I. Executive Summary

Located on Nantucket, an island 30 miles south of the Massachusetts mainland, Nantucket Cottage Hospital delivers health care under unique circumstances: providing quality facilities, programs, and services to a year-round population of 10,000 residents, which increases to almost 60,000 during the summer months, all while being isolated from the mainland. Today, this 104-year-old hospital includes 19 in-patient beds, a full range of modern diagnostic and treatment capabilities for both emergency and ongoing care, and numerous outreach services and programs.

Community Benefit Mission

Reflecting a strong tradition of caring and sense of community, the mission of Nantucket Cottage Hospital (NCH) is to be the island’s primary source of a full range of health and wellness services. NCH assumes the leadership role within the community by collaborating with other local organizations, by ensuring availability of an integrated array of health care services, and by responding to the needs of the increasingly diverse Nantucket community. Comprising a proficient and dedicated team of physicians, management, staff, and volunteers, NCH provides services in an expert, compassionate, respectful, and responsive manner; is fiscally responsible; and is prepared to respond to essential health care needs directly from within the community, or to meet expanded needs indirectly through an extensive network of off-island health care partners, including its affiliates Massachusetts General Hospital and Partners HealthCare. NCH promotes wellness for people of all ages through prevention, education, and readily accessible health care services, in an effort to improve the general health, vitality, and quality of life for all Nantucket residents and visitors.
In 2015, we conducted a Community Health Assessment (CHA) plan that included an assessment of quantitative data and qualitative input from various segments of the community to provide the best possible strategic analysis of community needs.

**Target Population**
The population on Nantucket can be grouped into 3 residency types:

1. Year-round residents: Persons residing on Nantucket year-round
2. Summer residents: Persons residing on Nantucket in July and August
3. Shoulder residents: Persons residing on Nantucket in April, May, June, and September, October

Our Community Health Assessments focused on year-round residents who represent a disproportionate share of the medically-underserved and vulnerable on the island. These residents are also most directly impacted by the assets and deficits that exist on the island.

**Community Health Assessment Key Findings**
The top health needs identified through quantitative data review and qualitative input analysis were:

1. Alcohol Use Disorders (AUDs) and Substance Use Disorders (SUDs)
2. Access to Housing
3. Mental Health Disorders
4. Cancer

In addition, the following factors were identified as key to defining a health community:

- Access to Health Care
- Good Schools, Jobs, and Economy

**Community Health Priorities**
Based on these key findings, Nantucket Cottage Hospital adopted all 4 health needs as priorities for our Community Health Implementation Plan

<table>
<thead>
<tr>
<th>Priority</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol and Substance Use Disorders</td>
<td>To address the alcohol and substance use disorders issue in the Nantucket community, identify gaps in services for those in need, and support the efforts of the Nantucket Behavioral Health Task Force in these areas.</td>
</tr>
<tr>
<td>Access to Housing</td>
<td>Play a proactive role in helping to address the island’s affordable housing crisis, and use NCH’s position as one of the largest private employers on the island to advocate for solutions.</td>
</tr>
<tr>
<td>Mental Health Disorders</td>
<td>Continue to serve as the acute safety net for island patients requiring psychiatric evaluation, stabilization, observation, and/or transfer off-island. Identify gaps in services and support the work of the Behavioral Health Task Force to fill them.</td>
</tr>
<tr>
<td>Cancer</td>
<td>To provide cancer screenings and education to the Nantucket community, while sustaining the growth in NCH’s cancer care program to provide more on-island services to cancer patients.</td>
</tr>
</tbody>
</table>
II. Community Health Assessment (CHA)

Data Collection Methods

Quantitative Data: Reviewing Existing Secondary Data

To describe the socio-economic and health status of the Nantucket Cottage Hospital service area population, this report draws from authoritative secondary data sources at the county and city level. Sources of data included, but were not limited to, Community Commons, the U.S. Census, Centers for Disease Control and Prevention, County Health Rankings, Massachusetts Department of Public Health, Housing Nantucket, National Low Income Housing Coalition, and the F.B.I Uniform Crime Reports. Some of the data were extracted from the Community Commons website, and others were accessed directly. Other types of data included self-report of health behaviors from large, population based surveys such as the Behavioral Risk Factor Surveillance System (BRFSS), as well as vital statistics based on birth and death records. When possible, secondary data are compared to state averages.

Qualitative Data: Focus Groups and Surveys

In May 2015, Nantucket Cottage Hospital organized two focus groups with community health agencies and organizations, as well as a cross-section of Nantucket residents, to solicit input on the island’s most pressing health needs, community assets, challenges, and solutions. The first focus group was held at a regular meeting of the Nantucket Healthy Community Collaborative, which includes representation from a wide range of community stakeholders – both public agencies and private organizations – that are committed to addressing Nantucket’s human services needs. The second focus group was conducted during a special meeting of Nantucket Cottage Hospital’s Patient and Family Advisory Council (PFAC). The PFAC seeks the community’s feedback and involvement to improve care at NCH, and helps the hospital fulfill its mission to meet the needs of an increasingly diverse and expanding Nantucket community. A semi-structured guide was used during both focus group sessions to ensure consistency in the topics covered. The sessions were facilitated by a moderator, and detailed notes were taken during conversations.

