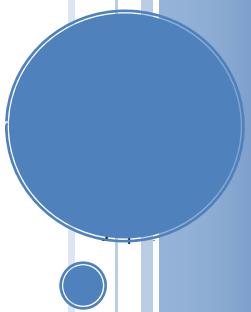
The Future of Eldercare on Nantucket

SK Advisors & Rabig Consulting

3/23/2016



The Future of Eldercare on Nantucket

ABSTRACT

This report provides a detailed analysis of the various factors which will affect decision-making regarding Our Island Home. It includes consideration of trends in long-term care, public policy, islands demographics, Island service provision system, the opinions of stakeholders, and financial analysis of the various options.

The conclusion of the report is that the best option for the citizens of the town of Nantucket is the construction of a new facility in the small house model of care on a new site. The recommended size is a total of 40 beds, 30 designated as the long-term care and 10 as affordable assisted-living.

TABLE OF CONTENTS

I. INTRODUCTION

CONSULTING TEAM

Toby Shea and Michael Kivov, SK Advisors, have a combination of deep expertise in the disciplines of Strategy and Capital. Toby has over 20 years of experience in the senior living field as a commercial banker, investment banker, and CFO for a multi-property senior care provider. Michael has nearly 20 years of experience focused on developing successful market and positioning strategy. Mike is considered to be the industry leader in assisting clients in developing strategies that improve performance and better meet the needs of current and future residents. Through this combination of strategy and capital, SK provides its clients with a more integrated and comprehensive approach to problem solving and execution.

Jude Rabig, Principal, Rabig Consulting is a Registered Nurse, gerontologist, who holds a PhD in gerontology and a business certificate from Stanford School of Business. She is a nationally recognized leader, change agent and strategist who has a deep understanding of organizational change and its application to long term care. Since 2001 she has partnered with over 35 organizations to design lead change initiatives.

Toby Shea	Mike Kivov	Jude Rabig, RN, PhD
tshea@skadvisors.net	mkivov@skadvisors.net	juderabig@gmail.com

SCOPE OF WORK

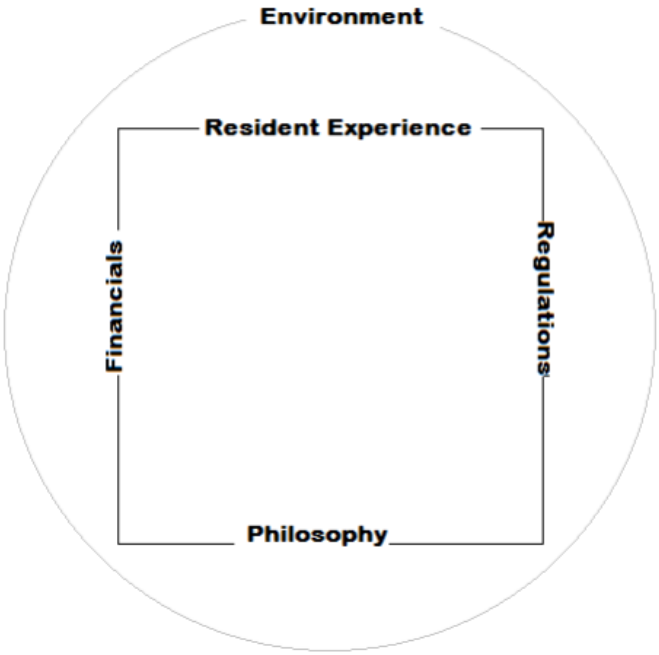
The Request for Qualifications (RFQ) issued by SMRT on December 21, 2015 requested an examination of the following issues as part of an expanded evaluation of the future for Our Island Home (OIH):

1. Current State Assessment
    - Medicare/Medicaid Pro-Forma
    - Staffing Assessment
    - Program Assessment
    - Care Model Assessment
    - Resident Experience
2. Future State Options

    Demographic Projections including Bed Needs for Special Populations including Skilled Nursing, Geri-Psych, Memory Care, Special Needs (Including Bariatric)
3. Care Models
    - Medical/Institutional
    - "Small House"
    - Blended models
    - Staffing Models
    - Culture Change Programs
4. Resident Experience
5. Opportunities and constraints established by the Commonwealth of Massachusetts nursing home licensing and certification that will impact care model, staffing ratios, unit size etc.
    a. Specific Massachusetts State Requirements for Medicaid and Medicare reimbursement
6. Financial Pro-Forma for options identified
7. Other Considerations
    - Consideration of the viability of partnering with Sherburne Commons
    - Consideration of the feasibility/advisability of bringing in an outside private operator
    - Consideration of expanding home health programs on the island to provide community members support in their homes rather than moving them at OIH

Consulting Approach

The SK Advisors and Rabig Consulting team utilized the project approach *White Box Thinking*. This approach promotes an examination of all possibilities within the boundaries of a problem solving space. Potential solutions are placed in the white box and analyzed individually. This assures that no idea is eliminated before an analysis is conducted. The parameters of white box thinking in long-term care include the resident experience, the financial constraints, the regulatory and legal limitations and the philosophy of the sponsoring organization. The analysis also incorporates consideration of the larger environment.



WHITE BOX THINKING

An examination of all possibilities with only the essential limits applied.

Thus, the analysis of the Our Island Home project included consideration of the island of Nantucket and the strengths and challenges it presents.

II. MACRO TRENDS & CONSIDERATIONS

TRENDS IN LONG TERM CARE

Long Term Care (LTC) refers to a broad range of supportive services needed by people who have limitations in their capacity for self-care because of a physical, cognitive, or mental disability or condition. A person's need for LTC is generally measured, irrespective of age and diagnosis, by functional status through measurement of his or her inability to perform basic activities necessary to live independently and by the need for assistance from another person to carry out these activities. These ADLs include bathing, transferring, toileting, and dressing, and incidental activities to daily living (IADLs), which include cooking, housekeeping, transportation, and managing finances. Long-term care can be provided informally or formally in a variety of settings.
A key question for consideration in planning for changes at Our Island Home is: How many people on Nantucket will need care in 2030? There is not a simple answer to this question in the year 2016. Reliance on straight demographic projections would point to an increased need for nursing home beds, yet other factors need to be considered. Since the mid-1980s, there has been a concern that increased longevity and the aging of the Baby Boom generation will result not only in a larger elderly population, but also in an increased prevalence of disability. Increased survival could mean more years of disability and higher long term care and other medical costs if medical interventions are able to prolong life, but not health and independence. However recent findings have provided evidence to the contrary. These studies suggest that there has been a decrease in the prevalence of disability among the elderly, an increase in disability-free life expectancy and a decrease in physical limitations such as lifting 10 pounds, walking short distances, and climbing a flight of stairs, which are related to onset of disability.[1] If efforts at healthy aging and improvements in medical care for chronic conditions continue to be successful and the total number of frail elders who need formal services in a community in 2030 could be quite similar to the number in 2000, even though the number of elders will more than double.

Even if the aggregate number of frail elders stays the same or grows slowly, formal care capacity must be better structured at the community level. Most communities rely

---

[1] Kickman& Snell. The 2030 Problem: Caring For Aging Baby Boomers, Health Services Research 37(4):849-84 · August 2002

heavily on nursing homes as the source of long term care. Sixty-seven cents of every public dollar supporting long-term care for the elderly is spent on institutional care[2] despite the clear preferences of frail elders for services in the community. This mismatch of dollars versus preferences happens in part because nursing homes are seen as the long-term care "safety net". This overreliance on nursing homes—what some people call an "unbalanced" long-term care system is financially unsustainable and this financial strain has prompted policymakers to rethink the balance between nursing home services and community-based services. This is evidenced by new funding for Medicaid assisted living and community based services, an expansion of incentives for purchase of long term care insurance and programs that support family caregivers. The challenge over the next decade is to develop new approaches to delivering community-based care. Home care, using a range of unskilled to highly skilled workers, represents the dominant type of community-based care. But, this service type, relying on a one-on-one model, is expensive and creates challenges. Congregate models such as adult day services and housing-based services that can use one caregiver to assist more than one elder at a time, need to become more prevalent. Utilization of technology including health monitoring and telehealth visits and other emerging technologies might increase the ability to care for individuals in their homes. The current trend is for collaborative interagency planning to foster and increase the types of community based support available and to reserve institutional care for the frailest.

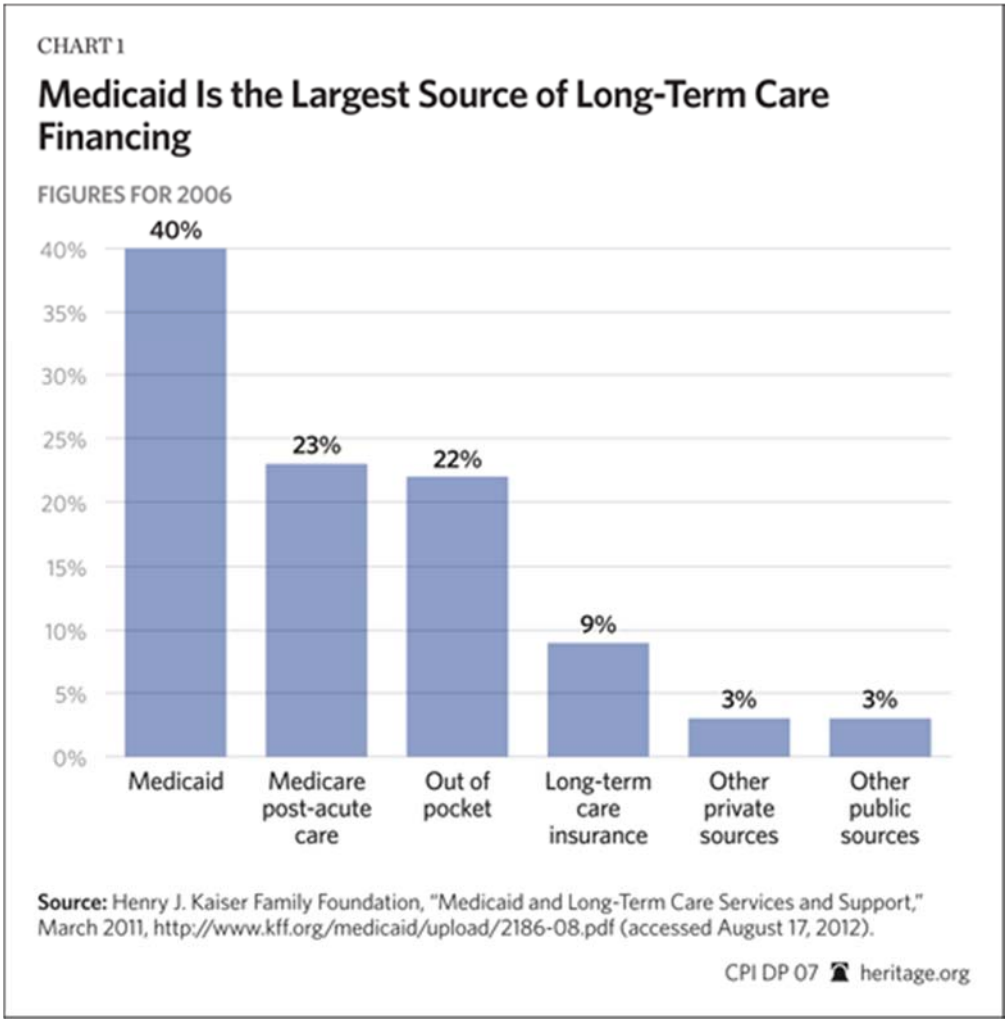
[2] Congressional Budget Office 1999

REIMBURSEMENT TRENDS

WHO PAYS FOR LTC

There are a variety of payers in the long term care arena. The charts below illustrate the programs and their proportion of spending.

SOURCE	WHO QUALIFIES	WHAT LTC SERVICES ARE COVERED
Medicaid Medicaid is a joint federal and state program that helps with medical costs for some people	Income based spend down of resources is expected	Nursing home care and personal care services community programs vary from state to state
Medicare Medicare is the federal health insurance program	People who are 65 or older, certain younger people with disabilities & people with End-Stage Renal Disease	Post Hospital care: Skilled nursing home for 1-100 days after a qualifying hospital stay – must need skilled service not just ADL support
Out of Pocket Payment by self or family for services	Those with resources to cover expensed	All systems accept private funds
Long Term Care Insurance	Privately purchased	Community care Nursing home care
Administration on Aging/Administration for Community Living	Over 65 Qualifications vary by program	Nutrition Transportation In home care Caregiver support
Veterans Administration	Some veterans and their wives/widows	Some nursing home care



INFORMAL AND FAMILY CAREGIVERS

The value of services provided by informal caregivers has steadily increased over the last decade, with an estimated economic value of $470 billion in 2013, up from $450 billion in 2009 and $375 billion in 2007. [3] At $470 billion in 2013, the value of unpaid caregiving exceeded the value of paid home care and total Medicaid spending in the same year. The federal government has introduced programs to provide support to caregivers which has assisted in the increased value.

[3] AARP Public Policy Institute. Valuing the Invaluable: 2015 Update.

PUBLIC POLICY & REGULATORY TRENDS

OLMSTEAD: COMMUNITY FIRST

On June 22, 1999, the United States Supreme Court held in *Olmstead v. L.C.* that unjustified segregation of persons with disabilities constitutes discrimination in violation of title II of the Americans with Disabilities Act. The Court held that public entities must provide community-based services to persons with disabilities when (1) such services are appropriate; (2) the affected persons do not oppose community-based treatment; and (3) community-based services can be reasonably accommodated, taking into account the resources available to the public entity and the needs of others who are receiving disability services from the entity.

The Supreme Court explained that its holding "reflects two evident judgments." First, "institutional placement of persons who can handle and benefit from community settings perpetuates unwarranted assumptions that persons so isolated are incapable of or unworthy of participating in community life." Second, "confinement in an institution severely diminishes the everyday life activities of individuals, including family relations, social contacts, work options, economic independence, educational advancement, and cultural enrichment." Further the Court directed all states to create a plan for managing the maximization of community alternatives to institutionalization. The overall purpose of an Olmstead Plan is to maximize the extent to which elders and people with disabilities are able to live successfully in their homes and communities. In Massachusetts, this effort has been named ***Community First.***[4] The vision of Community First is:

> *Empower and support people with disabilities and elders to live with dignity and independence in the community by expanding, strengthening, and integrating systems of community-based long-term supports that are person-centered, high in quality and provide optimal choice.*

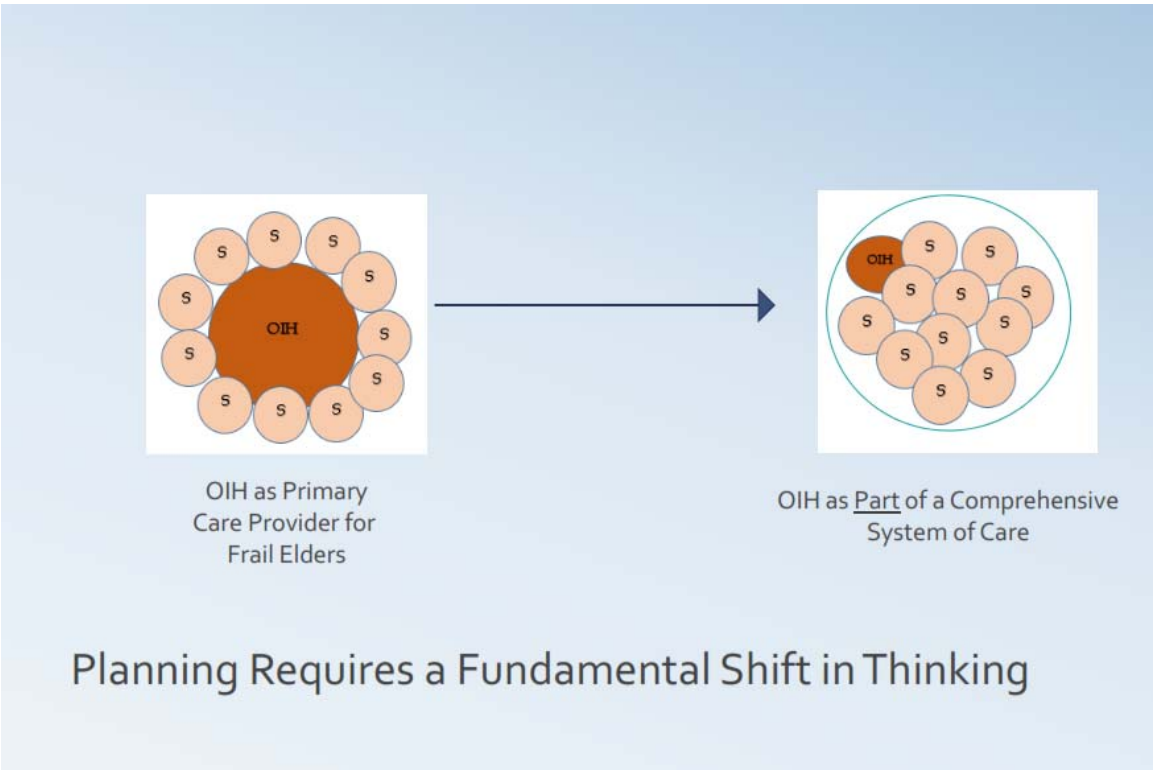
[4] The Community First Olmstead Plan accessed 3/2 at: http://www.mass.gov/eohhs/docs/eohhs/olmstead/olmstead-plan.pdf

The Goals of Community First

The overarching purpose of the Massachusetts Olmstead Plan is to maximize the extent to which elders and people with disabilities are able to live successfully in their homes and communities. Six goals provide the framework for achieving that vision:

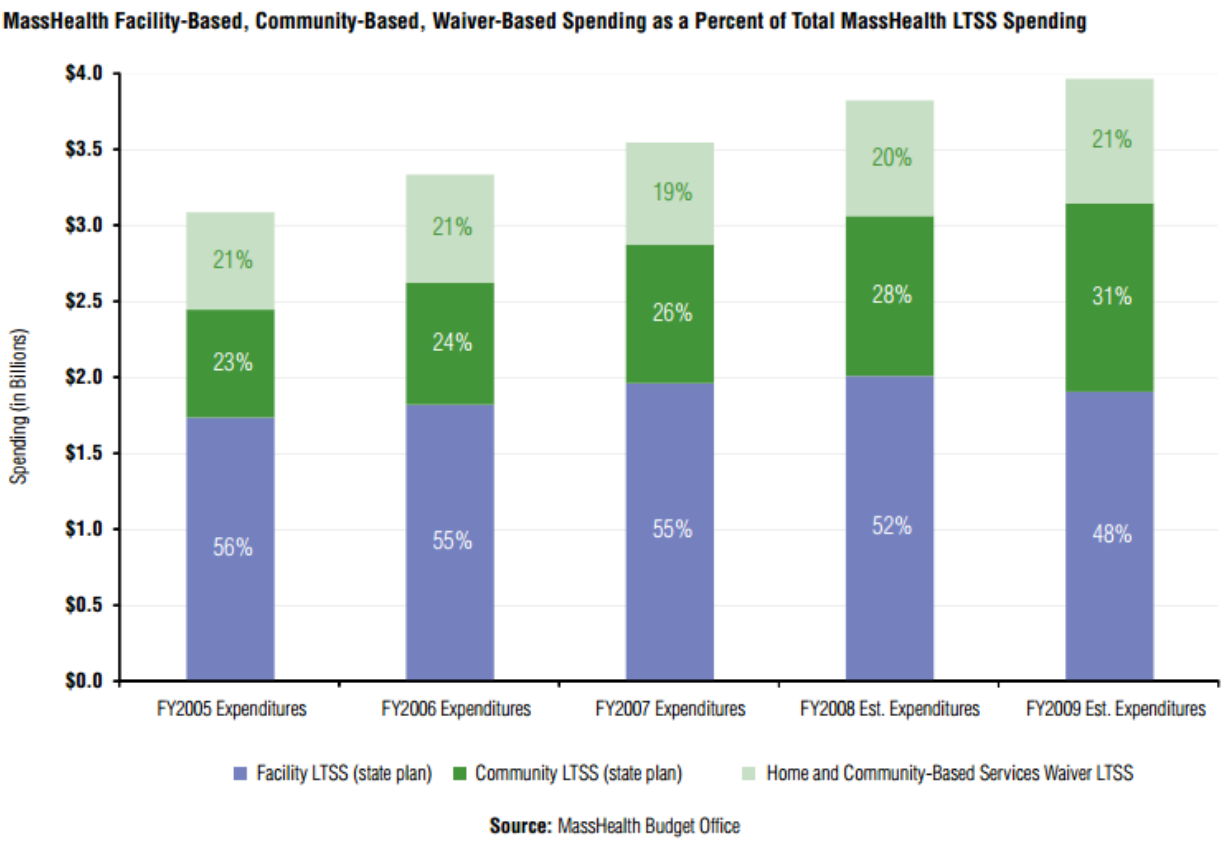
1. Help individuals transition from institutional care.
2. Expand access to community-based long-term supports.
3. Improve the capacity and quality of community-based long-term supports.
4. Expand access to affordable and accessible housing and supports.
5. Promote employment of persons with disabilities and elders.
6. Promote awareness of long-term supports.

