorimer, William, Leander, William J. (1996). Team-based health care organizations: blueprint for success. Aspen publishers, Inc. Gaithersburg, Maryland.

Minniear, Deanie. (1993). A household in a nursing home. Nursing Homes, 42(8), 6-9.

Moravec, Milan. (1999). Self-managed teams. Executive Excellence. 16(10). 18.

Mullins, Larry C. (1991) Loneliness: its effects on older persons in congregate housing. Sociology and Social Research: An International Journal. 75(3), 170-178.

Newman, Sally, Lyons, Charles, and Onawola, Roland. (1985). The development of an intergenerational service-learning program at a nursing home. The Gerontologist. 25(2). 130-133.

Ornish, Dean. (1990). Reversing heart disease. Ballantine Books. New York.

Peretti, Peter O. (1990). Elderly-animal friendship bonds. Social Behavior and Personality, 18(1). 151-156.

Hefley, Paula. (1973). Horticulture: a therapeutic tool. Journal of Rehabilitation. 39(1). 27-29.

Ransom, Sandy and Fox, Nancy. (1994). A profile of nursing assistants employed in central Texas nursing homes. Monograph. Institute for Quality Improvement in Long Term Health Care. Southwest Texas State University. San Marcos, Texas

Ransom, Sandy. (1998). The Eden alternative. Texas Journal on Aging. 1(1). 8-13.

Retsinas, Joan. (1986) It's ok, mom: the nursing home from a sociological perspective. New York: The Tiresias Press, Inc.

Reynolds, Rebecca A. (1995). Bring me the ocean: nature as teacher, messenger, and intermediary. Acton, Massachusetts: Vanderwyck & Burnham.

Rothert, Gene. (1994). Enabling garden: creating barrier-free gardens. Taylor Publishing Company. Dallas.

Rowles, G.D., Concotelli, J. A., & High, D.M. (1996). Community integration of a rural nursing home. The Journal of Applied Gerontology. 15(2), 188-201.

Siddal, Sandra Stuart. (1993). Do children bring Alzheimer's patients "back to life"? Nursing Homes, 42(8), 40 - 3.

Smith, Pat Costello. (1988, April 3). Health and shelter options fro the elderly. The New York Times, 12L1, 1.

Swearingen, Michael. (1997) Industrial productivity. Garland Publishing, Inc. New York and London.

Texas Department of Human Services Nursing Facility Cost Report Database (1987 - 1998).

Thomas, William H. (1996). Life worth Living: How someone you love can still enjoy life in a nursing home: the Eden Alternative™ in Action. Acton, Massachusetts: VanderWyk & Burnham.

Thomas, William H. (1999). The Eden Alternative™ handbook: the art of building human habitats. Summer Hill, Co, Inc. Sherburne, New York.

Thomas, William H. (1994). The Eden Alternative™ : nature, hope, and nursing homes. Sherburne, New York: Eden Alternative™ Foundation.

Wilson, Cindy C. and Turner, Dennis C. (1998) Companion animals in human health. London: Sage Publications.