The 2015 Nantucket Quality of Life survey was distributed throughout all patient waiting areas within Nantucket Cottage Hospital during the month of May 2015 and the first two weeks of June, as well as during the annual NCH Health Fair on May 2. The start of the survey period was announced in the island newspaper, The Inquirer and Mirror, and posted on a local media website, The Nantucket Chronicle. An electronic version of the survey was posted on the NCH web site during May and June, as well as the Town of Nantucket’s web site, and the Town of Nantucket Board of Health’s web site. The electronic version was also sent to island residents via e-newsletters from NCH and the Town of Nantucket. Physical copies of the survey were distributed at several other locations around the island, including the Saltmarsh Senior Center, the Nantucket Community School, and St. Mary’s Church, and collected by NCH staff following the close of the survey period.

Limitations

As with all research efforts, there are several limitations related to this report’s research methods that should be acknowledged.

Data based on self-reports should be interpreted with particular caution. In some instances, respondents may over- or underreport behaviors and illnesses based on fear of social stigma or misunderstanding the question being asked. In addition, respondents may be prone to recall bias—that is, they may attempt to answer accurately but remember incorrectly. In some surveys, reporting and recall bias may differ according to a risk factor or health outcome of interest.
While the focus groups and surveys conducted for this report provide valuable insights, results are not statistically representative of a larger population due to non-random recruiting techniques and a small sample size. Recruitment for focus groups was conducted by community organizations, and participants were those individuals already involved in community programming. Because of this, it is possible that the responses received provide limited perspective on the issues discussed. Lastly, it is important to note data were collected at one point in time, so findings, while directional and descriptive, should not be interpreted as definitive.
FINDINGS

Demographics

Table 1

<table>
<thead>
<tr>
<th></th>
<th>Nantucket County</th>
<th>Massachusetts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population</td>
<td>10,224</td>
<td>6,605,058</td>
</tr>
<tr>
<td>Total Land Area</td>
<td>44.96 mi²</td>
<td>7,797.99 mi²</td>
</tr>
<tr>
<td>Population Density</td>
<td>227.41 pop per mi²</td>
<td>847.02 pop per mi²</td>
</tr>
<tr>
<td>Population Change, 2000-2010</td>
<td>6.9%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Males</td>
<td>50.3%</td>
<td>48.4%</td>
</tr>
<tr>
<td>Females</td>
<td>49.7%</td>
<td>51.6%</td>
</tr>
</tbody>
</table>

Data Source: US Census Bureau, 2009-2013 American Community Survey, data retrieved from Community Commons on 4/15/15.

Population

As seen in Table 1, Nantucket County covers a relatively small geographic area of 44.96 mi² and has a total year-round population of 10,224, making it the least-populous county in Massachusetts. In addition, the area’s population density of 227.41 persons per square mile is significantly smaller than the statewide density of 847.02 persons per square mile. Between 2000 and 2010 Nantucket County experienced a population growth of 6.9% which was over two times greater than the statewide increase of 3.1%.

Although Nantucket is the least-populous county in Massachusetts, it was the fastest-growing county in the state last year, increasing its population 2.7 percent or 288 residents between July 2013 and July 2014. During the summer (July and August) and “shoulder” seasons (April, May, June and September, October) when seasonal home owners and vacationers are in residence, county officials estimate that the population increases to between 30,000 and 60,000. County officials further estimate that Nantucket may be home to as many as 20,000 year round residents, which is not reflected in the official Census Bureau figure.

Focus group participants noted the extreme seasonality and isolation of Nantucket present challenges for the community. Nantucket is very busy during the summer and shoulder seasons, but experiences a steep decline in terms of business, activity and population during the off season. Furthermore, its physical location 30 miles from the mainland limits opportunities for island residents, and collaborations with nearby communities, organizations and individuals. This has a significant impact on the community, including a lack of year-round employment opportunities, no year-round public transportation, the high cost of travel to and from the island, and an inability to share resources with other communities.

Table 2

<table>
<thead>
<tr>
<th></th>
<th>Nantucket County</th>
<th>Massachusetts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median Age</td>
<td>39.9</td>
<td>39.2</td>
</tr>
<tr>
<td>Under 18</td>
<td>21.0%</td>
<td>21.3%</td>
</tr>
<tr>
<td>18 to 24 years</td>
<td>6.3%</td>
<td>10.4%</td>
</tr>
<tr>
<td>25-44</td>
<td>31.5%</td>
<td>26.4%</td>
</tr>
<tr>
<td>45-64</td>
<td>28.8%</td>
<td>27.8%</td>
</tr>
</tbody>
</table>
Age Distribution

As seen in Table 2, the median age on Nantucket (39.9 years) and population age under the age of 18 (21.0%) are similar to the state, though Nantucket has a smaller percentage of 18 to 24 olds (6.3% vs. 10.4%). The percentage of 25 to 44 year olds on Nantucket (31.5%) is higher than the statewide percentage of 26.4%. The percentage of residents aged 65 years and older on Nantucket is 12.5%, slightly lower than the statewide percentage of 14.1%.