The overarching significance of this plan to the skilled nursing facility is that the creation and availability of more community-based services and additional funding for the services will move the nursing home from the core provider of services to a smaller part of a more comprehensive system of services which will provide support and care for older adults in the future, as shown in the chart below.



The trend towards community based services and away from nursing home services is illustrated in the graph below, and continues to shift with latest 2014 figures indicating a 46% utilization of funding for long-term care beds.

The shift in MassHealth spending from facilities to communities reflects the state's Community First policy



Source: MassHealth Budget Office

RESIDENT EXPERIENCE – CULTURE CHANGE

The quality history of nursing homes has been beleaguered since its inception. The early problems were primarily life safety issues such as fire hazards and sanitary conditions. Once these were under control, attention then morphed into focusing on quality of life issues such as physical restraint, abuse, inadequate nutrition and poor clinical care. Many of these problems remain: the industry is struggling with quality concerns such as core restraints, psychotropic medications, unexplained weight loss, skin breakdown, and the triad of quality of life problems; loneliness, helplessness and boredom. The various attempts to address these issues have coalesced into a movement named *culture change*. Various early interventions included modest adjustments of the operating model and met with modest success. In 2000 a total reinvention of the nursing home was envisioned and operationalized. Initially named the Green House®, this model of care transitions from an institutional model of care which prices efficiency sameness and policy and procedure into the paradigm of home where the architecture care patterns and rhythms of life represent the patterns one would find in home. The model requires a holistic reinvention, new policies and procedures, empowerment of line staff, person centered care, which involves the resident in all decision-making, and outcomes-based management. The model was created using an analysis of the literature in long-term care and the literature of organizational development. Funded by the Robert Wood Johnson Foundation and piloted in Tupelo, Mississippi the implementation was carefully followed by Dr. Rosalie Kane and her research team from the University of Minnesota. A video of the project can be seen at: *https://www.youtube.com/watch?v=l4Ap1ByNgKE* . This research demonstrated strong outcome improvements. The Green House model has become a registered trademarked model of care which has tightly prescribed implementation guidelines, and now belongs to a larger model of care, known as the small house model of care. The small house implementation is similar to the greenhouse model. However, it affords providers flexibility and implementation. There are over 200 operating small houses in the country and an estimated 180 to 210 in development, and an unknown number of small house like implementations. In addition to its research demonstrated improved outcomes, the small house model of care has greatly influenced the long-term care industry. The implementation of person centered care is becoming more widespread and it is very rare to find a new nursing home building that is being constructed in the old institutional hospital like model. In addition to the research outcomes listed below, the Alzheimer's foundation has named the small house a preferred model of care for those with memory impairment[5].

[5] Excellence in Design: Optimal Living Space for People With Alzheimer's Disease and Related Dementias. Accessed at: http://www.alzfdn.org/documents/ExcellenceinDesign_Report.pdf

Research [6] has demonstrated improvement in resident, family, and staff experience, summarized below:

Resident

Improvement in 7 domains of Quality of Life

- Privacy
- Dignity
- Meaningful activity
- Strength of relationship
- Autonomy
- Food enjoyment
- Individuality

Improved Quality of Care

- Elders maintain self-care abilities - longer
- Less depression
- Less boredom
- Less loss of appetite and weight loss

Higher direct care time: 21 to 31 minutes more per resident per day in staff time spent on direct activities.

Increased engagement with others: more than a fourfold increase in staff time spent engaging with elders outside of direct care activities.

Earlier identification of change in condition related to consistent staffing and highs staff to resident ratios.

Staff

Direct care staff report less job-related stress.

Stabilized projects show decrease in staff turnover, and overtime costs.

Decrease in work-related repetitive stress injuries//workers compensation costs.

[6] Kane & Cutler JAGS, 2007
Kane & Cutler Health Care Financing Review, 2009
Sharkey et al JAGS, 2011
Jenkens, Sult, Senior Housing Journal, 2011
Bowers & Nolet, University of Wisconsin, 2009

Families

Improved satisfaction with resident care.

Improve relationships with caregivers.

Financials

Cost neutral or improved operational costs.

Lower capital costs related to building size and common space decreases.

III. OUR ISLAND HOME ANALYSIS

SITE VISIT PARTICIPANTS & MATERIALS REVIEWED

In conducting our analysis, it was important for the Consulting Team to consider all available materials and conduct interviews with key stakeholders, including residents of Our Island Home. While on-site, the team conducted interviews with many different individuals and groups. During our analysis, we reviewed several documents and artifacts that have been written on the future of Our Island Home. The following serves to document the individuals and groups that were interviewed by the team, as well as the various materials that were reviewed and considered.

Interviews were conducted by phone or in person with the following:

Nantucket Government
Libby Gibson, Town Manager
Brian Turbitt, Financial Director
Rick Atherton, Board of Selectmen
Bobby DeCosta, Board of Selectmen
Dawn Hill-Holdgate Board of Selectmen
Tobias Glidden Board of Selectmen
Matt Fee Board of Selectmen
Jim Kelly, Finance Committee

Our Island Home Leadership Staff (focus group)
Rachel Chretien - Administrator
Gail Ellis - Director of Nursing
Heather Francis, Staff Development Coordinator
Taylor Hilst, Activities
Susan Balester, Business Office
Deb Bechtold, Dietician
Karen Correia, Food Supervisor
Edward King, Plant Supervisor
Erin Kopecki, Assistant Administrator

Others
Peter MacKay, Social Worker, Cottage Hospital
Peter Morrison, Demographer
David Worth, President, Sherburne Commons
Melissa Philbrick Board of Directors, Sherburne Commons
Chuck Gifford, Executive Director Sherburne Commons
Sherri Hunt, Director, Case Manager, Elder Services of Cape Cod
Phil Stambaugh, Capital Program Committee

Focus Groups

Focus groups were held with the following:
Direct Care Staff
Family Members
OIH Leadership Team Members

Resident Interviews

One-on-one resident interviews were conducted with 10 residents 4 males and 6 females. There were 16 questions which were a mix of yes and no and open ended questions. Residents were selected by the Nursing Home Administrator who did not see the survey tool in advance of the selection. A random selection process was not used because of the challenges of survey when individuals have cognitive verbal or hearing issues. The Administrator was asked to select residents who were able to be interviewed, i.e. they have the cognitive ability to comprehend and answer questions, had speech and verbal skills that allow them to answer questions and had adequate hearing skills. 10 residents represent a sample size of 22% which is an adequate sample size. Interviews were conducted in a private space. Residents were told that their answers would be recorded on paper, and reported but not associated with their individual names. The list of questions, along with a summary of the responses, can be found on page 53.

Materials Reviewed

Reports

Our Island Home Management Report Lanzikos 1996

Annual Report to the Residence at Sherburne Commons, 2015

Our Island Home Board of Selectmen Meeting SMRT Presentation, October 2015

Nantucket Community Health Needs Assessment and Implementation Plan

Nantucket Cottage Hospital, 2015

Our Island Home Work Group Presentation to the Board of Selectmen, July 2013

Our Island Home's Future – a Future Demographic Perspective, Peter Morrison, December 2015

Materials Reviewed (cont'd)

Operating Reports

OIH Organizational Chart 2016

OIH Nursing Administration Job Descriptions

OIH Staffing Lists, Staffing and Rooms and Schedules

Massachusetts DPH Survey Reports

Massachusetts DPH Life Safety Survey Reports

Census & Case Mix Reports

Clinical Reports

Pharmacy Quarterly Reports

Harmony Consulting Reports

Infection Control Policies

Pain Management Policies

MMQ (care intensity) Scores

Financial Reports

FY2017 Budget Reports

Annual and Interim Operating Statements ("Enterprise Update Reports")

Payor Source data

Census Reports

Medicaid Rate Certification Letter

Medicare RUG Rates

OIH Cost Reports

OIH Staffing Reports

Materials Reviewed (cont'd)

Concerned Individuals

Report prepared by Friends of Our Island Home relating to meeting of family members held March 5, 2016

The opinions of concerned citizens were reviewed at the websites:

Change.org: https://www.change.org/p/nantucket-board-of-selectmen-our-seniors-need-a-view-keep-our-island-home-where-it-is

Friends of Our Island Home: http://www.friendsofourislandhome**.org/**

Our Island Home: http://www.nantucket-ma.gov/157/Our-Island-Home

MARKET DYNAMICS

This section provides a summary of the key market dynamics impacting Our Island Home (and other long-term and post-acute care on the island). This includes for distinct sub-sections on Demographics, Competitive Environment, and Demand, before concluding with our observations and key takeaways. In addition to nursing care, the competition and demand analyses focus on other products and levels of care—including assisted living, specialized dementia care, and adult day care—in order to assess alternative opportunities available to Our Island Home. While this is not intended to be a comprehensive market analysis, we believe that an understanding of the demographics, competitive factors, and demand in the local market area is critical to both ascertaining likely root causes of the challenges at Our Island Home and assessing its future outlook, as well as devising strategies and initiatives for solving for the future, and in particular enhancing occupancy and revenue.

Demographics

This section examines in detail the demographics of the defined primary market area—which is Nantucket Island—for Our Island Home. Demographic data features 2015 estimates and five-year future projections (2020). The estimates and projections are developed by Nielsen Claritas, one of the country's largest demographers. Nielsen Claritas demographic data utilizes the US Census 2010 as its base and then applies proprietary interpolations and adjustments. We note that in recent years Nielsen Claritas has condensed some of its data reporting and does not provide the same level of detail and specificity by age and income cohorts as it used to going back to 2009. Consequently, where appropriate, we have performed some independent interpolations as necessary to extend the level of detail and precision provided in the data and to develop certain data points as necessary for our analysis and also develop population and household projections for 2016.

Population and Household Trends

Population and household data and trends exhibit most notably that the market area is small; as of 2015 there is an estimated total year-round population on the island of only approximately 10,600 persons. There is some growth occurring, and in particular strong growth projected in older adult age cohorts. Overall, the market is relatively affluent, although our understanding of the island is that averages can be somewhat deceptive, as there are many high-income households that push up indicators of wealth, but at the same time the island also has a sizeable lower to moderate income and working class

population. **Table 1** shows population trends and **Table 2** displays household trends in the market area.

Key data and findings for Table 1 are summarized below.

- The total population in the primary market area in the current year (interpolated for 2016) is estimated to be approximately 10,680 persons.
- The total population will increase nominally by approximately 500 persons over the next five years through 2020 (0.9% per annum).
- The total population age 65 and older in the market area, in the current year, is approximately 1,600, comprising 15.0% of the total population. This is in line with the corresponding national concentration of the 65+ population of 14.9% (per the latest Census Bureau national projections).
- The 75+ population in the market area is estimated at nearly 640 in the current year, comprising 6.0% of the total population. This is somewhat lower (5%) than the corresponding national concentration of the 75+ population of 6.3%.
- The 65+ population is projected to grow by 4.8% per annum over the next five years to a projected total of 1,890 by 2020.
- The 75+ population is projected to increase by 3.2% per annum through 2020 to a projected total of approximately 720.
- The strongest projected growth by percentage is in the 65 to 74 age cohort (5.8% per annum).
- Of note, there is strong growth projected over the next five years in the 75 to 84 age cohort at 4.5% per annum, after experiencing more modest growth (2.4% per annum) from 2010 through 2014. This largely mirrors national trends. As is the case in the market area, across the country the 75 to 84 age segment has been showing limited to modest growth in most markets (and even contracting in some) due to the birth dearth that occurred nationally coming out of the Great Depression. From 2015 through 2020, however, growth in the 75 to 84 age cohort nationally is projected to accelerate significantly, increasing to over 3% per annum.

Table 1

Older Adult Population by Age and Year Our Island Home Market Area								
Population	2010		2016		2020		% Annual Change	
	#	% of Total	#	% of Total	#	% of Total	(2010-2015)	(2015-2020)
Total	**10,172**	**100.0%**	**10,680**	**100.0%**	**11,070**	**100.0%**	**0.8%**	**0.9%**
55 to 64	1,285	12.6%	1,493	14.0%	1,574	14.2%	2.9%	1.4%
65 to 74	692	6.8%	961	9.0%	1,173	10.6%	6.2%	5.8%
75 to 84	373	3.7%	436	4.1%	511	4.6%	2.4%	4.5%
85+	162	1.6%	202	1.9%	206	1.9%	4.8%	0.5%
55+	**2,512**	**24.7%**	**3,092**	**29.0%**	**3,464**	**31.3%**	**3.9%**	**3.1%**
65+	**1,227**	**12.1%**	**1,599**	**15.0%**	**1,890**	**17.1%**	**4.9%**	**4.8%**
75+	**535**	**5.3%**	**638**	**6.0%**	**717**	**6.5%**	**3.1%**	**3.2%**

Key data and findings for Table 2 are summarized below.

- There are approximately 4,420 households in the market area in the current year (interpolated to 2016).
- Similar to population, there will be some growth in the number of households in the market over the next five years, increasing by 0.8% per annum.
- There are approximately 1,250 households age 65 and older in the market area, comprising 28.3% of all households. The number of 65+ households is projected to increase by 4.8% per annum over the next five years, adding approximately 50 such households each year.
- There are just over 500 households age 75 and older in the market area, comprising 11.4% of all households. The number of 75+ households is projected to increase by 3.4% per annum through 2020, adding approximately 15 such households annually.
- As with the population data, the strongest growth amongst older adult households is projected in the 65 to 74 age cohort (5.9% per annum). Also similar to population trends, the 75 to 84 age cohort is projected to significantly accelerate its growth through 2020 (4.7% per annum), mirroring national trends.

Table 2

Older Adult Households by Age and Year Our Island Home Market Area								
Households	2000		2016		2020		% Annual Change	
	#	% of Total	#	% of Total	#	% of Total	(2010-2015)	(2015-2020)
Total	**3,701**	**100.0%**	**4,421**	**100.0%**	**4,570**	**100.0%**	**1.2%**	**0.8%**
55 to 64	468	12.6%	**907**	20.5%	952	20.8%	6.1%	1.3%
65 to 74	322	8.7%	747	16.9%	747	16.3%	5.3%	5.9%
75 to 84	255	6.9%	371	8.4%	371	8.1%	1.2%	4.7%
85+	70	1.9%	131	3.0%	131	2.9%	5.5%	0.5%
55+	**1,115**	**30.1%**	**2,156**	**48.8%**	**2,201**	**48.2%**	**4.7%**	**3.1%**
65+	**647**	**17.5%**	**1,249**	**28.3%**	**1,249**	**27.3%**	**3.7%**	**4.8%**
75+	**325**	**8.8%**	**502**	**11.4%**	**502**	**11.0%**	**2.1%**	**3.4%**

Household Composition

The following displays the relationship between households and population in the market area by age group. As shown in **Table 3**, the headship ratio in the market is 0.41, meaning that there are 0.41 households per person. This is equivalent to an average household size of 2.41 persons per household. In most markets, as households age, household size typically becomes smaller (and thus the headship ratio increases) although often the 85+ age cohort has a larger household size than other senior age cohorts; this pattern holds true in the market area as well. On aggregate, the headship ratio for a household age 75+ in the market area is 0.69 (a household size of 1.44 persons).

Table 3

2015 Headship Ratios Our Island Home Market Area				
Age	**HHs**	**Pop.**	**HH Size**	**Ratio**
Total	**4,384**	**10,583**	**2.41**	**0.41**
65 to 74	577	908	1.57	0.64
75 to 84	301	417	1.39	0.72
85+	128	201	1.57	0.64
75+	**429**	**618**	**1.44**	**0.69**

The market area is disproportionately weighted towards renters compared to national standards. Approximately 58% of households in the market area are homeowners, compared to two-thirds of all households across the country. As shown in **Table 4**, homeownership actually is much higher among older adult households than it is among the overall population. Overall, the homeownership rate for households age 75 and older is 70%.

Table 4

Household Tenure Our Island Home Market Area						
Age	**Owner**		**Renter**		**Total**	
	#	**%**	**#**	**%**	**#**	**%**
All Households	**2,559**	**58.4%**	**1,825**	**41.6%**	**4,384**	**100.0%**
55-64	663	74.0%	233	26.0%	896	100.0%
65-74	485	84.1%	92	15.9%	577	100.0%
75-84	224	74.4%	77	25.6%	301	100.0%
85+	78	60.9%	50	39.1%	128	100.0%
75+	**302**	**70.4%**	**127**	**29.6%**	**429**	**100.0%**

Household Income

The following examines older adult households by income within the market area. The data shows that on the whole, older adult households in the market are relatively affluent. **Table 5** and **Table 6** display 65+ and 75+ households in the market by income, respectively; **Table 7** displays the median income by age cohort.

Key findings for Table 5 are summarized below:

- Of the approximately 1,000 households age 65 and older in the market (in 2015), just over three-fifths have incomes in excess of $35,000, 48% are estimated to have incomes in excess of $50,000, and approximately 36% are estimated to have incomes in excess of $75,000.
- The number of age 65 and older households with incomes in excess of $50,000 will increase by 180 over the next five years to approximately 650 by 2020, representing 53% of all 65 and older households. This represents an increase of 7.5% per annum.
- The number of age 65 and older households with incomes in excess of $75,000 will increase by 130 to over 490 by 2020, representing 39% of all 65+ households. This represents an increase of 7.5% per annum.

Table 5

Households 65+ by Income Our Island Home Market Area								
Income	2000		2015		2020		% Annual Change	
	#	%	#	%	#	%	(2000-2015)	(2015-2020)
<$15,000	168	26.0%	184	18.3%	195	15.6%	0.6%	1.2%
$15,000 - $24,999	92	14.2%	80	8.0%	88	7.0%	-0.9%	2.0%
$25,000 - $34,999	66	10.2%	129	12.8%	155	12.4%	6.4%	4.0%
$35,000 - $49,999	94	14.5%	134	13.3%	153	12.2%	2.8%	2.8%
$50,000 - $74,999	80	12.4%	122	12.1%	167	13.4%	3.5%	7.4%
$75,000 - $99,999	37	5.7%	79	7.9%	104	8.3%	7.6%	6.3%
$100,000 - $124,999	42	6.5%	64	6.4%	90	7.2%	3.5%	8.1%
$125,000 - $149,999	8	1.2%	67	6.7%	92	7.4%	49.2%	7.5%
$150,000 - $199,999	20	3.1%	47	4.7%	66	5.3%	9.0%	8.1%
$200,000+	40	6.2%	100	9.9%	139	11.1%	10.0%	7.8%
Total	**647**	**100.0%**	**1,006**	**100.0%**	**1,249**	**100.0%**	**3.7%**	**4.8%**
$35,000+	**321**	**49.6%**	**613**	**60.9%**	**811**	**64.9%**	6.1%	6.5%
$50,000+	**227**	**35.1%**	**479**	**47.6%**	**658**	**52.7%**	7.4%	7.5%
$75,000+	**147**	**22.7%**	**357**	**35.5%**	**491**	**39.3%**	9.5%	7.5%
$100,000+	**110**	**17.0%**	**278**	**27.6%**	**387**	**31.0%**	10.2%	7.8%

Key findings for Table 6 are summarized below:

- Of the 429 households age 75 and older in the market in the current year (2015), approximately 48% (205 households) are estimated to have incomes in excess of $35,000 and 28% (3,447 households) incomes in excess of $50,000.

- Additionally, it is estimated that 103 households (nearly one-quarter) have incomes in excess of $75,000.
- The number of age 75 and older households with incomes in excess of $50,000 will increase by 46 to approximately 190 by 2020, representing 38% of all 75 and older households. This represents an increase of 6.4%, or 9 households per annum.