<table>
<thead>
<tr>
<th>Table 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nantucket County</td>
</tr>
<tr>
<td>Asian</td>
</tr>
<tr>
<td>Black</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
</tr>
<tr>
<td>White</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

Data Source: US Census Bureau, 2009-2013 American Community Survey, data retrieved from Community Commons on 4/15/15.

Racial and Ethnic Diversity

As seen in Table 3, most of the residents on Nantucket are white (88.3%), higher than the statewide figure of 84.1%. Nantucket has a significantly lower percentage of Asian residents at 1.2% compared to the statewide percentage of 6.2%. The percentage of Nantucket residents who are black (6.3%) is slightly lower than the statewide percentage of 7.0%. In addition, Nantucket has a higher percentage of residents who identify as “Other” at 4.1% compared to 2.8% for Massachusetts overall. The percentage of Hispanic/Latino residents on Nantucket is 10.0% and similar to the statewide percentage.

<table>
<thead>
<tr>
<th>Table 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nantucket County</td>
</tr>
<tr>
<td>Percentage Foreign Born</td>
</tr>
<tr>
<td>Europe</td>
</tr>
<tr>
<td>Asia</td>
</tr>
<tr>
<td>Africa</td>
</tr>
<tr>
<td>Oceania</td>
</tr>
<tr>
<td>Latin America</td>
</tr>
<tr>
<td>Northern America</td>
</tr>
</tbody>
</table>


Foreign Born Populations

As seen in Table 4, the percentage of residents on Nantucket who are of foreign birth is 16.6%, slightly higher than the statewide percentage of 15.0%. When looking at the distribution of foreign born residents on Nantucket, two thirds are from Latin America and just under a quarter from Europe. Nantucket has significantly smaller percentages of foreign born African (0.5%) and Asian (6.2%) populations compared to statewide percentages of 8.3% and 29.2%, respectively.

Some quality of life survey respondents referenced the growing population of immigrants on Nantucket and noted the demographics of Nantucket are changing rapidly. The Nantucket Public Schools reported in 2014 that its
Hispanic student enrollment had increased to 21 percent of the entire student body, and that 12 percent of all students at the Nantucket Elementary School are identified English Language Learners.

Table 5

<table>
<thead>
<tr>
<th></th>
<th>Nantucket County</th>
<th>Massachusetts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median Household Income</td>
<td>$85,478</td>
<td>$66,866</td>
</tr>
<tr>
<td>Families Below Federal Poverty Level (FPL)</td>
<td>6.6%</td>
<td>8.1%</td>
</tr>
<tr>
<td>Children Below 100% Federal Poverty Level (FPL)</td>
<td>15.4%</td>
<td>14.9%</td>
</tr>
<tr>
<td>Households receiving Supplemental Nutrition Assistance Program (SNAP) Benefits</td>
<td>4.2%</td>
<td>11.7%</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>12.0%</td>
<td>6.9%</td>
</tr>
</tbody>
</table>


Income, Poverty, and Employment

As seen in Table 5, Nantucket’s median household income of $85,478 exceeds the statewide average of $66,866. Of the 2,462 families living in Nantucket, 6.6% had incomes below the FPL in the past 12 months, slightly less than the statewide percentage of 8.1%. However when looking at children under 18 who are living in households with income below the FPL, Nantucket’s percentage of 15.4% is higher than the statewide percentage of 14.9%.

As seen in Figure 1, the overall cost of living on Nantucket is twice the national average, and significantly higher in other areas of Massachusetts such as Boston, Worcester, and Springfield (cost of living data were not available at the state level). The cost of living index includes the following items in its calculation: groceries, housing, utilities, transportation, healthcare, and goods and services. In addition the cost of housing on Nantucket is quadruple the national average and significantly higher than Boston, Worcester, and Springfield. A primary theme throughout both focus groups was the toll the high cost of living on Nantucket has on the year-round community. Residents spend disproportionate amounts of their income on basic needs such as housing, groceries, and utilities. Focus
groups participants also expressed a lack of recognition by business owners about the cost of living and corresponding wages for their employees.

Just under half of quality of life survey respondents (45.8%) said they believe there is economic opportunity on Nantucket. Roughly two-thirds of survey respondents believe they have the opportunity to contribute to and participate in making Nantucket a better place to live. In addition, survey respondents ranked a healthy economy as the third most important factor defining a healthy community, after access to healthcare and affordable housing. Compared to Massachusetts overall, a lower percentage of Nantucket households (4.2%) received SNAP benefits compared to 11.7% statewide. The non-seasonally adjusted percentage of unemployed residents in Nantucket County was 12.0%, significantly higher than the statewide percentage of 6.9%.

When asked about food insecurity during the past 12 months, 6.3% (n = 19) of survey respondents said they have worried about food running out before being able to buy more and 3.7% (n=11) have run out of food and not been able to buy more.

<table>
<thead>
<tr>
<th>Table 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nantucket County</td>
</tr>
<tr>
<td>Residents 25+ with No High School Diploma</td>
</tr>
<tr>
<td>Residents with Associate’s Degree or Higher</td>
</tr>
</tbody>
</table>

Data Source: US Census Bureau, 2009-2013 American Community Survey, data retrieved from Community Commons on 4/15/15.

Educational Attainment

As seen in Table 6, Nantucket has a lower percentage of residents who did not graduate from high school at 6.0% compared to the statewide percentage of 10.6%. In addition, Nantucket has a higher percentage of residents (52.2%) who have an Associate’s level degree or higher compared to the statewide percentage of 47.1%.

Quality of life survey respondents ranked good schools as the third most important factor defining a healthy community. Just over two-thirds of survey respondents ranked Nantucket as a good place to raise children (including quality, day care, after-school programs, recreation, etc.). Focus group participants, however, noted that the cost and accessibility of childcare are challenges for many families. When asked about the top three health problems that have the greatest impact on community health on Nantucket, 6.9% of survey respondents cited education (low graduation rates, quality of education, etc.).
Year Round, Shoulder, and Summer Residents

In 2012, Denneen & Company conducted a survey of 630 Nantucket residents. Just over half of respondents (52%) were year round residents, 30% were summer residents, and 18% were shoulder residents. The findings are summarized in Table 7 below.

<table>
<thead>
<tr>
<th>Year Round Residents</th>
<th>Shoulder Residents</th>
<th>Summer Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults and Families</td>
<td>Wealthy retirees</td>
<td>Wealthy retirees and families with employed head(s)</td>
</tr>
<tr>
<td>All income and education levels</td>
<td>Over 55 years old</td>
<td>Mostly over 45 years old</td>
</tr>
<tr>
<td>Largely employed</td>
<td>College degree +</td>
<td>College degree +</td>
</tr>
<tr>
<td>Majority own home</td>
<td>Long time Island home owners</td>
<td>Long time Island home owners</td>
</tr>
<tr>
<td>Majority long term</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data Source: 2012 Nantucket Cottage Hospital Consumer Survey, Denneen & Company

Social and Physical Environment

<table>
<thead>
<tr>
<th></th>
<th>Nantucket County</th>
<th>Massachusetts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Housing Units</td>
<td>11,650</td>
<td>2,813,641</td>
</tr>
<tr>
<td>Vacant Housing Units</td>
<td>65.1%</td>
<td>9.9%</td>
</tr>
<tr>
<td>Owner-occupied housing units</td>
<td>65.8%</td>
<td>62.7%</td>
</tr>
<tr>
<td>Renter-occupied housing units</td>
<td>34.2%</td>
<td>37.3%</td>
</tr>
<tr>
<td>Median Home Value</td>
<td>$929,700</td>
<td>$330,100</td>
</tr>
<tr>
<td>Homes Costing $1,000,000 or more</td>
<td>43.0%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Renter Costs Exceed 50% of Total Household Income (Worst Case Needs)</td>
<td>17.0%</td>
<td>-</td>
</tr>
<tr>
<td>Fair Market Rent (FMR) for 2 Bedroom Apartment*</td>
<td>$1,799</td>
<td>$1,252</td>
</tr>
<tr>
<td>Number of Full-time Minimum Wage Jobs Needed to Afford 2 Bedroom Apartment at FMR</td>
<td>4.3</td>
<td>3.0</td>
</tr>
<tr>
<td>Annual Income Needed to Afford 2 Bedroom Apartment at FMR</td>
<td>$71,960</td>
<td>$50,090</td>
</tr>
<tr>
<td>Homeless Population</td>
<td>0</td>
<td>21,237</td>
</tr>
</tbody>
</table>

Data Sources: US Census Bureau, 2009-2013 American Community Survey, data retrieved from Community Commons & American Factfinder on 4/15/15; 2015 WorkforceHousing Needs Assessment by Housing Nantucket; and National Low Income Housing Commission

*HUD Fair Market Rent is a payment standard for housing authorities that administer Section 8 assistance; it is not an affordable rent per se. HUD’s goal for the FMR is that it should be “high enough to permit a selection of units and neighborhoods and low enough to serve as many low-income families as possible.

Housing

As seen in Table 8, of the 11,650 housing units on Nantucket, 65.1% are vacant. This is over six times the statewide percentage and reflective of the different residency types on Nantucket. In addition, Nantucket has a slightly higher percentage of home-owners (65.8%) as compared to the state percentages of 62.7%. The median home value of $929,700 on Nantucket is almost three times the statewide value of $330,100. Moreover, almost half of homes (43.0%) on Nantucket cost one million dollars or more, compared to 3.4% statewide.
A recent report conducted by Housing Nantucket estimated that homeownership is prohibitive to 90% of the island’s households. The lack of price-appropriate housing for people who work on Nantucket throughout the year is a barrier to a decent quality of life for workers and their families and an obstacle to hiring qualified people for some specialized positions. As numerous past studies and reports show, the stock of affordable housing on Nantucket been inadequate for a very long time.