Table 6

Households 75+ by Income Our Island Home Market Area								
Income	2000		2015		2020		% Annual Change	
	#	%	#	%	#	%	(2000-2015)	(2015-2020)
<$15,000	114	35.1%	113	26.3%	117	23.3%	-0.1%	0.7%
$15,000 - $24,999	9	2.8%	46	10.7%	48	9.6%	27.4%	0.9%
$25,000 - $34,999	30	9.2%	65	15.2%	76	15.1%	7.8%	3.4%
$35,000 - $49,999	56	17.2%	62	14.5%	72	14.3%	0.7%	3.2%
$50,000 - $74,999	39	12.0%	40	9.3%	53	10.6%	0.2%	6.5%
$75,000 - $99,999	7	2.2%	25	5.8%	30	6.0%	17.1%	4.0%
$100,000 - $124,999	28	8.6%	17	4.0%	23	4.6%	-2.6%	7.1%
$125,000 - $149,999	8	2.5%	17	4.0%	23	4.6%	7.5%	7.1%
$150,000 - $199,999	14	4.3%	17	4.0%	23	4.6%	1.4%	7.1%
$200,000+	20	6.2%	27	6.3%	37	7.4%	2.3%	7.4%
Total	**325**	**100.0%**	**429**	**100.0%**	**502**	**100.0%**	**2.1%**	**3.4%**
$35,000+	**172**	**52.9%**	**205**	**47.8%**	**261**	**52.0%**	1.3%	5.5%
$50,000+	**116**	**35.7%**	**143**	**33.3%**	**189**	**37.6%**	1.6%	6.4%
$75,000+	**77**	**23.7%**	**103**	**24.0%**	**136**	**27.1%**	2.3%	6.4%
$100,000+	**70**	**21.5%**	**78**	**18.2%**	**106**	**21.1%**	0.8%	7.2%

Key findings for Table 7 are summarized below:

- The overall median household income in the market is estimated at approximately $84,700 in 2015, and has increased by 50% since 2000.
- Median household income is much stronger for "younger old" households than for "older old" households. Specifically, the median household income by age cohort ranges from a high of $90,800 for households age 55 to 64 to just $26,000 for households age 85 and older.
- The median household income declines with age, with the most significant drop from the 65 to 74 age cohort (approximately $64,500) to the 75 to 84 age cohort (approximately $37,600).
- All age cohorts show a projected increase in annual income over the next five years, ranging from 0.9% to 3.3% per annum.

Table 7

Median Household Income of Older Adult Households by Age Our Island Home Market Area					
Age	**2000**	**2015**	**2020**	**% Annual Change (2000-2015)**	**(2015-2020)**
All Households	**$56,539**	**$84,710**	**$86,308**	**3.3%**	**0.4%**
55 to 64	$59,043	**$90,827**	$95,000	3.6%	0.9%
65 to 74	$31,667	**$64,482**	$70,943	6.9%	2.0%
75 to 84	$40,054	**$37,602**	$40,395	-0.4%	1.5%
85+	$27,500	**$26,000**	$30,227	-0.4%	3.3%

Home Value

Nielsen Claritas provides current year estimates and future year projections of home value. This data is based on US Census data and interpolated and adjusted by Nielsen Claritas. It is not considered as reliable or valid of an indicator of home values/prices in a market as is actual sales data. We note, however, that it can be a good indicator of relative value or affluence of one area as compared to another.

The Nielsen Claritas home value data displayed in **Table 8** shows that home values on the island are extremely high (which in fact creates a significant housing affordability issue). The estimated median home value across the market in the current year (2015) is approximately $980,000. This is an increase of 68% since the year 2000, which takes into account the significant gains in the residential real estate values experienced in the early to mid 2000s then tempered for the pullback in values and struggles of the home market in the past few years. The median value in the market is projected to remain essentially static through 2020, increasing just 1% over this time.

We note that this data was not available by age cohort or for older adults. In our experience, however, home values for the older adult population tend to be higher than those for the overall population as many homeowners in these age cohorts have bought up over the years. Older adults also as a rule will have significantly more equity in their homes than younger homeowners.

Table 8

Home Value Distribution (Census Data) Our Island Home Market Area								
	2000		2015		2020		2014-2019 Growth	
Home Values	#	%	#	%	#	%	Period	Per Annum
<$60,000	14	0.6%	13	0.5%	13	0.5%	0.0%	0.0%
$60,000 - $99,999	6	0.3%	25	1.0%	26	1.0%	4.0%	0.8%
$100,000 - $149,999	6	0.3%	14	0.5%	15	0.6%	7.1%	1.4%
$150,000 - $199,999	13	0.6%	30	1.2%	30	1.1%	0.0%	0.0%
$200,000 - $299,999	224	9.6%	86	3.4%	88	3.3%	2.3%	0.5%
$300,000 - $399,999	279	12.0%	94	3.7%	97	3.6%	3.2%	0.6%
$400,000 - $499,999	385	16.5%	155	6.1%	156	5.9%	0.6%	0.1%
$500,000 - $749,999	717	30.7%	307	12.0%	317	11.9%	3.3%	0.7%
$750,000 - $999,999	336	14.4%	604	23.6%	609	22.9%	0.8%	0.2%
$1,000,000+	353	15.1%	1,231	48.1%	1,312	49.3%	6.6%	1.3%
Total	**2,333**	**100.0%**	**2,559**	**100.0%**	**2,663**	**100.0%**	**4.1%**	**0.8%**
Median Home Value	**$583,508**		**$979,925**		**$991,995**		**1.2%**	**0.2%**
$150,000+	**2,307**	**98.9%**	**2,507**	**98.0%**	**2,609**	**98.0%**	**4.1%**	**0.8%**
$250,000+	**2,182**	**93.5%**	**2,434**	**95.1%**	**2,535**	**95.2%**	**4.1%**	**0.8%**
$300,000+	**2,070**	**88.7%**	**2,391**	**93.4%**	**2,491**	**93.5%**	**4.2%**	**0.8%**
$400,000+	**1,791**	**76.8%**	**2,297**	**89.8%**	**2,394**	**89.9%**	**4.2%**	**0.8%**
$500,000+	**1,406**	**60.3%**	**2,142**	**83.7%**	**2,238**	**84.0%**	**4.5%**	**0.9%**

Competitive Environment

This summary assessment of the competitive environment in the market examines an array of long-term care platforms/services, including assisted living and specialized dementia care in addition to nursing care. In general, senior living and long-term care on the island is very limited, reflecting the small year-round population of Nantucket. Despite the small size, the long-term care market also is highly fragmented. There is one senior living community providing market rate service-enriched independent living and assisted living (Sherburne Commons), one nursing facility (Our Island Home), and one hospital through which all heath care and "institutional" or bricks and mortar-based market rate post acute care is funneled. And none of these providers have any particular affiliation or relationship with each other, formal or informal.

Thus it can be said that Our Island Home (as well as Sherburne Commons) does not have any direct competition in the traditional sense. The reality is, however, that non bricks and mortar-based alternatives (such as at-home care), and informal caregiving (families and personal support networks) provide some competition. In fact, our observation is that these options appear to be having more of an impact on the competitive landscape in this market—as will be further explored after the discussion of demand—than typical in many other markets in which traditional facility-based competition is more prevalent.

The following briefly summarizes the relevant and impactful senior living and long-term care providers in the market.

- **Sherburne Commons** is the largest senior living and long-term care provider on the island, with 38 independent living residences (18 apartments in a main building and 20 cottages) and a 14-unit assisted living component. The community also has a wing that previously operated as an eight-bed specialized dementia care unit which has been taken off line (the space is presently being rented to physicians as medical offices.). Sherburne Commons has had a somewhat checkered history, with underperformance that has led to multiple changes in ownership. It is presently owned and operated by a locally-based non-profit organization specifically formed for the expressed purposes of taking over the facility, which it acquired from a real estate investment group that was the previous owner. Thus, Sherburne Commons is a small, single-site operation.

  Performance has been improving, bringing the facility from the brink of default to a somewhat more stable (but still stressed and somewhat precarious) financial and operating position. At present, 25 of the 38 independent living units are resident-occupied (three other cottages reportedly are rented by the hospital) and just 6 of the 14 assisted living units are occupied. (And as noted, the dementia unit did not succeed, reportedly never having more than one occupant at any given time.) Occupancy peaked at one point at 75%, but the community has never stabilized since opening.

  The product itself presents decently. Architecturally, it is in line with the preferred look on the island and has decent curb appeal. The entrance opens into a comfortable and inviting reception area and lobby, and interior décor overall is comfortable. Common areas and amenities are limited for independent living, but actually represent a decent allocation given the small number of residences. There is a main dining room which is attractive though traditional, as well as a casual café with a fireplace and large dining table, and a small library space within it. On the second floor around the landing above the main stairwell is a larger library space and a game room. Not surprisingly (given the small size of the community), wellness spaces are lacking: there is only a very small (perhaps 100 square feet) fitness room with a few machines. Residences are relatively spacious, and feature contemporary, open design and floor plans, with nine-foot ceilings on the ground floor (eight-foot on the second floor). In-unit features and finishes are relatively basic (laminate counters, builder grade carpeting, etc.)

  The assisted living unit has its own distinct (and cozy) dining room and also a country kitchen, as well as a generously sized great room (that functions for activities/programming, exercise, and therapy). Assisted living resident rooms are a plus, consisting primarily of small one-bedroom units with a kitchenette, as well as a few two-bedroom units. They have decent size closets and full baths with walk-in showers.

- **Nantucket Cottage Hospital**, which as the only hospital on the island is the dominant referral source for Our Island Home, in many ways also is its most direct competitor. This is due to the fact that the hospital has a swing bed unit that provides therapy and rehabilitation to patients discharged from the acute care beds in the hospital (or other hospitals on the mainland). Consequently, it is serving a market segment that otherwise would be served within Our Island Home: rehabilitation patients. Unfortunately for Our Island Home, this market segment is primarily Medicare beneficiaries and is usually quite lucrative. In fact, Medicare-funded rehabilitation often generates profit margin at most nursing facilities that offsets the deficits typically resulting from Medicaid patients. Thus, the hospital has encroached on Our Island Home's market share, and in particular its most lucrative market share. Unquestionably, this has been adversely impacting the financial performance of Our Island Home. Importantly, the hospital's focus on this market segment ensures that it will receive the most desirable rehab discharges and renders it highly unlikely that Our Island Home can expand into this arena and increase census and revenues from Medicare beneficiaries. Simply put, the hospital essentially meets this demand and precludes Our Island Home's opportunity to serve this segment.

  Cottage Hospital is essentially a tertiary acute care facility. Among the specialty services it provides include cardiovascular, emergency, oncology, and radiology/imaging, and as noted has a skilled nursing bed sub-provider unit. According to data available on the American Hospital Directory online (www.ahd.com), Cottage Hospital has 19 certified beds. In the fiscal year ending September 2014, the hospital reported 429 discharges and approximately $57 million in total patient revenue. The average length of stay was 3.8 days and the average daily census was just 4.5 persons. The ahd.com data exhibits that the swing beds accounted for 510 patient days, all of which were Medicare.

Demand

This analysis focuses on the quantitative analysis and measures of demand in the market first for assisted living, then following this for specialized Dementia/Alzheimer's care (with sensitivity to test for demand for low acuity care more appropriate for an adult day services setting as well as more moderate to higher acuity care typically placed within a licensed assisted living setting), and finally for long-term nursing care. This process tests the depth in the market and its capacity to support existing product, and also tests for the capacity to support additional inventory such as an expansion or even a new facility.

Market Rate Assisted Living Demand

We conducted quantitative measures of the defined market area's capacity to support private pay (market rate) assisted living beds in the market. In the methodology for calculating demand for assisted living beds market penetration rates and project capture rates are the major indicators of the depth of demand, or lack thereof. There are two primary differences between demand for independent senior housing products and assisted living analyses: 1) assisted living demand is based upon persons, as opposed to households, and 2) age- and income-qualified demand is factored through an additional screen to take into account 'need' or 'frailty'. The application of a need-based qualification screen reflects the fact that assisted living is a need driven, long-term care product. The core of the assisted living concept is that residents have difficulty in performing activities of daily living (including eating, bathing, toileting, ambulating, and transferring) and require assistance from a caregiver to perform these activities. Thus the target market for assisted living services is all age-, income-, and need-qualified persons within the market.

We conduct the analysis for the current year (2016). Reflecting the relatively strong incomes in the market and to provide a conservative picture of demand, we define the minimum income for qualification in the market as $60,000. It is generally accepted that a household would be willing to spend as much as 80% to 90% of its income on the fee for an assisted living bed given the vast array of care and services provided. Based on this assumption, a monthly fee of approximately $4,000 to $4,500 would be affordable to a household with an income of $60,000.

We note, however, that our analysis does not include any allocation for spend down of assets to supplement assisted living costs—which is a reality amongst a significant number of residents—nor does it include potential contributions from family members, which also is a factor in reality. Therefore, we believe that setting $60,000 as the minimum income qualification for the market creates a realistic but at the same time appropriately conservative definition of the age- and income-qualified market.

The need qualification factor that we employ is extremely conservative. We utilize data from a survey by the US Census Bureau updated in 2004 that depicts limitation with activities of daily living (ADLs) by age cohort and by severity of limitation (with categories for no limitation, with an instrumental activity of daily living only, limitation with 1-2 ADLs, and limitation with 3-5 ADLs). Our standard assisted living methodology utilizes limitation with 3-5 ADLs as predictive for need for assisted living care. This approach is conservative in that it yields a relatively high acuity target market. We believe, however, that it is most reflective of what the assisted living product has evolved into: a need-driven, formal caregiving setting that effectively has replaced the traditional private pay long-term care nursing home. Our reasoning is based on the following factors:

1) It is well established that prospects do not want to move into assisted living facilities and will remain at home as long as possible before needing to move to a facility.

2) In most professionally managed facilities a significant number of residents have recently suffered a catastrophic event that required hospitalization, and many in fact are direct discharges from acute care or subacute care facilities. This underscores the need-driven nature of assisted living and that many prospects have numerous health complications and are relatively high acuity.

3) The rise of assisted living has been in part to the detriment of nursing homes, many of which have experienced encroachment into their traditional private pay long-term care market share by assisted living facilities.

4) Length of stay in assisted living facilities across the country is only approximately two years, another sign of the high acuity of residents at move-in.

5) Persons with need for assistance with 1 or 2 ADLs are better able to have their care needs met in informal care settings such as through a family caregiver or even through adult day and also home health services, as well as many group homes and "mom and pop" care homes. Screening out these lower acuity individuals attempts to remove from the potential pool of competitive alternatives these informal caregiving settings.

Our market penetration analysis for the $60,000+ income scenario is presented in **Table 9**. The bullet points that follow summarize the steps and findings of this analysis.

- Based on interpolation, and broken down by age cohort, we estimate that there are 135 age- and income-qualified households (age 75 or older with incomes greater than $60,000) in the market area in 2016.
- To convert age- and income-qualified households into persons, we apply the household size, or ratio of population (persons) to households within a given age cohort throughout the market. After applying the persons per household ratios we estimate that there are 193 persons in age- and income-qualified households in the market.
- We then apply the need qualification factor. The US Census Bureau data indicates that 9.7% of the population age 75 to 84 has a limitation with 3 to 5 ADLs and 28.6% of the population age 85 and older has a limitation with 3 to 5 ADLs. Applying the need screen yields a total age, income, and need qualified target market (assisted living bed need) of 28 persons.
- We then account for competitive supply. Based on our competitive analysis we estimate that there are 14 existing assisted living beds in the market, all of which are located at Sherburne Commons.

- There are no known planned additions to the supply within the market area.
- Subtracting out the 14 competitive beds within the market from the total assisted living bed need of 28 produces the net demand or surplus of demand over supply. The result in the market area is a modest **net demand of 14 beds**.
- The 14 total beds competing in the market equates to a **market penetration rate of approximately 50%** of the total assisted living demand of 28 persons. This actually is right in line with our typical target for a healthy competitive market of under 50%. (That being the case, this usually applies to markets with a larger need and that are more developed with inventory, in which the penetration rate is measuring the combined inventory of a number of properties and not just one provider.)
- In a typical project capture (or supportable beds) calculation we subtract out the existing competitive beds in the market from the qualified target market to leave the unserved target market. In this market this leaves an unserved target market (net bed demand) of just 14 persons.
- Since we do not have a specific community or number of beds for which we are testing, we conduct a supportable beds analysis rather than a traditional project capture analysis. This assumes a capture rate of the unserved qualified market (or market share) that should be achievable and calculates the number of supportable residences based on the capture assumptions. In this analysis we also include for projected in-migration of residents from outside the market and adjust for stabilized occupancy at the subject. As Nantucket is an island, we do not believe it is realistic to assume any significant in-migration, although there will invariably be some move-ins that come from outside the market due to the presence of adult children/family in the area or some other factor. (In support of this assessment, we understand that three of the occupied residences at Sherburne Commons are households that moved in from outside of Nantucket.) Consequently, we assume that 90% of residents would come from within the defined market and that just 10% would be the result of in-migration. (In a more typical market, in-migration often accounts for 25% to 35% of move-ins.) We also assume a stabilized occupancy of 92% based on current national trends and underwriting standards.
- In our experience, any given project generally has the capacity to capture approximately 15% of the available qualified target market. Again, this is typical of a more developed market with competitive alternatives. For Nantucket island and its "captive" population, a much larger market share or capture rate seems reasonable and achievable, perhaps 50% of the unserved market or more.

- If we assume that any assisted living beds would be in addition to those already in existence at Sherburne Commons, there is very limited demand remaining in the market. Even assuming that a new facility would capture 50% of the unserved market of 14 persons, and taking into account some modest in-migration, the market could support only approximately eight beds at another facility.
- We also conducted sensitivity analysis to test for demand overall for the island, irrespective of the beds already at Sherburne Commons. The supportable beds analysis displays that assuming a typical capture rate of 15% the unserved target market of 28 persons could support approximately only 5 beds at a given project. Again, typical capture rates for mainland markets likely are not valid indicators of demand on any island (including Nantucket). Assuming a likely more valid 50% capture rate, the market could support **approximately 17 beds** of assisted living at any one community. This is similar in size (in fact a few beds larger) than the assisted living unit at Sherburne Commons that the community has struggled to fill. By some arguments, even more than 50% of the total demand could be captured by a provider with a strong product and program, and an appealing value position. This analysis is displayed in **Table 10**.

Table 9

2016 Assisted Living Demand Net Demand & Market Penetration Analysis Our Island Home Market Area				
Household Income Qualification				
	Age	**Households**	**Income**	**Age/Income**
			$60,000+	**Qualified HHs**
	75-84	315	33.2%	105
	85+	129	23.7%	30
Total		**444**	**30.5%**	**135**
Conversion of Households to Persons				
	Age	**Age/Income Qualified HHs**	**Persons Per Household**	**Qualified Persons**
	75-84	105	1.39	145
	85+	30	1.57	48
Total		**135**	**1.43**	**193**
Assisted Living Need Qualification				
	Age	**Qualified Persons**	**Assisted Care Need**	**AL Demand**
	75-84	145	9.7%	14
	85+	48	28.6%	14
Total		**193**	**14.4%**	**28**
Total Assisted Living Bed Need				**28**
Competitive Supply				
	Existing Beds			14
	Planned Beds			0
	Subject Existing Beds			0
Total Assisted Living Bed Supply				**14**
Net Bed Demand (Surplus)				**14**
Market Penetration Rate				**50.4%**

Table 10

2016 Assisted Living Demand Supportable Beds Analysis Our Island Home Market Area	
Capture Rate Calculation	
Total Unserved Market	28
Achievable Project Capture Rate	**50.0%**
Supportable Beds at Project from Market	**14**
Stabilized Occupancy	92.0%
Market Draw	90.0%
Total Supportable Beds in Market	**17**

Low Income (Medicaid) Assisted Living Demand

We also conduct the same assisted living demand calculation specifically targeted to the low income population that represents potential Medicaid beneficiaries and could in theory be served by an assisted living program sponsored by a Medicaid-funded Home and Community-Based Services Waiver or similar program. This program has proven to be viable in Massachusetts and could represent an option to be considered at Our Island Home (and on the island in general).

The approach is exactly the same as the market rate assisted living demand calculation. The difference is that we apply an income ceiling rather than a minimum income. For the purposes of this analysis we assume a maximum household income of $25,000; thus the target market is comprised of all individuals age 75 and older from households with incomes of less than $25,000 and with need for assistance with activities of daily living, as defined in the market rate examination.

The result of this calculation is a determination of a total low income (Medicaid) assisted living bed need of 41 persons, as exhibited in **Table 11.** In our experience, demand for such care significantly outweighs potential supply in most markets and there is typically a sizeable unserved population. Furthermore, it is realistic for a facility with low income targeted beds to capture a significant portion of the available target market and capture rates are much higher than for market rate assisted living (due to the lack of viable and comparable alternatives in most markets). Given the unique situation on Nantucket, it does not seem unreasonable for a facility to meet most of this available demand and capture more than 50% of the available market share. Consequently, we conclude that a facility readily could fill approximately 20 beds of low income targeted assisted living (and likely more).