Of Nantucket’s 3,894 housing units that are rented, 17% of tenants spend more than 50 percent of their monthly income for housing (rent and basic utilities) – a condition known as worst-case housing needs. By definition, households that can have worst case needs are households that: are renters; have very low incomes e.g. no more than 50 percent of the Area Median Income (as adjusted for family size); and do not receive federal housing assistance. In addition, in order to afford the fair market rent (FMR) for a two bedroom apartment on Nantucket ($1,799), a minimum wage earner must work 172 hours per week, 52 weeks per year (MA minimum wage is $8.00 per hour). Alternately, a household must include 4.3 minimum wage earners working 40 hours per week year-round in order to make the two-bedroom FMR affordable. The annual income required on Nantucket to afford a two bedroom apartment at fair market rent is $71,960 and significantly higher than the statewide figure of $50,090.

Quality of life survey respondents listed access to housing as the second most important health problem on Nantucket. In addition, a primary theme throughout both focus groups was the lack of affordable housing options on the island for both year-round and seasonal residents. Many observed that although this has been a problem for decades, it is a crisis that has grown even more acute in recent years. Some shared stories of friends and neighbors who they considered to be valued, year-round members of the community who have been forced to move off-island because they were unable to find housing. This was reinforced by comments about the disproportionate amount of island residents’ income going toward housing costs. When asked about housing instability, 7% of survey respondents stated they may not have access to housing in the next two months.

<table>
<thead>
<tr>
<th>Means of Transportation to Work</th>
<th>Nantucket County</th>
<th>Massachusetts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car, Truck, or Van</td>
<td>76.1%</td>
<td>80.0%</td>
</tr>
<tr>
<td>Public Transportation (excluding taxicab)</td>
<td>1.4%</td>
<td>9.3%</td>
</tr>
<tr>
<td>Walked</td>
<td>11.2%</td>
<td>4.7%</td>
</tr>
<tr>
<td>Bicycle</td>
<td>4.1%</td>
<td>0.7%</td>
</tr>
</tbody>
</table>


Transportation

As seen in Table 9, the percentage of Nantucket County residents who take public transport to work (1.4%) is significantly lower than the statewide percentage of 9.3%. Nantucket County has just over twice the percentage (11.2%) of workers who walk to work compared to the statewide percentage of 4.7%. Similarly the percentage of people in Nantucket County who bike to work (4.1%) is larger than the statewide parentage of 0.7%.

Focus groups noted the lack of year round public transportation on Nantucket was a challenge in addition to the high cost of travel to and from the island.
Crime and Safety

Table 10

<table>
<thead>
<tr>
<th></th>
<th>Nantucket County</th>
<th>Massachusetts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Violent Crime Per 100,000 Residents</td>
<td>460.21</td>
<td>436.8</td>
</tr>
<tr>
<td>Property Crime Per 100,000 Residents</td>
<td>3,195.9</td>
<td>2,153.0</td>
</tr>
</tbody>
</table>

Data Sources: US Census Bureau, 2009-2013 American Community Survey, data retrieved from Community Commons on 4/15/15.

As seen in Table 10, Nantucket has a higher violent crime rate per 100,000 residents (460.21) compared to the statewide figure of 436.8. In addition Nantucket has a higher property crime rate per 100,000 residents (3195.9) compared to 2,153.0 statewide.

Figure 2: How safe would you say you feel in each of the following places?

As seen in Figure 2 above, when asked about how safe they felt walking in the community at night, three-quarters of respondents said they felt safe/somewhat safe. The majority of survey respondents stated that they felt safe/somewhat safe while in their homes, in addition to in parks, playgrounds, and other recreational areas. In addition, one quarter of quality of life survey respondents stated low crime and safe neighborhoods were in the top three factors that define a healthy community.

Health Indicators
As seen in Figure 3 above, when asked how they would rate Nantucket as a “healthy community”, the majority of quality of life survey respondents (88.7%) considered it “healthy” or “very healthy” and 11.3% considered it “unhealthy” or “very unhealthy”.

As seen in Figure 4 above, the majority of quality of life survey respondents rated their general health (89.9%), physical health (87.2%), mental health (95.7%), and quality of life (93.7%) as “excellent”, “very good” or “good”. Respondents who rated their health or quality of life as “fair” or “poor” were distributed as follows: physical health (12.8%), general health (10.0%), quality of life (6.2%), and mental health (4.3%).

Data Source: 2015 Nantucket Cottage Hospital Quality of Life Survey.
As seen in Figure 5, when quality of life survey respondents were asked to identify the three most important health problems on Nantucket (e.g. those that have the greatest impact on overall community health), the leading problems identified were: alcohol and substance use disorders (63.4%); access to housing (48.2%); mental health disorders (35.3%); and cancers (20.5%).