Table 11

2016 Assisted Living Demand Net Demand & Market Penetration Analysis Our Island Home Market Area				
Household Income Qualification				
	Age	**Households**	**Income**	**Age/Income**
			<$25,000	**Qualified HHs**
	75-84	315	31.7%	100
	85+	129	47.0%	60
Total		**444**	**36.1%**	**160**
Conversion of Households to Persons				
	Age	**Age/Income Qualified HHs**	**Persons Per Household**	**Qualified Persons**
	75-84	100	1.39	138
	85+	60	1.57	95
Total		**160**	**1.46**	**233**
Assisted Living Need Qualification				
	Age	**Qualified Persons**	**Assisted Care Need**	**AL Demand**
	75-84	138	9.7%	13
	85+	95	28.6%	27
Total		**233**	**17.4%**	**41**
Total Assisted Living Bed Need				**41**

Dementia Care Demand

The methodology for calculating demand for assisted living/personal care-based Alzheimer's-dedicated (or dementia care) beds is very similar to the demand methodology used for traditional assisted living and determines a target market of age, income, and need-qualified persons in the same manner. There are two key differences. The first is that Alzheimer's demand examines the population age 65 and older rather than 75 as the onset of the disease can be earlier and the degeneration more rapid in some individuals. While prevalence is comparatively low in the 65 to 74 age cohort, due to the size of the population within these cohorts this age group does form a measurable portion of the universe of persons that need Alzheimer's care. The second key difference is that in lieu of need for assistance with activities of daily living, the need or frailty screen applied to the age- and income-qualified population in the Alzheimer's methodology is an estimated prevalence of probable Alzheimer's disease in the population by age cohort. (We note that while diagnostic methods have improved in recent years and Alzheimer's disease and related disorders are now routinely identified and diagnosed earlier in the process and more often, the only known truly valid

determination of whether a person has Alzheimer's disease is post-mortem upon autopsy; as a result, all estimates of Alzheimer's in the living are based on diagnostic factors generally said to reflect "probable" Alzheimer's.)

A second acuity screen is then applied to factor out the highest acuity or end stage population which we believe would not be appropriate for residence in an assisted living facility (these residents would likely be in a nursing home or perhaps a hospice). Popular theories speculate that there are anywhere from three to seven progressive stages of the disease. We utilize data based on a three-stage accounting of the disease based on the level of cognitive deficits and associated behavior that classifies those inflicted as either mild, moderate, or severe/high acuity. Our approach is that those with mild to moderate cognitive deficiencies and symptoms are appropriate for assisted living. Data on prevalence is taken from a well-known, and still widely accepted study by Dr. Denis A. Evans and associates published in the Harvard Medical School Journal and Journal of the American Medical Association ("Prevalence of Alzheimer's Disease in a Community Population of Older Persons Higher Than Previously Reported", *JAMA*, 1989, 262 (18)). In a follow up study, Dr. Evans found that approximately one quarter of those with probable Alzheimer's would be classified as mildly impaired, one half as moderate, and 26% were severe. Therefore, our demand methodology filters out the 26% of those with the disease that would be categorized as severe.

Dementia care fees are also typically somewhat higher than those for traditional assisted living due to the specialized care programs and higher staffing levels of these units. Accordingly, for the purposes of this analysis, we test for demand assuming both $60,000 and a more conservative scenario with $75,000 as the minimum qualifying income. As with the assisted living demand analysis, the dementia care demand analysis is highly conservative in that it does not include any allocation for spend down of assets to supplement costs or potential contributions from family members.

Our market penetration and project capture analyses for the $60,000+ income scenario are presented in **Table 12** and **Table 13.** As with assisted living, we utilize the current year (2016) as the test year. The bullet points that follow summarize the steps and findings of these analyses. We note that as Alzheimer's disease and related dementias are often difficult to diagnose, many of those with the disease or a related disorder go undiagnosed and do not receive any care. Additionally, there is more reliance on informal caregiving settings to assist loved ones, as well as adult day services. Accordingly, penetration and capture rates experienced in many markets – and those that we typically would consider to be achievable and supportable in a given market – are much lower than for assisted living.

- Based on interpolation, we estimate that there are 462 age- and income-qualified households (age 65 or older with incomes in excess of $60,000) in the market area in the current year.

- To convert age- and income-qualified households into persons we apply the persons per household ratios. After applying these ratios we estimate that there are 708 persons in age- and income-qualified households in the market.
- We then apply the prevalence of probable Alzheimer's factor. There are many estimates of this available that can vary widely in prevalence findings. Studies by the aforementioned Dr. Evans and colleagues produced the following estimates of prevalence: 1.5% of the population age 65 to 69; 3.0% of the population age 70 to 74; 18.7% of the population age 75 to 84; and 47.2% of the age 85 and older population. Applying the prevalence screen yields a total age-, income-, and need-qualified target market of 57 persons.
- Applying the second acuity screen of 74.1% mild and moderate stage/cognitive impairment (and therefore appropriate for placement in an assisted living facility) reduces the qualified target market to 43 persons.
- We then account for competitive supply. With the unit at Sherburne Commons having been taken offline, there are no known specialized market rate (private pay) dementia care beds serving the population in Nantucket.
- The result in the market area is a **net demand of 43 beds**.
- As there are no existing beds, the **market penetration rate is 0**% of the total Alzheimer's assisted living bed need of 43.
- We note that the eight beds at Sherburne Commons would have represented a capture rate of approximately 16% of the unserved target market, once adjusting for modest in-migration and stabilized occupancy, as in the assisted living demand calculation.
- If we assume—similar to the assisted living analysis—that any given community could reasonably expect to achieve a capture of approximately 50% of the unserved market given the captive nature of the target market, the market could support approximately 25+ beds at a given community. (We note that in our experience, a benchmark for an achievable capture rate is generally around 5%, although it can be higher in less developed, exurban markets).
    - Acceptable industry benchmarks for penetration and capture rates for dementia care are continuing to rise with the increased proliferation of the product and consumer utilization.

Table 12

2016 Alzheimer's Care Demand Net Demand & Market Penetration Analysis Our Island Home Market Area				
Household Income Qualification				
	Age	**Households**	**Income**	**Age/Income**
			$60,000+	**Qualified HHs**
	65-74	611	53.6%	327
	75-84	315	33.2%	105
	85+	129	23.7%	30
Total		**1,055**	**43.8%**	**462**
Conversion of Households to Persons				
	Age	**Age/Income Qualified HHs**	**Persons Per Household**	**Qualified Persons**
	65-74	327	1.57	515
	75-84	105	1.39	145
	85+	30	1.57	48
Total		**462**	**1.53**	**708**
Alzheimer's Prevalence Qualification				
	Age	**Qualified Persons**	**Alzheimer's Prevalence**	**Alzheimer's Need**
	65-74	515	1.5%	8
	75-84	145	18.7%	27
	85+	48	47.2%	23
Total		**708**	**8.1%**	**57**
Assisted Living Alzheimer's Level				74.1%
Total Alzheimer's Assisted Living Bed Need				**43**
Competitive Supply				
	Existing Beds			0
	Planned Beds			0
	Subject Existing Beds			
Total Alzheimer's Assisted Living Bed Supply				**0**
Net Bed Demand (Surplus)				**43**
Market Penetration Rate				**0.0%**

Table 13

2016 Alzheimer's Care Demand Supportable Beds Analysis Our Island Home Market Area	
Supportable Beds at Subject Calculation	
Total Unserved Market	43
Achievable Project Capture Rate	**50.0%**
Supportable Beds at Project from Market	**21**
Stabilized Occupancy	92.0%
Market Draw	90.0%
Total Supportable Beds in Market	**26**

- Sensitivity analysis testing the more conservative $75,000+ minimum income scenario yields a total bed need and unserved market of 35 persons. Under the same 50% capture/market share assumptions, the market still could support approximately 20+ beds. This is exhibited in **Table 14** below.

Table 14

2016 Alzheimer's Care Demand Supportable Beds Analysis: $75,000+ Income Scenario Our Island Home Market Area	
Supportable Beds at Subject Calculation	
Total Unserved Market	35
Achievable Project Capture Rate	**50.0%**
Supportable Beds at Project from Market	**17**
Stabilized Occupancy	92.0%
Market Draw	90.0%
Total Supportable Beds in Market	**21**

Overall this data suggests that there is unmet demand for private pay/market rate specialized dementia care on Nantucket Island and that the market has adequate depth and demand to support a small unit (certainly as small as the unit that was in operation at Sherburne Commons).

Adult Day Services Demand

For the purposes of this analysis we also perform a sensitivity to our typical dementia care demand analysis to assess likely need and demand for adult day services in the market. As adult day service utilization is most typically the result of persons with some impact from dementia and its burden on a family caregiver, we estimate potential demand by focusing exclusively on the mild stage of impairment or low acuity need/demand discussed within the dementia care demand analysis. This is approximately 25% of the Alzheimer's population, as outlined by Dr. Evan's studies. We factor out the moderately and severely impaired population that forms the core of our assisted living and nursing-based dementia care demand. (It should be noted, however, that the mildly impaired population is included within our assisted living-based demand, and thus there is overlap and a double counting between this demand and the demand being calculated for adult day services, which is a subset of the previously examined dementia care demand).

The rest of the assumptions from, and the approach employed within the dementia care demand also are utilized in this calculation. Based on the $60,000+ income scenario, there is a total demand for 14 beds/slots of low acuity dementia care in the market that could be met via adult day services. This is displayed in **Table 15.**

Table 15

2016 Alzheimer's Care Demand: Low Acuity/Adult Day Services Net Demand & Market Penetration Analysis Our Island Home Market Area				
Household Income Qualification				
	Age	**Households**	**Income**	**Age/Income**
			$60,000+	**Qualified HHs**
	65-74	611	53.6%	327
	75-84	315	33.2%	105
	85+	129	23.7%	30
Total		**1,055**	**43.8%**	**462**
Conversion of Households to Persons				
	Age	**Age/Income Qualified HHs**	**Persons Per Household**	**Qualified Persons**
	65-74	327	1.57	515
	75-84	105	1.39	145
	85+	30	1.57	48
Total		**462**	**1.53**	**708**
Alzheimer's Prevalence Qualification				
	Age	**Qualified Persons**	**Alzheimer's Prevalence**	**Alzheimer's Need**
	65-74	515	1.5%	8
	75-84	145	18.7%	27
	85+	48	47.2%	23
Total		**708**	**8.1%**	**57**
Day Care/Low Acuity Alzheimer's Level				25.0%
Total Low Acuity Alzheimer's Bed/Slot Need				**14**

Nursing Care

The standard methodology we employ in determining general demand for long-term/intermediate care nursing beds is a simple and direct method that emulates the methodology employed by many state health planning agencies in determining certificate of need (CON) eligibility and demand within a given planning area. As this methodology emulates standard CON determination, income of prospects is not a determining factor. (The CON process assumes that all payors are eligible, and in fact was established and continues to be utilized in large part to ensure that states do not overextend themselves beyond the budget for Medicaid dollars available to nursing facilities.) Thus the target market of this analysis is all prospective nursing home residents, including private pay and Medicaid, as well as Medicare beneficiaries. Age and need are considered the only relevant determinants of target market and demand.

The methodology quantifies the number of age- and need-qualified persons within the market area. Typically, nursing home demand focuses on the 65+ population in a market. Our formula does the same, breaking down population into five-year age

cohorts (65 to 69, 70 to 74, 75 to 79, 80 to 84, and 85+) by gender. We interpolate these age cohorts based on the demographic data for the market and overlaying the five-year age cohort distribution for the population nationally. Applied to the raw population data is the incidence of nursing home need and utilization by age as determined by the National Institutes of Health (NIH). This calculation yields the target market for services.

From this figure we subtract the total number of nursing beds in the market to derive a surplus (more estimated need than existing beds) – which indicates additional need/demand for nursing beds in the market – or a deficit, which indicates the market is already over-bedded. **Table 16** displays this demand analysis for the defined market area, the steps of which are summarized in the bullet points that follow:

- Using the aforementioned quantitative criteria, we have determined that in 2016 there is a total age-qualified population of 824 females and 702 males.
- Applying the NIH incidence and utilization ratios by age and gender we project a total nursing bed need within the market area for 60 nursing beds.
- Based on discussions with representatives of Cottage Hospital, we estimate that it utilizes approximately 12 skilled nursing swing beds that represent the total competitive supply to Our Island Home in the market.
- The need calculation indicates that the total nursing bed need of 60 beds should be sufficient to support the hospital swing beds as well as the full allocation of 45 certified beds at Our Island Home.
- It is worth noting that our industry experience suggests that traditional nursing home utilization is decreasing and will continue to do so in the foreseeable future as alternative non-institutional settings and methods for skilled and long-term care are increasing in popularity. Thus calculating a need for 60 nursing beds by this standardized methodology likely is overstating potential future demand/utilization of traditional nursing care beds on the island.

Table 16

2016 Nursing Bed Need Our Island Home Market Area				
Population by Age and Gender				
	Age	**Population**	**Incidence**	**Need**
Females				
	65-69	266	1.23%	3
	70-74	193	1.23%	2
	75-79	128	5.92%	8
	80-84	97	5.92%	6
	85+	140	22.15%	31
Total		**824**	**5.38%**	**44**
Males				
	65-69	266	0.96%	3
	70-74	183	0.96%	2
	75-79	115	3.82%	4
	80-84	77	3.82%	3
	85+	61	12.93%	8
Total		**702**	**2.17%**	**15**
Total Nursing Bed Need				**60**
Competitive Supply				
	Existing Beds			12
	Planned Beds			0
	Subject Existing Beds			45
Total Nursing Bed Supply				**57**
Net Bed Demand (Bed Deficit)				**3**

This analysis further suggests that the total supply on the island of nearly 60 nursing beds including Our Island Home and the hospital swing beds is appropriate for the level of need that there should be on the island. On its surface, it suggests that a reduction in beds at Our Island Home is not necessary (whether rebuilt or not). The reality, however, is that Our Island Home is struggling to maintain census, and that a significant portion of its beds typically are filled with patients that are not even at a nursing home appropriate level of care, but do not have any appropriate alternative care setting and thus wind up at the Home. We estimate that a census of no more than approximately 30 to 35 patients is actually receiving nursing care at Our Island Home.

The question this all begs, naturally, is where is this additional demand that should be filling beds at Our Island Home? One theory is that the antiquated product—which certainly is an obstacle—is reducing likely utilization at Our Island Home. Beyond this, however, a reasonable—and to this analysis fundamental—question is whether

utilization would be increased with a state-of-the-art product with enhanced marketability? Given patterns of under-utilization of virtually all levels of bricks and mortar post acute and long-term care on the island, it seems that something a little deeper rooted is at work (such as well-entrenched preference for at-home and informal care network options) and the outlook for expanding utilization of nursing care beds at Our Island Home—even with more appealing product—is unlikely or at the very best limited and uncertain.

Furthermore, as noted, the future trend across the industry appears to be reduction in traditional nursing care beds with long-term and skilled care needs being met with increased regularity via alternative methods and settings.

Observations & Takeaways

The following summarizes observations and key takeaways from our examination of the market dynamics impacting Our Island Home and the long-term care environment in general in Nantucket.

- The post acute care delivery system on the island is fragmented: there is no organization providing a continuum or partial continuum of senior living and long-term care and consumers needs to go to a different facility and location for virtually every different level or type of care; and the organizations that are providing post acute care and services do not have any affiliation or particular relationship that streamlines and simplifies the process and benefits the consumer. This is a particular challenge given the small size of the island and modest number of long-term care beds that it supports (and exist). Simply put, there is very little critical mass for any one provider to maintain an economically self-sufficient operation while serving only a specific level of care or piece of the continuum.
- Demand for nursing care on the island (60 beds) should be sufficient to fill the 10-12 beds typically being operated as skilled nursing swing beds at Cottage Hospital and also the 45 certified beds at Our Island Home. This suggests that challenges in maintaining census at Our Island Home are not market or demographically driven. Rather, they more likely are a function of internal factors or product limitations (and an obsolete physical plant) that limits its marketability to prospective move-ins.
    - One theory as to why Our Island Home is struggling to maintain beds that on paper can be filled by demand from within the market is that the antiquated product lacks the marketability to do so and is adversely impacting the ability to attract qualified prospects.

- This raises a fundamental question as to whether utilization would be increased with a state-of-the-art product with enhanced marketability. Our belief is that given the patterns of under-utilization of virtually all bricks and mortar post acute and long-term care on the island, it seems that something a little deeper rooted is at work; we speculate that perhaps at-home and informal care network options are being utilized with greater frequency than typical in other markets and this is encroaching on the demand that typically would be utilizing nursing care (and specifically Our Island Home) and more generally all of the long-term care facilities on the island. Consequently, we believe that the outlook for expanding utilization of nursing care beds at Our Island Home beyond the 30+ beds actually providing nursing care at this time—even with more appealing product—is likely limited and at the very best uncertain.
- Furthermore, given the aforementioned trend of reduction in an decreasing utilization of traditional nursing care beds, an effort to expand bed capacity beyond current levels does not seem prudent at this time.

- The island population is relatively "captive" to the long-term care options that exist on the island. (It is not reasonable to expect that prospects will go off-island to the mainland to seek alternatives.) Given the lack of competitive alternatives on the island, typical rules and metrics of project capture and market share do not apply, and we would anticipate that a quality provider could capture a significant portion of the unmet demand for a given level of care.
  - In other words, it is not unreasonable that one provider—lacking any direct competition—could capture 50% or more of the demand for assisted living and specialized dementia care.
  - That being the case, any one community (whether Sherburne Commons or another provider) in theory should be able to fill and support approximately 15 beds of assisted living and 20-25 beds (or more) of dementia care.
- It appears that all levels of care—nursing care at Our Island Home, assisted living at Sherburne Commons, and previously dementia care at Sherburne Commons—are being under-utilized relative to the demand for these levels of care on the island given the lack of competitive alternatives available. As it seems unlikely that the population on the island is healthier than the norm (in fact, the overall island health assessment suggests that the opposite may be true), the struggle of these communities to fill and sustain beds indicates that qualified prospects simply are electing not to utilize the existing facilities. This suggests

that at-home and informal caregiving means and settings are being utilized more heavily than typical (and this in effect is eating into demand for the traditional bricks and mortar settings).

- There is more than adequate demand to fill the eight beds of specialized dementia care previously in operation at Sherburne Commons, even assuming a capture of only a portion of the qualified target market that is more characteristic of typical markets in which there are competitive alternatives that are available (and not an island with only one provider). This suggests two things:
    - A lack of expertise with this product and market may have played a role in the lack of success of the unit at Sherburne Commons; and
    - There is potential to fill a small (certainly 10 beds and perhaps as large as 20 beds) specialized dementia care unit if it is appropriately priced, positioned, and marketed.

ANALYSIS OF OPERATION

Our analysis of the operation reviewed a variety of categories, including the physical plant, satisfaction measurement, staffing information, patient safety, survey and accreditation, quality of life and quality of care as well as progress towards deinstitutionalization.

1. PHYSICAL PLANT

Based on the report submitted by the SMRT Architectural firm the current OIH building is out of compliance with current building codes and requires replacement. We agree that the structure is inadequate and it presents significant challenges to effective operations, and to resident quality of life.

2. RESIDENT INTERVIEWS

Question 1: How long have you lived here?

Responses: 10

Numerical responses ranged from 3 months to 5 years with 5 of the sample having spent 2 years or more at OIH.

Verbal responses included:

- most of my life
- a long time

Question 2: How did you come to be here?

Responses: 10

3 Falls
2 No one to provide care at home – spouse deceased
1 Too much care for my spouse to provide
2 Health issues - came here (Nantucket) to be closer to my family
2 Health issues – not listed to preserve privacy of the small sample

Question 3: Did you have any help at home prior to coming here?

Responses: 10

6 yes
4 no

Comments

6 Housekeeping assistance
2 Assistance with physical care 2 times per week

Question 4: Do you have enough privacy here?

Responses: 10

4 yes
6 no

Comments

3 attributed satisfaction to having a good roommate
2 attributed satisfaction to having no roommate
3 stated it was especially hard when visitors came
1 stated they leave their room often because it's too cold

Question 5. When you came here were you able to bring things from home that were important to you?

Responses: 10

10 No

Comments

All reported bringing a few personal items because of space limitations.

Question 6: How often did you get outdoors in the good weather last year?

Responses: 9

1 every day
1 most days
1 3 times a week
1 as much as possible
2 once a week
1 only once
1 not very often
1 never

Question 7: How important to you is your location close to the water?

Responses: 10

1 very important it's therapeutic
2 important
1 it's nice but not vital
1 would miss it, but would not complain about moving
1 it doesn't matter. It's not my top priority
4 not important

Question 8. How is the food here, are you able to get snacks?

Responses: 10

8 food is good
1 food is pretty good
1 food is okay, but repetition
10 you have to ask for snacks

Question 9: how often do you get your favorite food?

Responses:10

1 quite often
1 once a week
2 regularly
6 not often

Question 10: How easy is it to live in your room and use the bathroom?

Responses: 10

2 difficult because of roommate and the need to share
6 difficult very cramped/difficult to use
2 easy to use (interviewer's note: both of these responders walked without assistive devices)

Question 11: do you have to follow the schedule here (getting up going to bed eating and so on?

Responses: 10

the responses were mixed:
I can watch TV, read but can't go out on my own.
You can do some things, but watching TV at night can be a problem if your roommate wants to sleep.
I'm a late sleeper so I can get up between 9 and 10
I'm free to do things I like
Yes. Meals are scheduled
I can sleep in if I want there's no set time to go to sleep
I get up in time for breakfast and go to bed to keep warm
I follow a schedule get up for breakfast- no set time for bed.
Not getting up, you might miss breakfast
You can say up late if you want

Question 12: Do you get bored or lonely here is there enough to do?

Responses: 10

6 no, there is not enough to do
4 yes I have enough to do

Question 13: What do you wish you could change about living here?

Responses: 10

4 no change
5 more living space
5 private room
2 more to do
1 friendlier staff

Question 14: What are your thoughts and feelings about building a new Our Island Home

Responses: 10

9 yes
1 no opinion

Comments:

Good idea to have single rooms
I don't mind change
A good idea to build a new facility
Do it!
It should be replaced
It would be good to see a new building with more space
I'm positive about the new building

Question 15. If the new building is not located in this exact spot. How would you feel about?

Responses: 10

6 it doesn't matter/ok
1 I would miss the location, but would accept it if necessary
1 if it can't be done any other way it would be okay
1 it would be too bad I would miss the views
1 I would not be happy about it

Comments:

No problems the design of the building is the most important thing

Question 16: If the new building meant living off island for a year during the construction how would you feel about that?

Respondents 10

7	no problem with that
1	I would have to deal with it
1	I would not like to leave the island
1	I would prefer one move to another location

3. SATISFACTION MEASURES

Customer satisfaction evaluations in long-term care are conducted for humanistic reasons, that is, to evaluate if the needs of individuals are being met, for marketing reasons to assure that word-of-mouth supports high occupancy and for economic reasons since high levels of satisfaction yield better clinical outcomes at lower cost. Typically, residents, staff and family satisfaction surveys are conducted at least annually and as frequently as quarterly in some organizations.

Resident

Studies in nursing homes have concluded that resident satisfaction data provide information about the quality of care that is different from information gleaned from clinical indicators. Resident satisfaction surveys typically include questions about activities, facility environment, food, clinical care and pain management, personal care, staff interaction, privacy, autonomy, cleanliness, and housekeeping.

Staff

Job satisfaction is defined as the favorableness with which employees view their work. Research suggests that job satisfaction of employees within an organization is related to an organization's ability to change. Since a consistent problem for the last 20 years has been the inability of most nursing homes to change in a meaningful way, especially in the area of quality of care, in this context improving job satisfaction may be important in organizational improvement. Organizations with satisfied employees have fewer resident falls, fewer pressure ulcers and higher occupancy rates.

Family

Family satisfaction is reflective of facility quality. The most important features to families include warm staff interaction, cleanliness, resident grooming, good food, and consistent daily routines.

Our Island Home

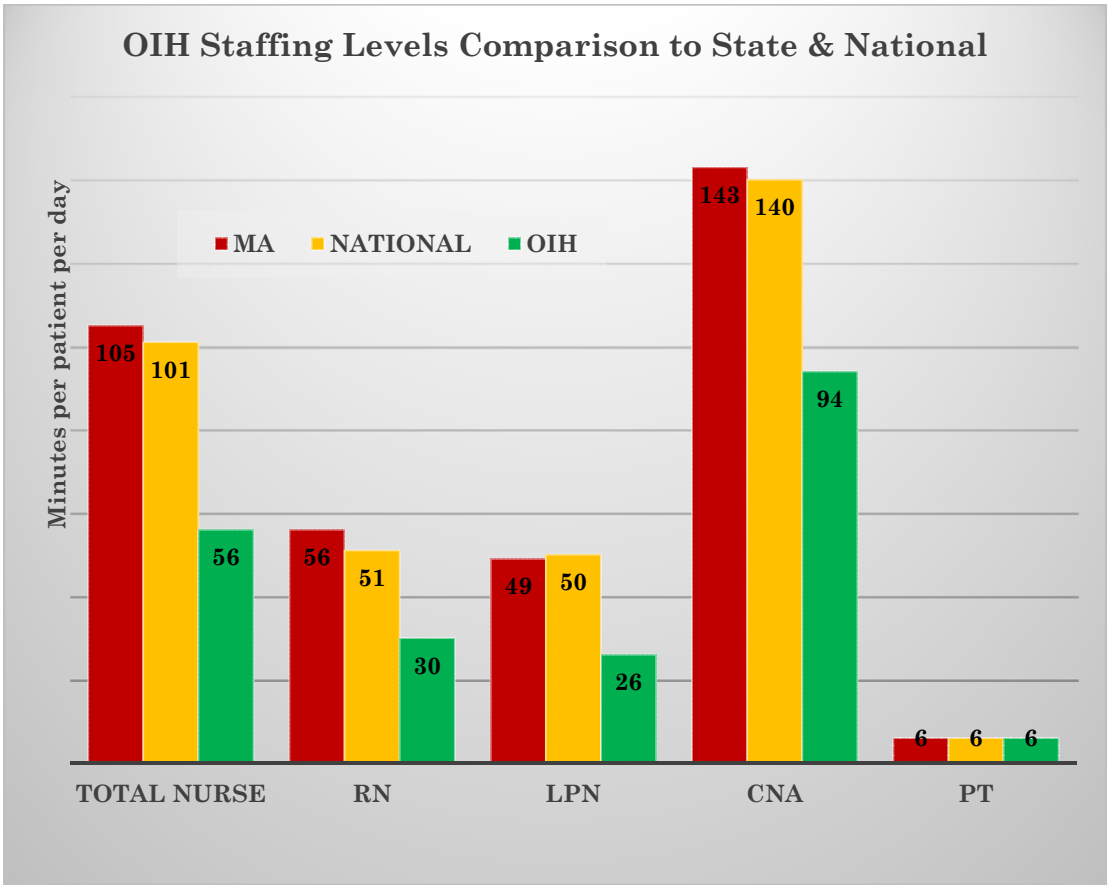
Our Island Home does not have a routine schedule of satisfaction surveying. The last satisfaction survey conducted was in 2012. The survey was a 31 question family satisfaction survey. It was completed by 3 respondents (0.13% return). The overall average score was 3.7 on a 0 - 4 point scale (0 very poor 4 very good).

4. STAFFING PATTERNS

A relationship exists between quality of care and staffing ratios[7]. Higher levels of certified nursing assistant staffing ratios are associated with higher quality of life and quality of care outcomes. Higher levels of licensed nursing staff are associated with improved clinical outcomes and decreased hospitalization. The following compares the OIH staffing with Massachusetts and national averages:

STAFFING	MA	National Average	OIH	OIH Difference MA National
Total number of residents	98.7	86.8	41	
Total number of licensed nurse staff hours per resident per day	1 hour 45 minutes	1 hour 41 minutes	56 minutes	-49 -45
RN hours per resident per day	56 minutes	51 minutes	30 minutes	-26 -21
LPN hours per resident per day	49 minutes	50 minutes	26 minutes	-23 -24
CNA hours per resident per day	2 hours 23 minutes	2 hours and 20 minutes	1 hour 34 minutes	-49 -46
Physical therapy staff hours per resident per day	6 minutes	6 minutes	6 minutes	0 0
Total differences in staffing per resident per day				-2h 47m -2h 16m

[7] Castle. Nursing Home Caregiver Staffing Levels and Quality of Care: A Literature Review. Journal of Applied Gerontology August 200827: 375-405,



These staffing levels are likely contributors to the clinical outcome levels OIH is now obtaining.

5. CLINICAL QUALITY MEASURES

The Centers for Medicare and Medicaid Services maintains a national database known as the Minimum Data Set (MDS). The Data for quality measures come from the MDS Repository. The MDS is an assessment done by the nursing home at regular intervals on every resident in a Medicare- or Medicaid-certified nursing home. Information is collected about the resident's health, physical functioning, mental status, and general well-being. These data are used by the nursing home to assess each resident's needs and develop a plan of care. This is publicly reported on the website Nursing Home Compare. The following compares OIH quality measures to Massachusetts and national averages:

LONG TERM CARE RESIDENTS

Percent of long stay residents experiencing one or more falls with major injury.	**OIH**	**MA**	**US**
Why this measure is important falls can cause moderate to severe injury, including death	**5.4% Above Average**	3.0%	3.3%

Percent of long stay residents with a urinary tract infection	**OIH**	**MA**	**US**
Why this measure is important Most urinary tract infections can be prevented by keeping area clean, emptying the bladder regularly, and drinking enough fluid.	**18.2% worse than average**	4.6%	5.1%

Percent of long stay residents who self- report moderate to severe pain	**OIH**	**MA**	**US**
Why this measure is important When pain is not treated residents may not be able to perform daily routines, may become depressed or have an overall poor quality of life.	**16.0% worse than average**	5.7%	8.1%

Percentage of long state residents with pressure ulcers	OIH	MA	US
Why this measure is important pressure ulcers cause pain and other complications like skin and bone infections and they take a long time to heal.	**2.5% better than average**	4.8%	5.9%

Percentage of long stay residents with pressure ulcers	OIH	MA	US
Why this measure is important pressure ulcers cause pain and other complications like skin and bone infections and they take a long time to heal.	**2.5% better than average**	4.8%	5.9%

Percentage of long stay low risk residents who lose control of their bowels or bladder.	OIH	MA	US
Why this measure is important Loss of bowel or bladder control isn't a normal sign of aging and can be successfully treated.	**53.7% slightly worse than average**	**52.5%**	46%

Percent of long stay residents who were physically restrained	OIH	MA	US
Why this measure is important a resident who is restrained can experience the complications of immobility and some of her from impaired dignity.	**6.3% worse than average**	1.2%	0.9%

Percent of long stay residents who have had a catheter inserted and left in their bladder	OIH	MA	US
Why this measure is important Use of a catheter may result in complications like urinary track or blood infection physical injury, skin problems, and bladder stones.	**7.3% worse than average**	2.6%	3.1%

Percent of long stay residents whose need for help with daily activities has increased	OIH	MA	US
Why this measure is important the resident's ability to perform daily functions is important in maintaining health status	**13.7% better than average**	15%	15.6%

Percent of long stay residents who lose too much weight	OIH	MA	US
Why this measure is important Aloss of 5% or more of body weight in one month is usually considered unhealthy too much weight loss can make a person week and change how medication works in the body.	**10.9% worse than average**	6 .7%	7.4%

Percent of long stay residents who have depressive symptoms	OIH	MA	US
Why this measure is important depression is a medical problem that can produce fatigue a loss of interest, poor appetite problems concentrating and sleeping.	**4.6%** worse than MA better than US	3.5%	5.6%

Percent of long stay residents who receive antipsychotic medication	OIH	MA	US
Why this measure is important These medications pose risk to the health of older adults and are only appropriate for individuals with psychiatric diagnoses.	**13.2%** **better than average**	19.3%	18%

Administration of vaccines	OIH	MA	US
Percentage of long stay residents assessed and given the pneumococcal vaccine	**91%**	**94.3%**	93.6%
Percentage of long stay residents assessed and given flu vaccine	**100%** **Better than average**	96.7%	94.9%

SHORT STAY RESIDENTS

Percent of short stay residents who self- report moderate to severe pain	OIH	MA	US
Why this measure is important When pain is not treated residents may not be able to perform daily routines, may become depressed or have an overall poor quality of life.	**25 %** **worse than average**	17.5 %	17.2 %

Percentage of short stay residents with pressure ulcers that are new or worsening	OIH	MA	US
Why this measure is important pressure ulcers cause pain and other complications like skin and bone infections and they take a long time to heal.	**2.9%** **worse than average**	1.2 %	1.2 %

Percent of short stay residents who receive antipsychotic medication	OIH	MA	US
Why this measure is important These medications pose risk to the health of older adults and are only appropriate for individuals with psychiatric diagnoses.	**0 % better than average**	1 .7 %	2.2 %

Percentage of short stay residents Administration of vaccines	OIH	MA	US
Percentage of long stay residents assessed and given the pneumococcal vaccine	**93.9%**	**82.4%**	81.9%
Percentage of long stay residents assessed and given flu vaccine	**93.3 %**	85.2 %	81.5 %

6. CMS RATING [8]

The Center for Medicare and Medicaid services creates the overall 5-star rating for nursing homes based on 3 parts: health inspections, quality measures and staffing. Star ratings for each part and the overall rating range from 1 star to 5 stars, with more stars indicating better quality. The Health inspections rating is based on the 3 most recent comprehensive inspections, and inspections due to complaints in the last 3 years. The quality measures score combines the values on eleven quality measures which are derived from clinical data reported by the nursing home. The staffing rating considers two measures: the Registered Nurse hours per resident per day; and the total staffing hours per resident per day. Staffing data are submitted by the facility and are adjusted for the needs of the nursing home residents.

[8] https://www.medicare.gov/NursingHomeCompare/About/HowWeCalculate.html

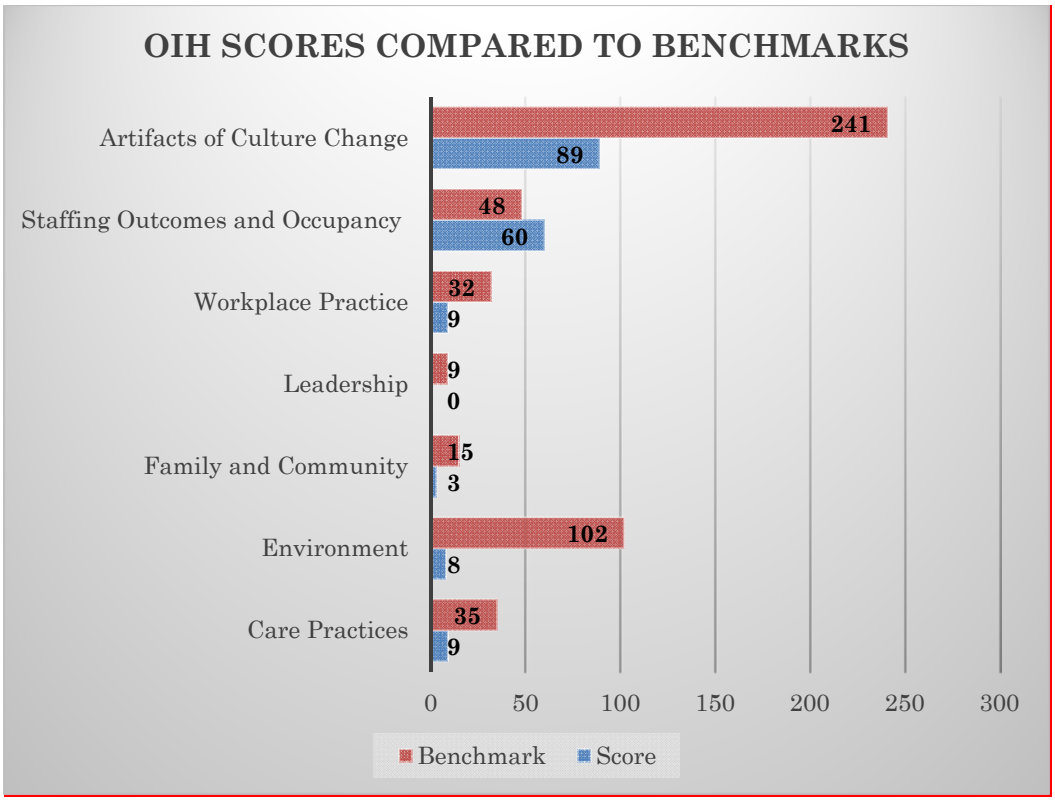
Center for Medicare and Medicaid Services Five Star Rating		
Overall	3 parts: • Health inspections • Quality measures • Staffing •	
Health Inspection	CMS bases health inspection ratings on the 3 most recent comprehensive (annual) inspections, and inspections due to complaints in the last 3 years. CMS places more emphasis on recent inspections.	
Staffing	CMS bases the staffing rating on 2 measures: 1) Registered Nurse (RN) hours per resident per day 2) total staffing hours per resident per day. Staffing data are submitted by the facility and are adjusted for the needs of the nursing home residents.	
Quality Measures	CMS combines the values on eleven QMs (a subset of the 18 QMs listed on Nursing Home Compare) to create the QM rating. QMs are derived from clinical data reported by the nursing home.	

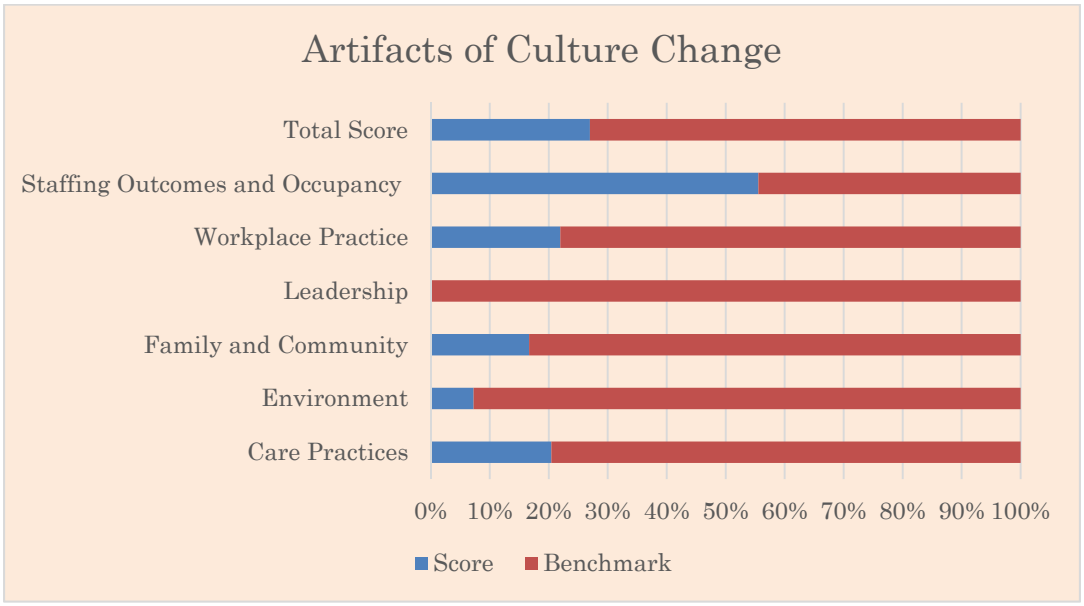
7. QUALITY OF LIFE & CULTURE CHANGE

The Artifacts of Culture Change[9] tool was developed in cooperation with the Centers for Medicare and Medicaid services to assist organizations in assessing the status of their progress in implementing culture change. Six components of the operation are examined and scored. Based on on-site observations and questioning of Our Island Home's Administrator, Artifacts was completed. The primary use of the tool is to create a baseline and then to use it to create an implementation plan for culture change, which includes benchmarks, and then to measure progress against goals.

[9] Artifacts of Culture change downloadable copy Developed by the Centers for Medicare and Medicare Services and Edu-Catering, LLP. Accessed online 3/1/2016: http://www.artifactsofculturechange.org/ACCTool

Artifacts Sections	Potential Points	Score	Benchmark
Care Practices	70	9	35
Environment	320	8	102
Family and Community	30	3	15
Leadership	25	0	9
Workplace Practice	70	9	32
Staffing Outcomes and Occupancy	65	60	48
Artifacts of Culture Change	**580**	89	241





The analysis indicates that Our Island Home is a very institutional facility operating primarily in the basic bureaucratic and procedural-based model without evidence of culture change practices.

ANALYSIS OF ADMISSIONS AND COMMUNITY RESOURCES

A review of the admissions and referral process indicated that a variety of referral sources recommended placement at Our Island Home. These included hospital social worker, community senior service providers and individual family members. A review of the current OIH resident population indicated that approximately 25% of the current residents had very low care needs (and correspondingly low reimbursement rates). Interviews indicated that there is a need on the island for affordable care alternatives to nursing home placement, which accounts for the low care needs residents. When community based services do not robustly address care at home the nursing home becomes a safety net or catchall for individuals who have unmet needs.

ISLAND SERVICES

There are 54 clients receiving some form of community-based services from the Nantucket Office for Elder Services, less than 10 residents receiving assisted living services at Sherburne Commons and 14 beds of supportive independent living at The Homestead, and interviewees reported a robust network of family caregivers and privately paid independent caregivers. The Regional Transit Authority provides accessible door to door senior transportation, there are nutrition and recreational programs at the Saltmarsh Senior Center. There is a safety net program to locate a wandering individual, a Palliative and Supportive Care Program which offers care, caregiver support and bereavement groups. The community also has a Meals on Wheels program and Visiting Nurse Services. The Academy Hill Apartments provide 27 housing units (12 subsidized units) for elderly residents of Nantucket, and Landmark House provides affordable subsidized housing as well. Notably, there appears to be no medical day care, specific dementia care program, or care management agency outside of the Office of Elder Services.