**Figure 5: Leading Health Problems on Nantucket**

Data Source: 2015 Nantucket Cottage Hospital Quality of Life Survey.
As seen in Figure 6, when quality of life survey respondents were asked what are the three most important health factors that define a “healthy community”, the leading factors identified were: access to healthcare (60.7%); affordable housing (43.2%); good schools, jobs, and economy (38.6%); low crime/safe neighborhoods (26.7%); strong sense of community (25.4%); and healthy behaviors and lifestyles (22.1%).

**Figure 6: Leading Factors That Define a “Healthy Community”**

Community Cohesion

Focus group participants highlighted the disconnect between year-round residents of the island and Nantucket’s summer residents. Participants commented on the fact that many summer residents do not get involved with the community and its organizations (with a number of notable and generous exceptions), while year-rounders generally do not respect and value the many positive contributions of the summer residents, and instead focus on the negative impacts of the seasonal influx.

One in four quality of life survey respondents said that a strong sense of community was a top three factor defining a healthy community. Just under three-quarters of survey respondents noted they feel connected to the community and that there are networks of support in place under times of stress and need. A similar proportion of respondents noted that the businesses, agencies, and organizations on Nantucket contribute to making the community a better place to live. The majority of quality of life survey respondents (82.2%) believe they can contribute to and participate in making Nantucket a better place.

Just under two-thirds of survey respondents said they believe Nantucket is a good place to grow old when considering consider elder-friendly housing, transportation to medical services, churches, shopping, elder day care, and social support for the elderly.
Healthy Eating, Physical Activity, and Overweight/Obesity

Table 11

<table>
<thead>
<tr>
<th></th>
<th>Nantucket County</th>
<th>Massachusetts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obese Adults 20+</td>
<td>20.2%</td>
<td>23.3%</td>
</tr>
<tr>
<td>Physical Inactivity</td>
<td>17.5%</td>
<td>21.1%</td>
</tr>
<tr>
<td>Access to Exercise Opportunities</td>
<td>95.0%</td>
<td>95.0%</td>
</tr>
<tr>
<td>Food Insecurity</td>
<td>8.8%</td>
<td>11.9%</td>
</tr>
<tr>
<td>Low-Income Population with Low Food Access</td>
<td>3.0%</td>
<td>4.3%</td>
</tr>
</tbody>
</table>

Data Sources: 2015 RWJ County Health Rankings & Roadmaps and U.S. Department of Agriculture, data retrieved from Community Commons on 4/15/15.

As seen in Table 11, Nantucket performed comparatively or better than statewide percentages on the following measures: adult obesity (20.2% vs. 23.3% statewide); physical inactivity (17.5% vs. 21.1% statewide); access to exercise opportunities (95% for both areas); food insecurity (8.8% vs. 11.9% statewide); and low income populations with low food access (3.0% vs. 4.3% statewide%).

Just under half of quality of life survey respondents cited healthy behaviors and lifestyles; access to healthy food; and a clean environment were leading factors that define a healthy community. In addition, nine percent of respondents said poor diet and inactivity were among the top three health problems on Nantucket.

Table 12

<table>
<thead>
<tr>
<th></th>
<th>Nantucket County</th>
<th>Massachusetts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult smoking</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>Excessive Drinking</td>
<td>26%</td>
<td>20%</td>
</tr>
<tr>
<td>Admissions to MA Department of Public Health (MA DPH) Funded Treatment Programs</td>
<td>594.4</td>
<td>1,532.4</td>
</tr>
<tr>
<td>Alcohol &amp; Drug Related Hospital Discharges per 100k Population</td>
<td>118.9</td>
<td>344.7</td>
</tr>
<tr>
<td>Unintentional Injury Death Rate Per 100,000</td>
<td>32.7</td>
<td>29.7</td>
</tr>
</tbody>
</table>

Data Sources: 2015 RWJ County Health Rankings & Roadmaps, data retrieved from Community Commons on 4/15/15; MA Department of Public Health, Health Status Indicators Report for Nantucket published 6/2013.

Alcohol & Substance Use Disorders

As seen in Table 12, Nantucket’s percentage of adult smokers is the same as the state’s percentage of 15%. However, Nantucket fairs worse than the state with 26% of residents reporting excessive drinking, compared to 20% statewide. Admissions to MA DPH funded treatment programs were significantly lower at 594.4 per 100,000 persons compared to the state rate of 1,532.4 per 100,000 persons. Similarly Nantucket had fewer alcohol and other drug related hospital discharges per 100,000 persons with 118.9 compared to 344.7 statewide. These favorable discharge statistics are likely reflective of a lack of on-island services, such as the absence of a inpatient psychiatric facility.

Survey respondents cited substance use disorders as the most pressing health problem on Nantucket. Alcohol and drug use disorders on Nantucket were also key themes discussed in focus groups. These problems are not new on the island, but there is increased attention and awareness due to the recent opioid overdoses, the growth of alcohol-fueled events on Nantucket such as the Figawi Race Weekend and the Fourth of July beach parties.
Participants further noted the lack of resources to appropriately address these problems and the need for additional counseling and support services, and a detoxification center.

**Injury-Related Behaviors**

As seen in Table 13, when examining the age-adjusted death rate from unintentional injuries, Nantucket fares worse at 32.7 deaths per 100,000 residents when compared to the statewide figure of 29.7.

<table>
<thead>
<tr>
<th>Age-Adjusted Death Rates (Per 100,000 Pop.)</th>
<th>Nantucket County</th>
<th>Massachusetts</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Cause Mortality</td>
<td>632.6</td>
<td>667.8</td>
</tr>
<tr>
<td>Cancer</td>
<td>169.53</td>
<td>173.99</td>
</tr>
<tr>
<td>Coronary Heart Disease</td>
<td>150.02</td>
<td>155.93</td>
</tr>
<tr>
<td>Ischaemic Heart Disease</td>
<td>115.81</td>
<td>96.8</td>
</tr>
<tr>
<td>Cerebrovascular Disease</td>
<td>41.15</td>
<td>33.12</td>
</tr>
</tbody>
</table>

Data Sources: Centers for Disease Control and Prevention, National Vital Statistics System, data retrieved from Community Commons on 4/15/15; MA Department of Public Health, Health Status Indicators Report for Nantucket published 6/2013.

As seen in Table 13, the age adjusted death rate (per 100,000 persons) on Nantucket is 632.6, which is lower than the statewide rate of 667.8. Similarly, the rates of mortality for cancer and coronary heart disease are lower on Nantucket with rates of 169.53 and 150.02 respectively, compared to 173.99 and 155.93 statewide. The rates of ischaemic heart disease (115.81) and cebrovascular disease (41.15) on Nantucket are higher than the statewide rates of 96.8 and 33.12, respectively.

**Chronic Disease**

<table>
<thead>
<tr>
<th>2012 Ischaemic Heart Disease Prevalence (Medicare Population)</th>
<th>Nantucket County</th>
<th>Massachusetts</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012 Diabetes Prevalence Age 20+</td>
<td>6.8%</td>
<td>8.1%</td>
</tr>
</tbody>
</table>

Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, data retrieved from Community Commons on 4/15/15.

As seen in Table 14, Nantucket has a lower prevalence of heart disease (20.6%) and diabetes (6.8%) compared to statewide percentages of 25.0% and 8.1%, respectively.

**Chronic Disease - Cancer**
Reproductive and Maternal Health

Figure 7: 2007-2011 Cancer Incidence - Cases Per 100,000

As seen in Figure 7 above, Nantucket’s 2007-11 overall cancer incidence (622.5) is significantly greater than the statewide incidence of 492.5. Similarly, Nantucket exceeds statewide incidence rates for breast cancer (179.4 vs. 135.6) and colorectal cancer (48.5 vs. 42.0). The melanoma of the skin incidence on Nantucket is almost quadruple the statewide incidence at 74.9. The lung & bronchus cancer incidence on Nantucket is 53.8, which is less than the statewide incidence of 68.9. When asked about the three most important health problems on Nantucket that impact overall community health, 20.5% of quality of life survey respondents cited cancer as a leading health problem on Nantucket.

Mental Health Disorders

Nantucket is currently experiencing an increase in the number of suicides. Seven middle-age residents on Nantucket have committed suicide since October 2014. The last cluster of suicides happened between February 2007 and August 2008, when four teenagers killed themselves. According to data compiled by Barnstable County’s Human Services Department, 320 residents of the Cape and Islands committed suicide between 2000 and 2011, the last year for which publicly available statistics are available. Eleven of those suicides were residents of Nantucket. The Cape and Islands suicide rate of 12.1 per 100,000 persons is substantially higher than Massachusetts’ overall 8.7 rate.

Quality of life survey respondents cited mental health disorders (anxiety, depression, etc) as the third most important health problem on Nantucket. Thirteen survey respondents specifically referred to the increase in suicides on Nantucket. When asked how they would rate their own mental health, 32.8% said it was excellent, 62.9% said it was very good/good, and 4.3% said it was fair/poor.

Focus group participants also noted the issue of mental health on Nantucket and referred to the number of suicides over the past year among middle-aged men. They also acknowledged the island’s existing clinicians, providers, and agencies are all over-extended given the extent of the issues and noted the great need for an inpatient treatment capacity.

Reproductive and Maternal Health
As seen in Table 15, 83% of the area’s 122 expectant mothers received adequate prenatal care in 2010. This was slightly lower than the overall statewide percentage of 84.9%. In addition, Nantucket County’s 2010 infant mortality rate of 2.5 deaths of infants less than one year of age per 1,000 births was lower than the statewide rate of 4.9. Both the Nantucket County and statewide rates are more favorable to the HP2020 goal of 6.5. Lastly, 10% of Nantucket County’s 122 births were of low birthweight compared to 7.8% statewide.