Analysis of Current Financials

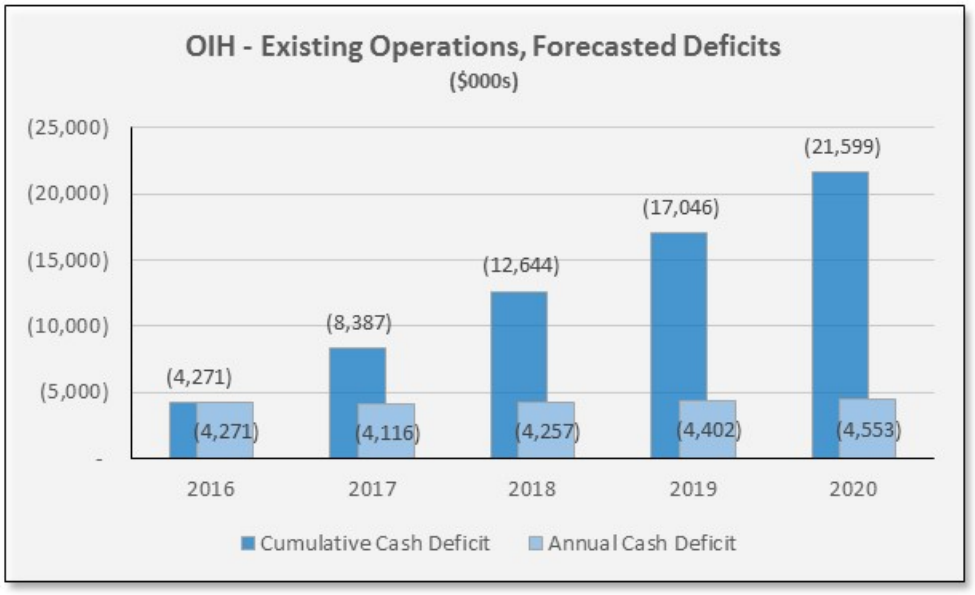
OIH has historically maintained a solid occupancy rate for its 45 bed facility. Between July 2014 and February 2016, OIH has averaged approximately 41.0 residents, or 91.2% occupancy. The maximum occupancy over that time was 43.6 residents, or 96.8% occupancy (October 2015). The minimum occupancy was 36.0 residents, or 80.0% occupancy (May 2014). OIH's average occupancy of 91.2% compares well to the average occupancy of SNFs across the United States of 82.3%, as well as the state average for Massachusetts SNFs of 86.8%[10].

Despite its favorable occupancy levels, however, OIH has been operating at a deficit for many years, requiring significant subsidy from the Town. Since 2010, OIH has participated in Massachusetts' Certified Public Expenditure program (CPE), which is a program that provides additional reimbursement for municipally owned skilled nursing facilities. The benefits received from CPE has helped cover a portion of the operating losses at OIH, and thus reduce the required Town subsidy; however, the timing of these payments is highly inconsistent (e.g. benefits tied to 2011 were not received until 2014), and the continuation of this program is uncertain. As a result, OIH (and by extension, the Town) cannot be expected to rely on CPE as a funding source in the future.

Between FY2013 and FY2015, the Town's average subsidy of OIH operations was $2,294,719. This included CPE funding of $1,017,038 in FY2014 and $1,690,143 in FY2015. Excluding the CPE funds received in those years, the average Town subsidy of OIH operations would have been $3,197,113.

An analysis of OIH's operations between FY2014 and year-to-date FY2016 (February 2016) indicates that OIH's operating challenges relate to both the revenue and expense inputs. As discussed previously, third party reimbursement rates from the federal and state governments (Medicare and Medicaid) are under significant pressure. At the same time, the cost of providing care is increasing. The cost of labor, technology, etc. are all contributing factors to the rise in the cost of care for SNF providers. These divergent pressures are expected to continue into the future with reimbursement levels failing to keep pace with rising costs. As a result, it is a near certainty that, as currently constituted, subsidies from the Town will continue to escalate. We have projected forward OIH's existing operations in order to highlight the projected deficits (aka required Town subsidy) over the next five years (FY2016-FY2020), as shown in the graph on the following page:

[10] The Henry J. Kaiser Family Foundation, www.kff.org/other/state-indicator/nursing-facility-occupancy-rates/



The above isolates OIH's operations and looks at the operating cash flow deficits exclusive of CPE fundings. It also assumes a zero balance in OIH's retained earnings and ignores subsidization from the Town. It is important to analyze the future cash needs of OIH in this manner given the uncertainty surrounding the CPE program, as discussed previously. By eliminating these extraneous factors, which may or may not be available in the future, this analysis provides a more accurate representation of the true cash flow needs of OIH going forward, and thus, the reliance on Town subsidy.

Based on this analysis, if OIH were to continue operating in its existing facility with no changes to programs, costs or reimbursement, the cumulative subsidy from the Town could exceed $21.0 million between FY2016 and FY2020 (again, excluding any potential CPE benefits).

As stated above, OIH's operating challenges relate to both revenue and expense issues. SNF operators across the country are facing similar reimbursement and cost pressures as OIH. Many providers, however, are able to manage these conflicting factors and operate with some level of marginal profitably, or at the least a manageable loss. An annual study prepared by Clifton Larson Allen, a global accounting and professional services firm, compares certain statistics obtained from its client base of 450 SNF operators. In the most recent report, CLA reported that the median Net Profit Margin for their SNF operator clients in the Northeast was 1.2%. The median Net Profit Margin for SNF providers across the United States was just 1.9%[11]. OIH's Net Margin for FY2014 and FY2015 was negative (100.8%) and (81.3%), respectively (excluding CPE receipts and Town subsidy payments).

[11] The 30th Edition: Skilled Nursing Facility Cost Comparison, Clifton Larson Allen LLP, 2015

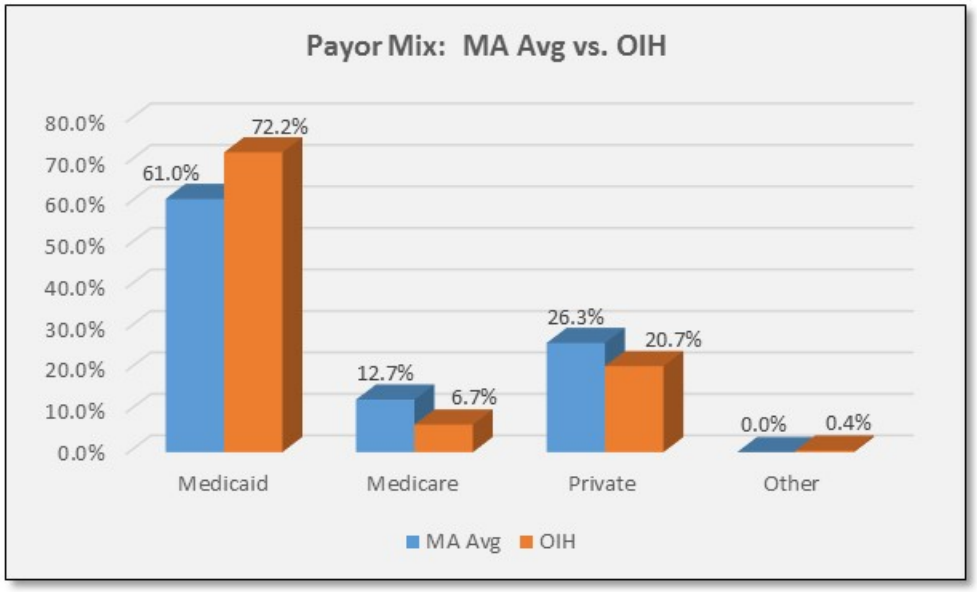
While many providers are able to manage costs and remain viable, OIH faces a different dynamic than others based on a variety of external and internal factors. External factors such as geographic location, put pressure on operating expenses as the cost of ordinary items like food, office and medical supplies are higher than for mainland providers. Geography also plays a role in the cost of labor and the ability to find appropriately skilled individuals to fill needed positions, resulting in higher staffing costs (which will be discussed in more detail below in the Operating Expense Analysis). Internal factors, such as municipal-ownership and union labor, present even more upward cost pressures for OIH.

Overall, as an island-bound SNF provider, the issues facing OIH are somewhat unique, yet identifiable and quantifiable. While the Town is considering a replacement facility for OIH, an analysis of the historical financial results may seem irrelevant; however, understanding the current revenue and expense structures, and other key drivers of OIH's business model is highly important context to be studied and analyzed before moving forward. Understanding the nuances behind OIH's operating challenges and opportunities can help shape the decisions for the step in OIH's evolution. The following analysis examines more closely the impacts of these various external and internal factors on OIH's operations and helps to explain the challenges facing OIH ahead.

Analysis of Revenues

OIH generates its revenues from three primary sources: (1) Federal Government – Medicare; (2) State Government – Medicaid (or MassHealth as the program is known in Massachusetts); and (3) private payors (individuals paying out-of-pocket for nursing care costs). Medicaid is the predominant payor source for OIH services, representing 72.2% of total resident days[12]. The chart below illustrates OIH's historical payor mix based on resident days, compared against the average for SNF providers in Massachusetts:

[12] Payor mix is referenced here as a percentage of the total number of days that a residents spends at OIH, per payor source. Calculating the payor mix on the basis of resident days is a more accurate reflection of the utilization of OIH's services. Another method is to calculate the payor mix on the basis of total revenues received by payor, but this tends to misrepresent the utilization given the disparity in the rates being paid.



Source: The Kaiser Family Foundation, The Kaiser Commission on Medicaid and the Uninsured, Nursing Facilities, Staffing, Residents and Facility Deficiencies, 2009 Through 2014 (August 2015)

The general rule of thumb for successful financial operation of a SNF is to subsidize the Medicaid residents with a healthy Medicare and Private Pay census. In the best of circumstances, SNFs lose approximately $40.00 per resident day on Medicaid. Based on its unique characteristics (geographic location, union labor), OIH loses more than $300.00 per day of Medicaid reimbursement.

OIH's payor mix is not optimal but, on the surface, does not appear to be a significant detriment to its operations. The percentage of resident days represented by Medicaid is higher than the state average, but not exceedingly so (72.2% versus 61.0%). The private pay mix is healthy at approximately 20%. Further analysis shows, however, although the payor mix in percentage terms is not significantly outside the norm, the average levels of reimbursement for Medicaid and Medicare are lower than normal due to the acuity mix of residents. OIH's historical average Medicaid and Medicare rates between FY2014 and FY2016 are as follows:

Average Daily Rates: Government Payor Sources			
	2014	2015	ytd2016
Avg Medicaid Rate	197.25	197.15	192.78
Avg Medicare Rate	349.48	394.54	311.38

Medicaid Revenues

The average Medicaid rate in the State of Massachusetts is approximately $200.00 per day. OIH's rate is not significantly lower, and on a per patient day basis, would account for approximately $75,000 in additional revenue if OIH were to receive the state average rate; however, a more detailed analysis of OIH's Medicaid utilization indicates that the lower average rate it receives is due in large part to the lack of alternative options for individuals who need some services, but may not need a skilled level of nursing care (i.e. are of lower acuity). These individuals generate the lowest level of reimbursement, but in the high cost setting of a SNF. An analysis of the resident profile at OIH indicated that approximately 25% of the residents did not need a high level of nursing services and could be cared for in a different, lower cost setting. The result is a Medicaid rate that is lower than necessary and ultimately pushes the average Medicaid reimbursement rate it receives below the state average.

In addition, it is not clear whether OIH is receiving sufficient relief via enhanced reimbursement rates given its unique characteristics. The Massachusetts Department of Public Health publishes the rates for each SNF provider in the state. The rate schedule is determined by a mix of historical acuity of residents, as well as other factors. A comparison was made to the average rates set for OIH for Medicaid to that of Windemere Nursing and Rehabilitation Center on Martha's Vineyard. This comparison was deemed to be appropriate given each facility bears similar situations as island-bound senior care providers. As shown below, Windemere's rate schedule is significantly higher than OIH's, while each experience similar situations as island-bound providers.

Medicaid Rate Schedule	Acuity ← Lower Higher →						
	1	2	3	4	5	6	Average
Our Island Home	132.51	157.60	186.44	214.40	235.73	264.45	198.52
Windemere Nursing & Rehab Center	179.41	204.50	233.34	261.30	282.63	311.35	245.42

If the lower acuity residents had access to alternative programs for necessary services, OIH's average Medicaid rate would increase to approximately $205.00 per day (increasing revenues by approximately $130,000 per year). This is an improvement of its current rate, but still falls short of the rate Windemere receives. OIH is encouraged to further explore the reason for this difference to determine whether there are other enhancements to its rates from which it can benefit.

Medicare Revenues

For Medicare, OIH generates a relatively low census of residents requiring rehab services, which has become the primary margin driver of any SNF. While SNFs are expected to lose money on every Medicaid resident, that is expected to be offset by the margin inherent in Medicare services. As shown above, OIH's Medicare payor mix is lower than the state average (6.7% versus 12.7%).

The principal challenge OIH faces with regard to Medicare reimbursement is the local competition for those residents by Nantucket Cottage Hospital. The hospital maintains a "swing bed" program, whereby a portion of its beds are able to be utilized to provide rehab services. Given that the hospital controls the discharge process of its patients, it is uniquely positioned to maintain within their system individuals who are in need of rehab care. Absent these swing beds, residents on the Island would assuredly utilize the services of OIH for their rehab, significantly increasing both the Medicare utilization (payor mix) and reimbursement rates. As it stands today, the Medicare utilization is low, and similar to the issue discussed above regarding Medicaid rates, the residents who do utilize OIH for rehab are typically on the lower end of the acuity spectrum, and therefore the reimbursement rates are lower. Overall, there is little likelihood that OIH could increase its Medicare utilization to be more in line with state and national averages given the competition from the hospital and its influence over discharge placement.

Analysis of Operating Expenses

The CLA study reports the median Net Profit Margin for its SNF clients in the Northeast to be 1.2%, and 1.9% across the United States[13]. This equates to an Operating Expense Ratio (operating expenses as a percentage of revenues) of 98.8% and 98.1%, respectively. OIH's Operating Expense Ratio was approximately 181% for FY2015 (excluding Town subsidy and CPE receipts). One reason this ratio is significantly higher than the CLA

[13] The 30th Edition: Skilled Nursing Facility Cost Comparison, Clifton Larson Allen LLP, 2015

median relates to the reduced level of reimbursement revenues for OIH, as discussed above. OIH's expense base, however, is significantly higher than would otherwise be supportable. Thus, even if OIH were to enhance its revenues, it is highly unlikely that it would be able to achieve a level of reimbursement that would be sufficient to cover its current level of expenses.

The following table details OIH's expenses for FY2014 and FY2015 actuals, plus FY2016 and FY2017 budget:

	FY 2014 Actual	% Total	FY 2015 Actual	% Total	Fiscal 2016 Budget	% Total	Fiscal 2017 Budget	% Total
Payroll - Salary	4,173,705	57.8%	4,303,555	58.5%	4,264,102	57.4%	4,637,002	57.4%
Medicare P/R Tax Exp	59,714	0.8%	61,074	0.8%	56,400	0.8%	66,000	0.8%
Medical Insurance	935,128	13.0%	1,027,558	14.0%	1,041,700	14.0%	1,177,300	14.6%
Barnstable Cty Retir Fund	645,058	8.9%	669,674	9.1%	683,616	9.2%	699,800	8.7%
Total Salary & Benefits	5,813,605	80.5%	6,061,861	82.4%	6,095,818	82.0%	6,580,102	81.4%
Utilities	194,071	2.7%	166,957	2.3%	207,600	2.8%	182,950	2.3%
Repairs & Maintenance	48,846	0.7%	27,852	0.4%	49,550	0.7%	32,350	0.4%
Food	146,589	2.0%	154,943	2.1%	158,250	2.1%	163,250	2.0%
Professional Services	497,719	6.9%	612,322	8.3%	563,000	7.6%	617,150	7.6%
Medical Supplies	97,933	1.4%	91,155	1.2%	102,500	1.4%	93,000	1.2%
General Insurance	80,528	1.1%	82,371	1.1%	81,200	1.1%	92,300	1.1%
Other Supplies	53,714	0.7%	51,221	0.7%	66,410	0.9%	58,950	0.7%
Other	285,788	4.0%	111,771	1.5%	106,500	1.4%	260,410	3.2%
	7,218,793	100.0%	7,360,453	100.0%	7,430,828	100.0%	8,080,462	100.0%

Per Patient Day Analysis:

An effective way to compare costs to benchmarks is analyzing a facility's per patient day (PPD) expenses (total expense *divided by* total number of resident days). This allows for better comparison with industry benchmarks. The 10th percentile in the Northeast (the most expensive), as reported in the CLA study, was $341.87 per patient day[14]. OIH has reported total PPDs that are significantly higher than the highest cost operator in the CLA study (FY2014 actual - $480.68; FY2015 - $500.17; FY2016 budget – $504.95). The following table highlights the comparison for FY2015 actual results by department:

[14] The 30th Edition: Skilled Nursing Facility Cost Comparison, Clifton Larson Allen LLP, 2015

FY2015: Comparative Analysis of Total Costs (Per Patient Day)

Department Totals PPDs	Nursing	Dietary	Laundry, Hskpg, Plant	G&A	Payroll Benefits	Totals
2014 Northeast 90th Percentile	99.48	15.50	26.76	22.47	18.08	**182.29**
2014 Northeast 50th Percentile	134.04	19.06	38.62	32.32	23.46	**247.50**
2014 Northeast 10th Percentile	177.18	26.74	52.95	45.94	39.06	**341.87**
OIH	**222.87**	**51.86**	**44.34**	**65.10**	**115.99**	**500.16**
Comparison to 10th Percentile	45.69	25.12	(8.61)	19.16	76.93	**158.29**
difference in $$$s (ppd difference x total patient days)	672,377	369,647	(126,704)	281,999	1,132,099	2,329,417

As shown above, OIH's costs in FY2015 were $158.30 (46.3%) higher than the lowest (highest cost) percentile in the Northeast ($500.16 vs. $341.87). In dollar terms (variance of $158.29 *times* total patient days of 14,716), this variance equates to approximately $2.3 million of higher operating costs for OIH relative to the 10th percentile in the CLA study.

The principal reason behind this variance relate to staffing costs, which consist of salaries and employee benefits. The single largest expense category for any SNF operator is staffing. For OIH, the staffing costs have averaged approximately 80% historically. The CLA 10th percentile is approximately 76%[15]. As was the case above in the analysis of payor mix, OIH's staffing costs are not materially out of line with the medians when compared on a percentage basis. The absolute difference, observed when analyzing staffing costs on a PPD basis, shows a much different picture.

Salary Cost Analysis:

OIH salary cost PPDs are approximately $66.40 (23.2%) higher than the CLA 10th percentile. Based on the number of patient days, this difference accounts for approximately $977,076 of higher costs than the lowest CLA percentile, representing approximately 41.9% of the total variance in operating costs, as shown in the following table:

[15] The 30th Edition: Skilled Nursing Facility Cost Comparison, Clifton Larson Allen LLP, 2015

FY2015: Comparative Analysis of Salary Costs (Per Patient Day)

Salary Costs PPDs	DON, RN & LPN	Aides	Other Nursing Admin	Soc Svcs, Act, Ancil Svcs	Dietary	Laundry, Hskg, Plant	G&A	Totals
2014 Northeast 90th Percentile	29.85	30.59	4.01	5.51	7.12	4.78	3.94	85.80
2014 Northeast 50th Percentile	47.48	36.54	9.04	22.03	10.05	9.85	8.21	143.20
2014 Northeast 10th Percentile	67.66	47.76	19.51	37.01	13.97	17.19	16.65	219.75
OIH	**67.42**	**92.71**	**19.47**	**15.32**	**40.65**	**29.84**	**20.73**	**286.15**
Comparison to 10th Percentile	(0.24)	44.95	(0.04)	(21.69)	26.68	12.65	4.08	**66.40**
difference in $$$s (ppd difference x total patient days)	(3,532)	661,531	(589)	(319,188)	392,599	186,156	60,098	977,076

Several factors contribute to this variance, including (1) the Island dynamics (geography, difficulty in finding and retaining qualified staff, etc.), (2) the longevity of many staff members, particularly the nurses aides, and the payment benefits received for achieving certain milestones, and (3) the SEIU union contract. Interestingly, the staffing costs are higher than the medians despite the fact that the staffing ratios are lower than the state averages (as shown in the table and discussed on page 60). The fact that OIH's staffing ratios are below state average clearly highlights the factors listed above as being the principal causes of OIH's staffing costs being so high.

Benefits Cost Analysis:

A facility's overall staffing costs include not just wages and salaries but employee benefits as well. OIH provides certain employee benefits that are consistent across providers, including healthcare, dental, holidays, retirement, etc. Overall, OIH's benefits are significantly higher than the CLA medians on a PPD basis ($115.99 vs. $39.06). This variance of $76.93 PPD accounts for approximately 48.6% of the total negative variance to the CLA Total Cost medians. When combined with the variance accounted for by salary costs (41.9%), OIH's salary and benefits costs account for 90.5% of the total negative variance. (Of note, the remaining 9.5% appeared to be spread across multiple departments and expense line items with no particular or consistent theme; except that some could be explained by the mandated purchasing laws municipal enterprises are expected to follow.)

Not surprisingly, the two largest categories within OIH's benefits costs structure are health insurance and retirement. Health insurance has averaged approximately 54.5% of total benefits costs (or, $61.67 PPD). Retirement costs have averaged approximately 39.7% of total benefits (or, $44.97). Both of these categories, on a standalone basis, represent higher PPD costs than the <u>total</u> benefits PPD costs for the 10th percentile

median in the CLA study ($39.06[16]). The large variance is mainly attributable to the (1) the SEIU labor contract, and (2) the fact that OIH is municipally-owned. Healthcare costs have been increasing approximately 10% per year. Also, as a municipally-owned facility, OIH is required to contribute to employee retirement benefits through the Barnstable County Retirement Fund.

[16] The 30th Edition: Skilled Nursing Facility Cost Comparison, Clifton Larson Allen LLP, 2015

OLMSTEAD AND RIGHT SIZING

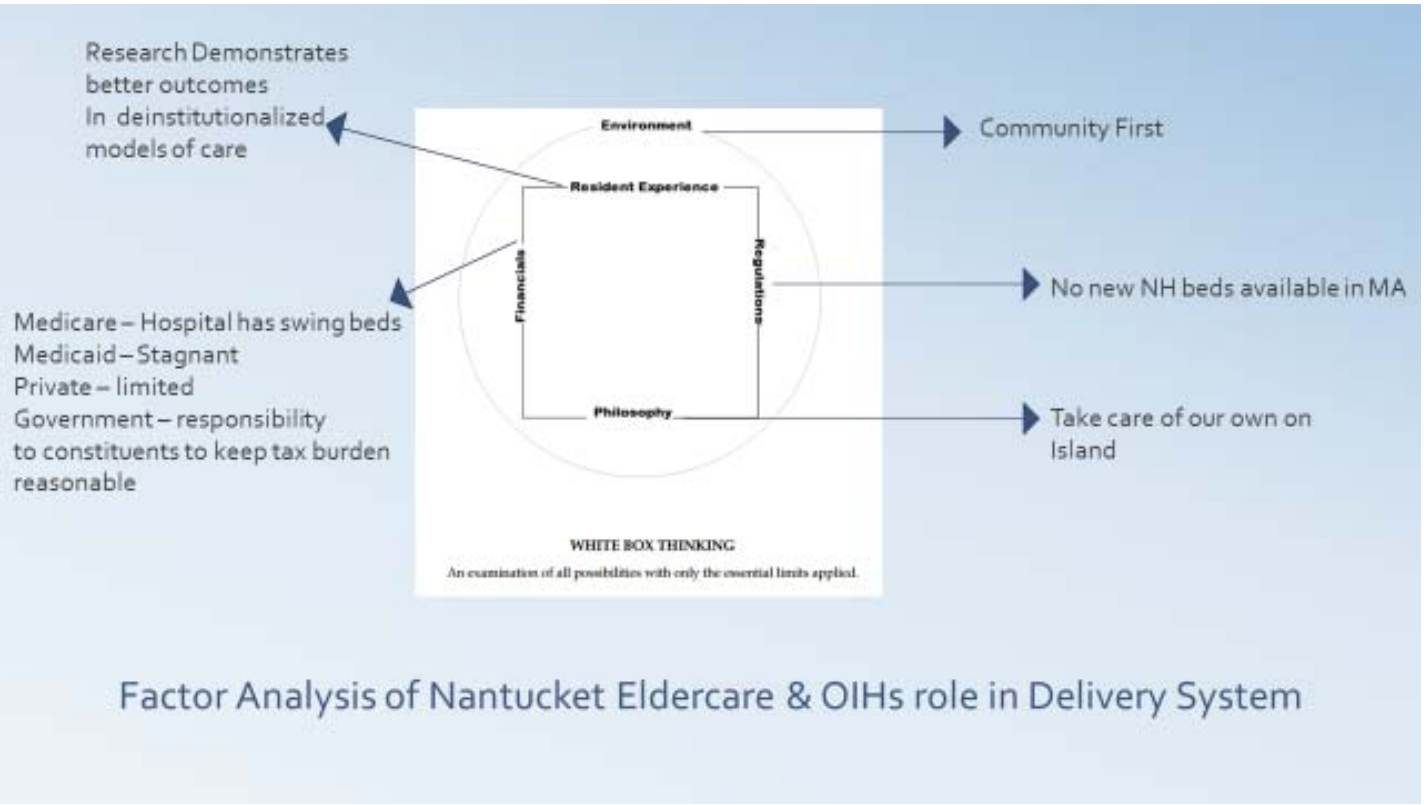
There is a need to analyze data regarding the population and its need for future care as we consider the various options for Our Island Home. For a decade, simple demographic projections have been used to determine future bed needs. However, in the last several years since the Olmstead decision, which produced a policy shift to home and community-based service reimbursement, attention must be paid to the funding positions of state government as they relate to nursing homes. States are faced with ever-increasing tax burden for healthcare, so they must employ various methods to reduce overall health and medical costs**.** Certificate of Need/Determination of Need programs are aimed at restraining health care facility costs and allowing coordinated planning of new services and construction. Many "CON" laws initially were put into effect across the nation as part of the federal "Health Planning Resources Development Act" of 1974. Despite numerous changes in the past 30 years, about 36 states retain some type of CON program, law or agency as of 2016. Massachusetts employees this program to control the number of nursing home beds through a Certificate of Need, or Determination of Need Program. This program requires that annually the state of Massachusetts issues a memorandum informing interested providers of fair determination regarding the need for additional nursing home beds in Massachusetts. The state has consistently issued this memorandum stating that according to their projections which extend to 2020, there are a surplus of 7,000 nursing beds in the state, and therefore they are not accepting applications for additional beds. It is highly unlikely that this position will change anytime in the future. As previously stated, the national and Massachusetts trend is to increase funding to community based long-term care services in an effort to decrease the rate of institutionalization and thereby decrease the utilization of nursing homes and the need for additional beds. As the Town considers the construction of a new Our Island Home, it is important to point out that, due to these restrictions on new CON licenses, the new facility would have to be within the current beds licensure level of 45 beds.

FUTURE NEEDS

The combination of the restricted number of beds available to Our Island Home (45) is not the challenge to the provision of adequate services that the demographic projections might indicate. As discussed at the outset of this report (see *Trends in Long-Term Care*, page 10), the decrease in the age-adjusted prevalence of disability among the elderly, an increase in disability-free life expectancy, and a decrease in physical limitations is expected to result in continued reduction in need for long-term care. Moreover, as it relates to Our Island Home and Nantucket more directly, the evidence points to lower utilization of “bricks and mortar” nursing care. Together, these factors point to a lower need for total nursing beds for Our Island Home going forward.

White Box Scenarios

The premise of this analysis is that Our Island Home is in jeopardy, related to expanding deficits, increasing expenditures, challenges of physical plant, quality concerns and potential for decreasing revenues as outlined in this report. Nonetheless, a wellspring remains of good will toward, and support for, the historic mission of Our Island Home. The Town of Nantucket finds itself facing difficult decisions about the future of this longstanding institution that for years has served the citizens of Nantucket. It was evident throughout the interviews and reviews of material that deep controversy exists among the stakeholders. While there is little challenge to the evidence that supports the need for some change, there are passionate opinions regarding the site selection for a new facility. There are also strong indications that there are limits to the amount of taxpayer support that can continue to be poured into the operation, however, these limits are as yet ill-defined. Meanwhile, costs of operating Our Island Home continue to escalate, particularly benefit costs associated with health insurance and pensions, and this upward trajectory is likely to continue.



MAINTAIN THE STATUS QUO

Financial	QoL & Quality of Care	Demographic & Reimbursement Elasticity	Other Factors
Escalating losses related to: Static reimbursement rates • Escalating operating costs • Escalating demand for repair & maintenance costs • Potential loss of state-funded CPE revenues • Building issues could produce citations and civil monetary penalties Fiscal burden remains on Town	Continued issues with quality outcomes and meeting state requirements	None – will not meet changing demands of population Lacks expansion space	Ethical responsibility to provide best quality of care in the least restrictive environment Legal responsibility to comply with Olmstead Some stakeholders have strong conviction to keep OIH at current location

ANALYSIS – RENOVATE EXISTING BUILDING

Financial	QoL & Quality of Care	Demographic & Reimbursement Elasticity	Other Factors
Escalating losses related to: • Static reimbursement rates • Escalating operating costs • Escalating demand for repair & maintenance costs • Potential loss of state-funded CPE revenues • Building issues could produce citations and civil monetary penalties Fiscal burden remains on Town	Continued issues with quality outcomes and meeting state requirements	None – will not meet changing demands of population because it lacks expansion space to add community based services	Renovation costs unreasonable because of Federal/State regulations which require that renovation of *any* part of a facility bring the *entire* facility up to the current code. This represents a rebuild. Some stakeholders have strong conviction to keep OIH at current location

Analysis- Sale to an Outside Entity – Before or After Construction

Financial	Other Factors
Fiscal burden no longer on Town, but … **Unlikely that any buyer would purchase due to:** • **Current level of operational losses and presence of systemic challenges to achieve profitability** • **Sale to third party would eliminate state-funded CPE revenues (allocated only for municipally-owned nursing homes)** • **Lack of short term rehabilitation market** • **General lack of interest in facilities with union contract in place** • **Logistical challenges and expenses associated with Island location**	**Sale option has been explored, to no avail** **Even if sale were consummated, no control over continued operation for the long-term** **Risk of closure high due to specific dynamics that would likely lead to mounting losses**

Analysis: Build A traditional 40 bed building at the Existing Site or A New site

Financial	QoL & Quality of Care	Demographic & Reimbursement Elasticity	Other Factors
Existing site – more expensive to build, and more expensive to operate *New site* - less expensive to build, but still more expensive to operate Town subsidy higher than other alternatives, regardless of site If remain at existing site - no potential sale to Land Bank, thus a loss of revenue from the sale to offset construction costs Fiscal burden remains on Town	Will not improve QoL in the same manner as afforded in a person centered home like environment	Current site: None – will not meet changing demands of population because it lacks expansion space to add community based services Building plan eliminates ability to change programs to meet changing needs	Some stakeholders have strong conviction to keep OIH at current location

Analysis: Build At the Existing Site

Two Factors make this an unacceptable option – the Storm Surge Risk Analysis and the site constraints. Both are illustrated below.

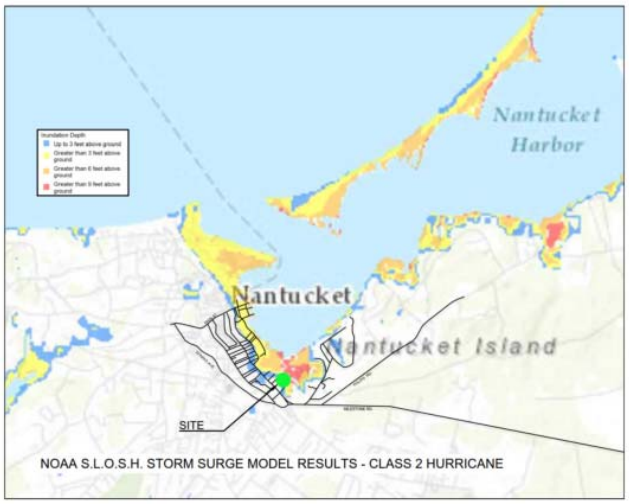
Nantucket Storm Surge Analysis

Nantucket Hurricane History
1924: Unnamed, Cat. 1
1938: Great New England Hurricane, Cat. 3
1944: Great Atlantic Hurricane, Cat. 2
1954: Hurricane Edna, Cat. 3
1954: Hurricane Carol, Cat. 3
1960: Hurricane Donna, Cat. 2
1985: Hurricane Gloria, Cat. 2
1991: Hurricane Bob, Cat. 2

Class 2 Hurricane

- Portion of site closest to shore may be inundated with up to 3-ft of storm surge

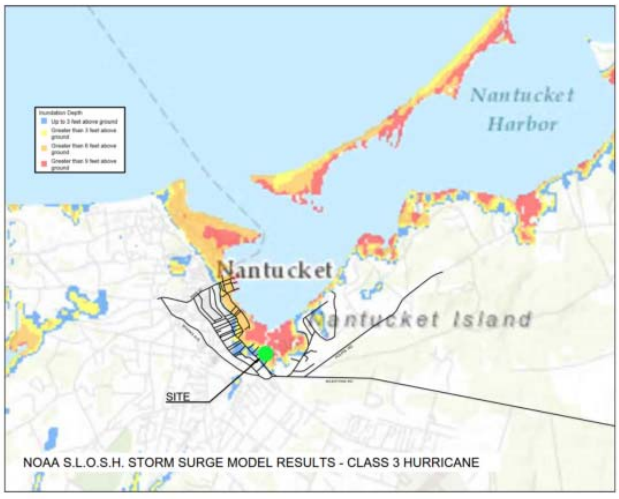
Source:
NOAA S.L.O.S.H. (Sea, Lake, and Overland Surges from Hurricanes)



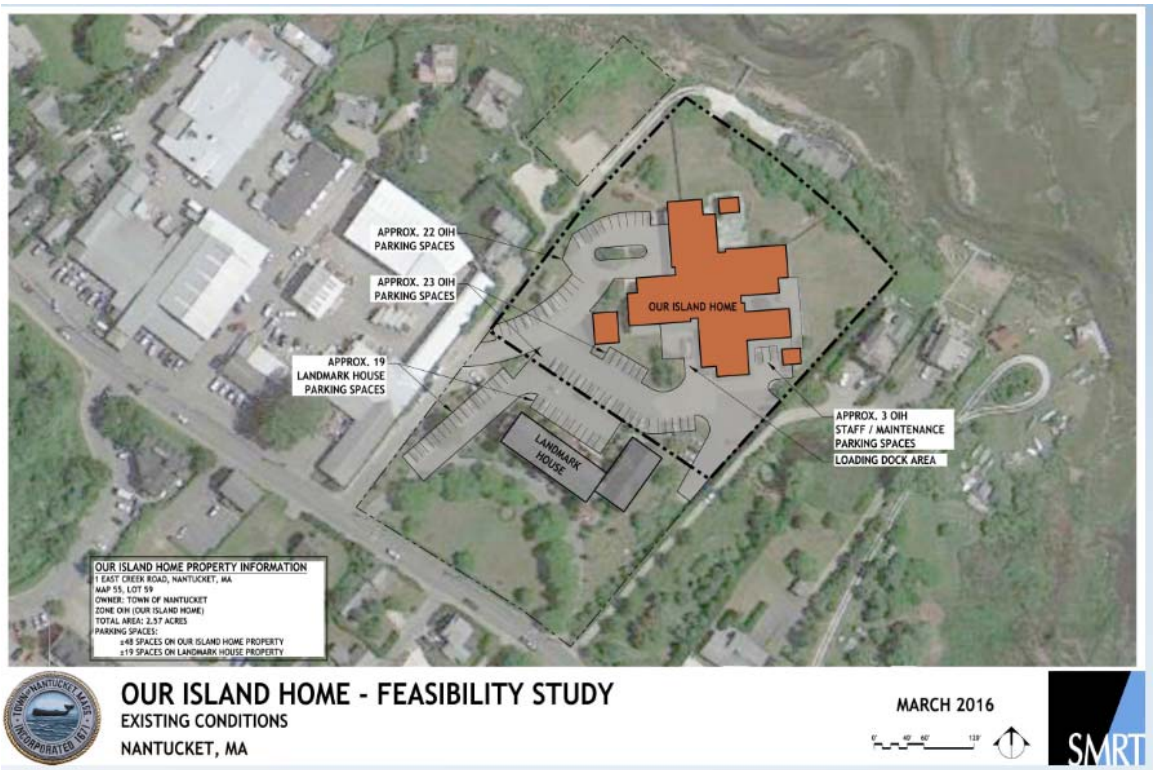
Nantucket Storm Surge Analysis

Class 3 Hurricane

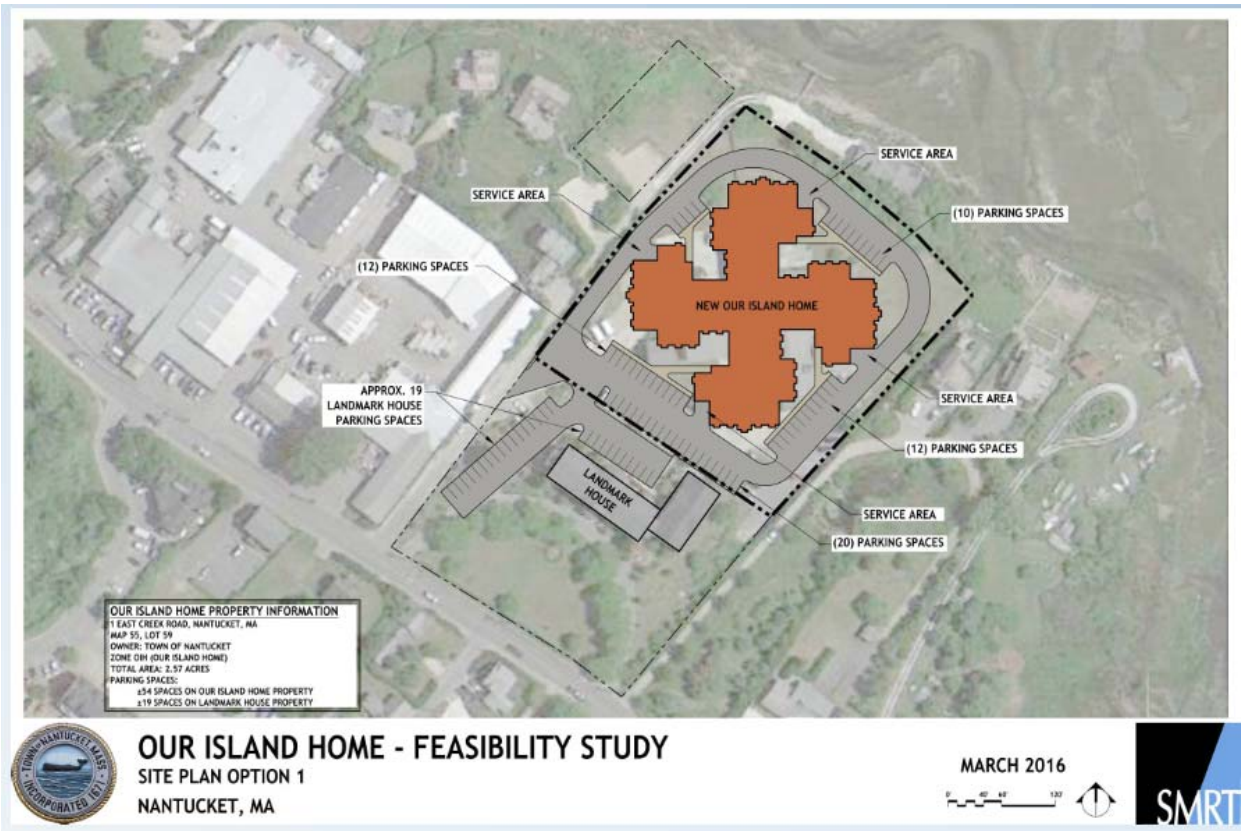
- Majority of site may be inundated by storm surge with depths up to 6-ft.



Existing Conditions

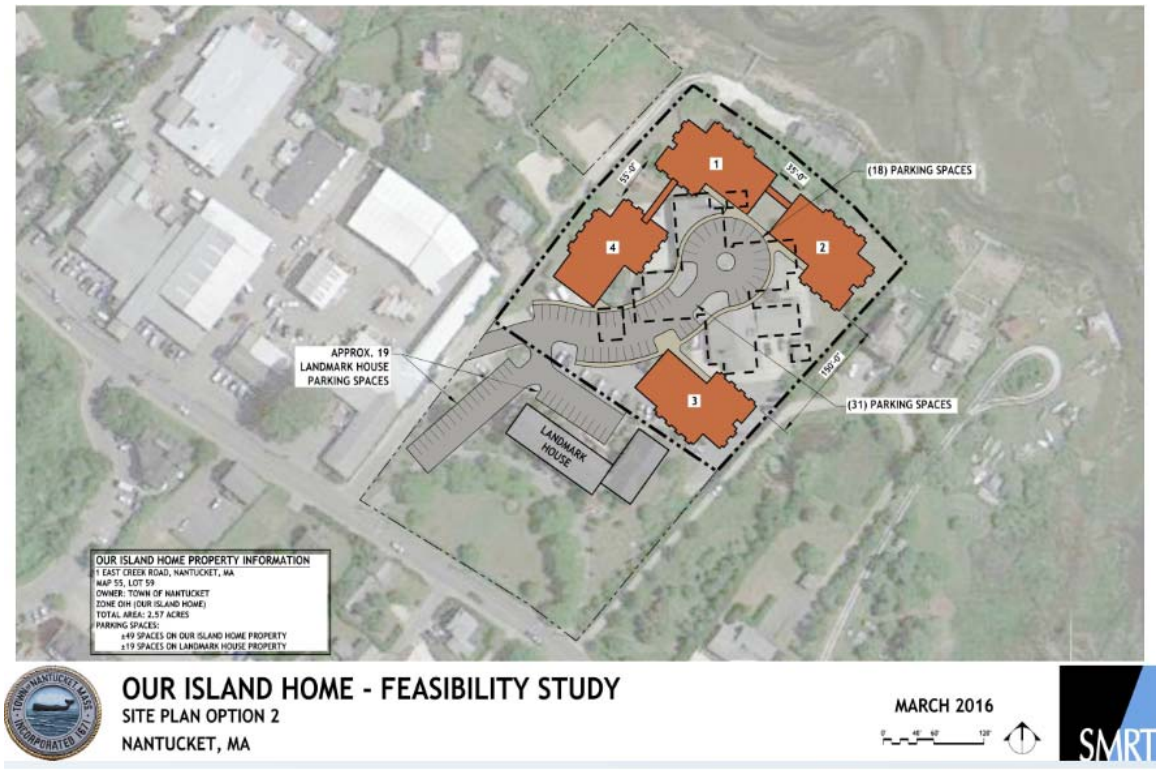


New Small House – 40 Beds Requiring Demolition before Construction



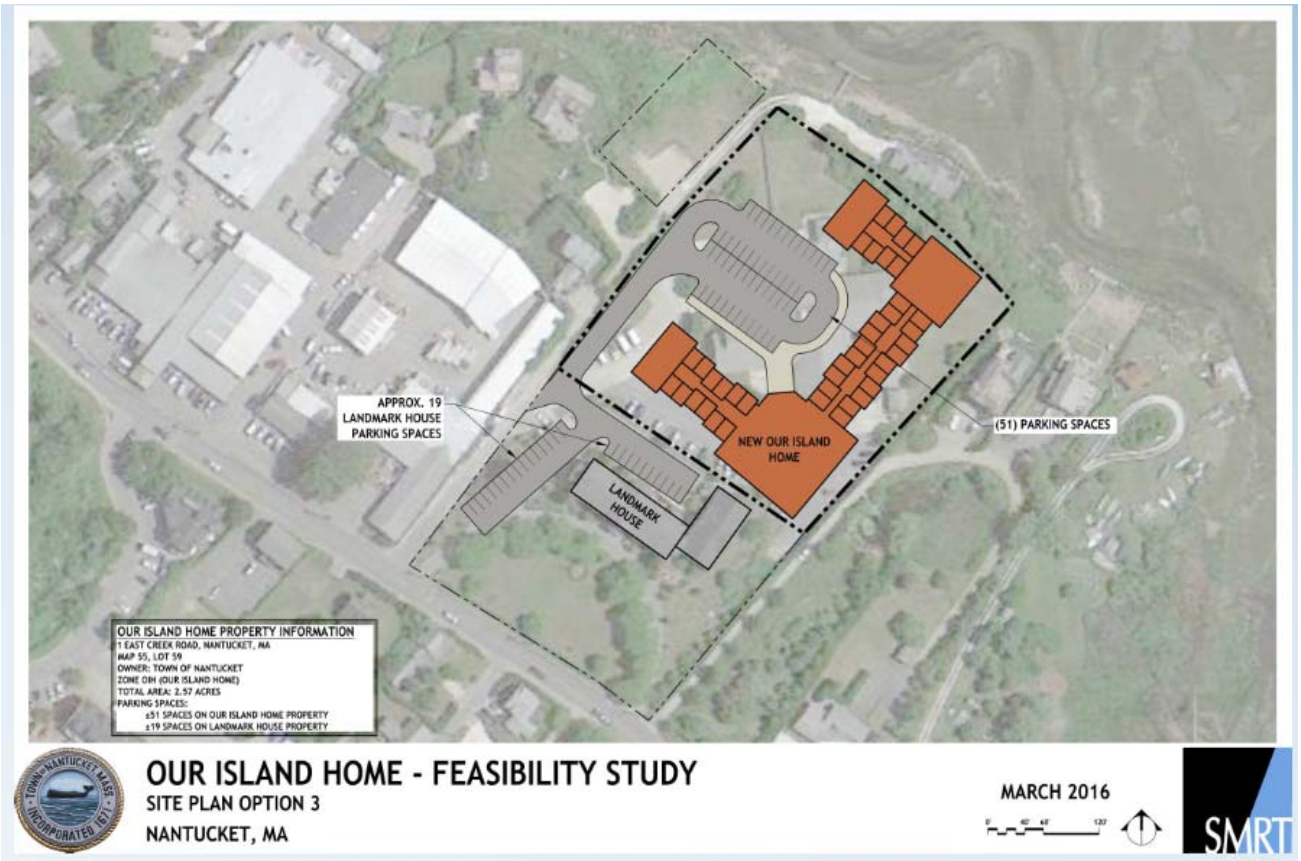
It is not feasible to construct without moving all residents. It is difficult to create a plan since requirement would be for residents to be in a skilled facility – it is unlikely that these beds could be available in the state, or that residents or families would agree to such a dislocation. The State Health Department would have to approve any plan to move residents and it is highly improbable that they would approve the relocation.

New Small House 40 Beds Building Around Existing



Connectivity of houses would be lost and operations would be challenged with likely additional costs.

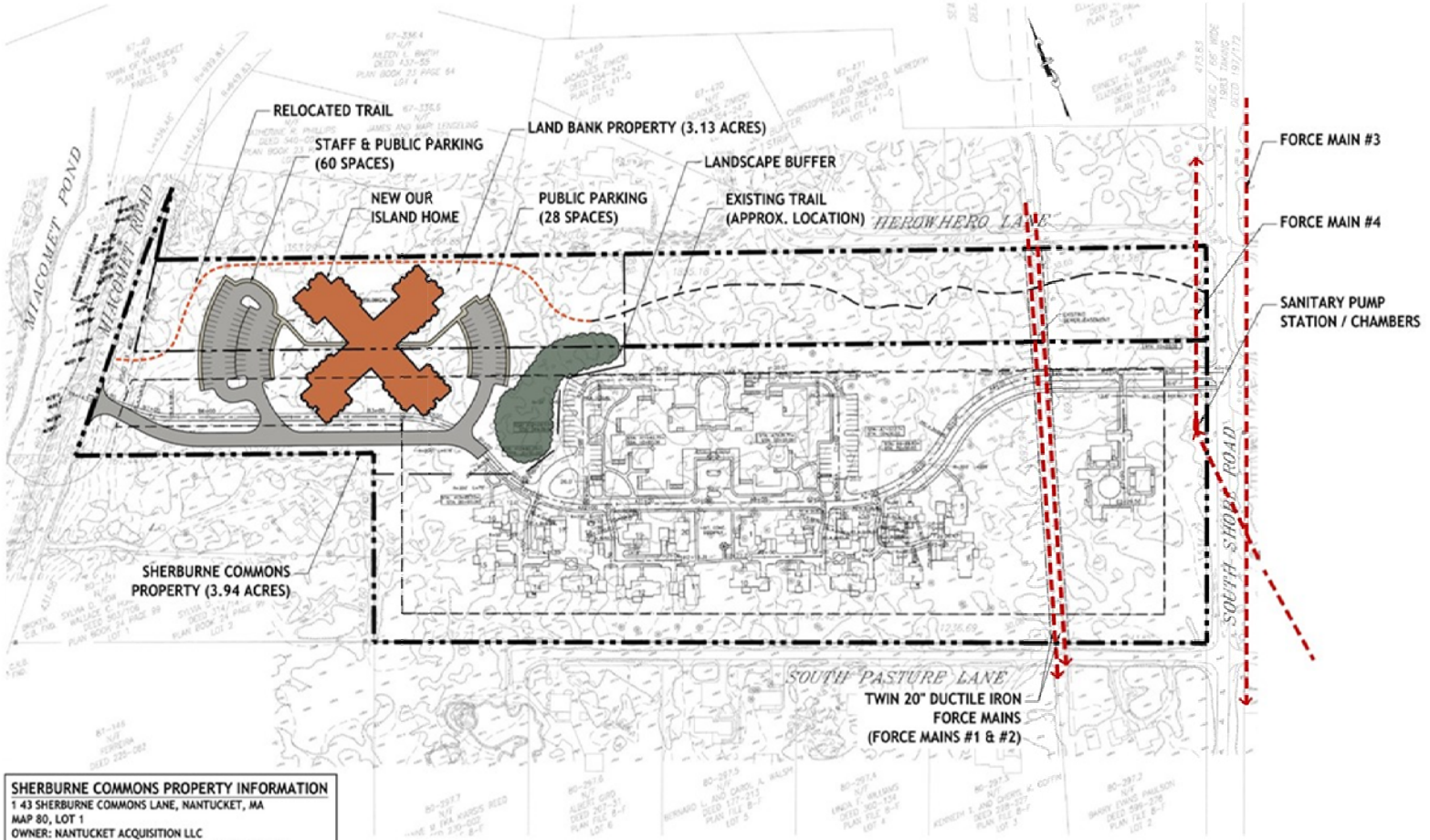
New Traditional Nursing Home 40 Beds



Site fit is problematic, no space for expansion, no flexibility for use of beds – all would be nursing home.

Construction of a Small House 30 Bed NH and 10 bed Affordable AL at Sherburne: Best Fit Option

Financial	QoL & Quality of Care	Demographic & Reimbursement Elasticity	Other Factors
Construction costs less than most other alternatives, more than some Least expensive model to operate (in terms of Town subsidy required) Potential revenue from sale of land to Land Bank Fiscal burden remains on Town, but marginally less than other models	Expected improvement in Quality of Life and Quality of Care	Very elastic – potential for site to become the hub of community services – a one stop center for services and providers Provides flexibility to shift houses to meet service demands if needs or reimbursement changes	Easy transition- build then move



SHERBURNE COMMONS PROPERTY INFORMATION
1 43 SHERBURNE COMMONS LANE, NANTUCKET, MA
MAP 80, LOT 1
OWNER: NANTUCKET ACQUISITION LLC
ZONE ALC (ASSISTED INDEPENDENT LIVING COMMUNITY)
PARKING SPACES: 88

OUR ISLAND HOME - FEASIBILITY STUDY

SHERBURNE COMMONS SITE - SITE PLAN OPTION 1

NANTUCKET, MA

MARCH 2016

0' 80' 120' 240'

SMRT

Summary Options

The following table highlights certain financial considerations for various options explored, including total cost of the project and cash flow from the operation (based on FY2020 projected cash flows for each):

Scenario:	Current State	Traditional Bdg- Existing Site	Traditional Bdg- New Site	Small House - New Site	Small House - New Site
Number of SNF Beds	45	40	40	30	40
Number of AL Units	-	-	-	10	-
Project costs (Uses)	-	21,640	18,461	23,864	23,864
Cash Flow:					
Loss from Operations	(4,454)	(2,829)	(2,829)	(1,851)	(1,959)
Debt service	-	(1,634)	(795)	(1,203)	(1,203)
Routine capital	(150)	(40)	(40)	(40)	(40)
Net Cash Flow	$ (4,604)	$ (4,503)	$ (3,664)	$ (3,094)	$ (3,202)

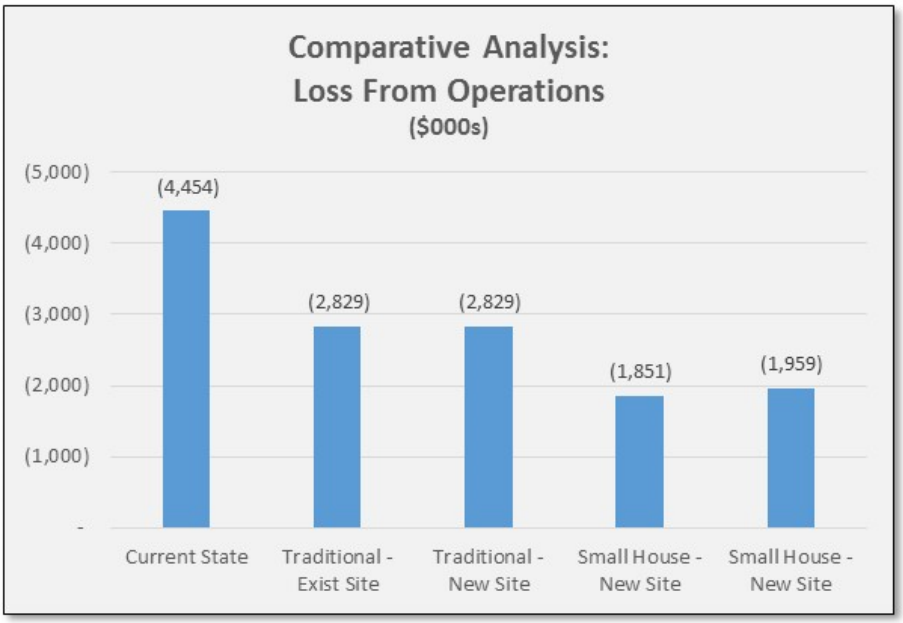
* Excluding Town subsidy and State CPE receipts for municipally-owned providers

As shown above, the option of constructing a new Small House on a new site, with a unit mix of 30 long-term care beds and 10 assisted living with an affordable component, represents the lowest cost alternative.

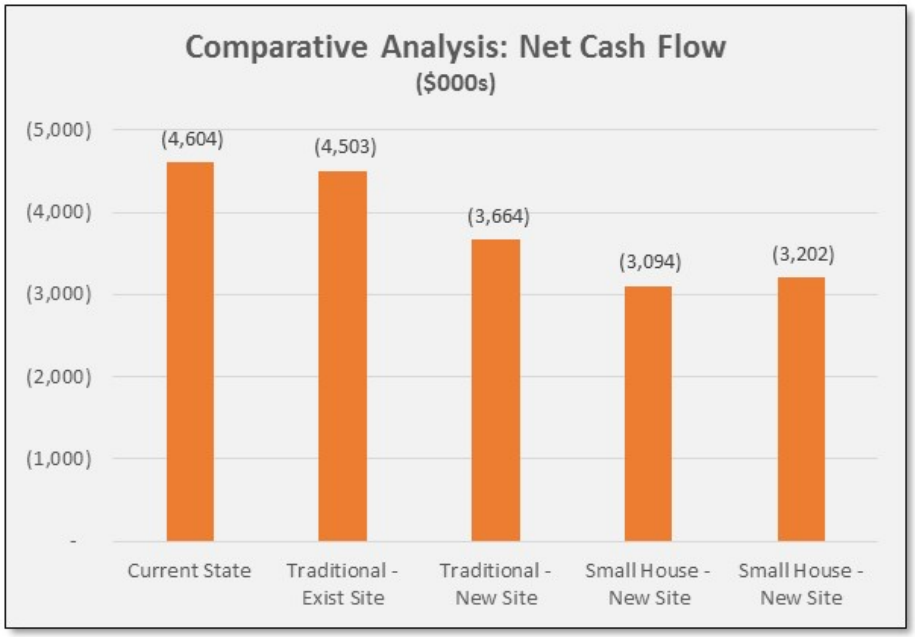
When analyzing the above more closely, it is clear this alternative represents the most favorable outcome, representing a significant improvement in the Loss from Operations ($1.851 million vs. $4.454 million based on the Current State). After factoring in debt service requirements the total net cash flow is a deficit of $3.094 million, which is a considerable negative position. It is however an improvement over the current state, and better than other alternatives.

The slides on the following pages provides additional comparison of the alternatives, highlighting the difference in operating cash flow and total cash flow (inclusive of debt service and capital expenditures).

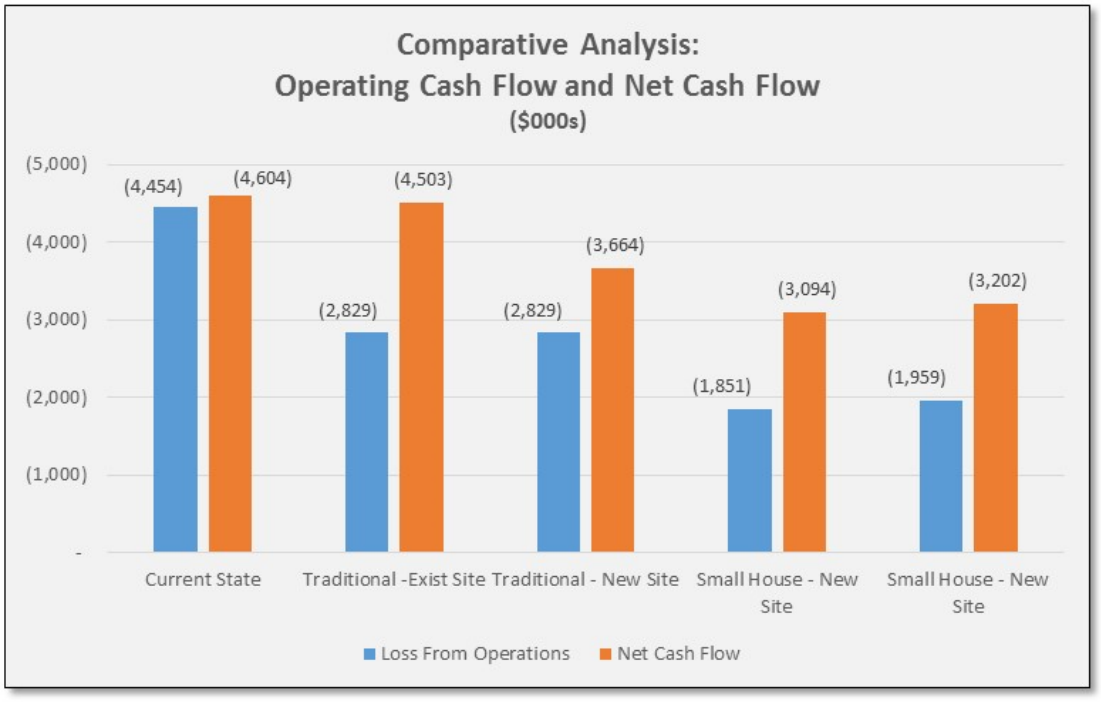
The following table represents the projected net cash flow deficit, solely from operations of OIH:



The table below represents net cash flow losses after factoring in financing costs related to construction, and ongoing capital expenditures:



The table below represents a comparison of the net cash flow from operations (blue) and total net cash flow including debt service and capital expenditures:



ADDITIONAL RECOMMENDATIONS

While the white box thinking focuses on specific scenarios regarding the future of our island home. There are a number of general recommendation which should be applied in the context of improvement of costs and outcomes:

1. Fully explore with legal counsel other operating/ownership structures including:
    - Establishment of a Public Benefit Corporation to own/operate OIH
    - Conversion of OIH to a freestanding not for profit/voluntary corporation
    - Management contract and outsourcing of selected services

2. Implement management and operational/cost savings efficiencies

3. Implement clinical quality improvement of clinical outcomes.

4. Engage in a Public Relations campaign to promote island residents' utilization of:
    A) The state-funded Home Modification Loan Program (HMLP) provides loans to make modifications to the primary, permanent residence of elders, adults with disabilities, and families with children with disabilities. The modifications to be made to the residence must be necessary to allow the beneficiary to remain in the home and must relate to their ability to function on a daily basis. Based on the income guidelines, loans of $1,000 up to $30,000 which is secured by a promissory note and a mortgage lien. This program offers 0% deferred payment loans, 0% and 3% amortizing loans depending on the total gross household income. Homeowners eligible for a 0% deferred payment loan do not make any monthly payments and no interest accrues. Repayment is required when the property is sold or has its title transferred. 0% and 3% amortizing loans require monthly payments and must be paid back in 5–15 years, depending on the total amount borrowed.

    B) The Massachusetts Partnership Long Term Care Insurance. Under new state regulations, residents that purchase an approved form of LTC coverage can protect their home from being sold to cover long-term care costs.

5. Investigate the initiation and support of an adult day health program by another island entity.