Sexually Transmitted Infections

As seen in Table 16, Nantucket has lower rates per 100,000 residents of HIV (243.4), chlamydia (246.5), and gonorrhea (29.6), compared to statewide figures of 314.6, 357.5, and 35.9, respectively.

Tickborne Diseases

As seen in Table 17, Nantucket surpasses statewide percentages for Lyme disease, babesiosis, and HGA with incidence rates of 570.0 vs. 86.0 statewide, 353.9 vs. 7.9 statewide, and 88.5 vs. 9.2 statewide respectively. Although not identified as a leading health problem on Nantucket (2.2% n=7) in the quality of life survey, there has been extensive media coverage of this issue over the years, and awareness of tick-borne diseases and preventative measures is high. Furthermore, island physicians have extensive experience in diagnosing and treating these diseases, and both the hospital and the Town of Nantucket’s Board of Health have engaged in education initiatives over the years, including a recent video produced by the Board of Health that featured Nantucket Cottage Hospital surgeon and tick disease expert Dr. Tim Lepore. It should also be noted that efforts to address the prevalence of
tick-borne diseases on Nantucket have been controversial, most notably the extended deer hunt authorized and later rescinded by the state Division of Fisheries and Wildlife.

**Access to Care**

Nantucket Cottage Hospital is the only medical facility on the island providing primary, urgent, emergency and surgical care, as well as outpatient services and appointments with medical and surgical specialists. NCH works closely with the island’s mental health and substance use disorders agency, Family & Children’s Services of Nantucket, and provides office space for this organization.

**Table 18**

<table>
<thead>
<tr>
<th>Data Risk Surveillance System</th>
<th>Behavioral Factor Sources: US Department of Health &amp; Human Services, Health Resources and Services Administration, retrieved from Community Commons on 4/15/15</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nantucket</strong></td>
<td><strong>Massachusetts</strong></td>
</tr>
<tr>
<td>Adults 18-64 without Health Insurance Coverage</td>
<td>7.7%</td>
</tr>
<tr>
<td>Children under 19 without Health Insurance Coverage</td>
<td>2.5%</td>
</tr>
<tr>
<td>Population Living in a &quot;Health Professional Shortage Area&quot;</td>
<td>100%</td>
</tr>
<tr>
<td>Primary Care Physicians per 100,000 Population</td>
<td>58.3</td>
</tr>
<tr>
<td>Dentists per 100,000 Population</td>
<td>76.93</td>
</tr>
<tr>
<td>Percent of Female Medicare Enrollees with Mammogram in Past 2 Years</td>
<td>70.9%</td>
</tr>
<tr>
<td>Adults 50+ Ever Had a Sigmoidoscopy or Colonoscopy</td>
<td>59.5%</td>
</tr>
</tbody>
</table>

As seen in Table 18, a higher percentage of Nantucket residents (7.7%) do not have health insurance compared to the statewide percentage of 5.6%. In addition, the percentage of children under 19 without health insurance coverage on Nantucket is almost twice the state percentage at 2.5%.

Nantucket’s entire population is living in a federally designated “Health Professional Shortage Area”, compared to 14.6% of residents statewide. Nantucket has 58.3 primary care physicians and 76.9 dentists per 100,000 residents, compared to statewide figures of 102.7 and 91.2, respectively.

The 2012 Denneen & Company survey of a representative sample of Nantucket residents showed that 92.0% of year round residents, 42.0% of shoulder residents, and 17.0% of summer residents have a primary care physician on Nantucket. Nantucket residents reported they are generally able to get an appointment with an area primary care physician, although some of the appointments are farther away than expected. Summer residents tend to access emergency department and urgent care services more than primary care services.

In addition, Nantucket has lower percentages of screenings for breast cancer (70.9%) and colorectal cancer (59.5%) compared to statewide percentages of 73.8% and 71.0% respectively.

Quality of life survey respondents noted that access to healthcare is the number one factor that defines a healthy community and just over half of respondents stated that they were satisfied with the existing health system on Nantucket.

Several survey respondents noted the lack of specialists, especially those qualified to treat mental health and substance use disorders. Focus group participants acknowledged that the island’s existing clinicians, providers and agencies are all over-extended given the extent of the behavioral health issues.
III. PROCESS FOR PRIORITIZING NEEDS IDENTIFIED

A team of NCH staff members, along with Partners Healthcare Community Health Reporting & Compliance staff, analyzed and reviewed the results of the 2015 Nantucket Quality of Life Survey and summarized the comments and feedback gathered during the focus group sessions on Nantucket. Quantitative data from local, state and federal sources was also reviewed and analyzed. The data were used to prioritize the health needs of island residents based on the frequency with which the issues were identified in the survey and focus groups. The analysis identified the top health needs and issues for Nantucket, including alcohol and substance use disorders, housing, mental health, and cancer.

IV. IMPLEMENTATION STRATEGY/COMMUNITY BENEFIT ACTION PLANS

Detailed action plans for each priority area are detailed below. Action plans are evaluated annually and refined based on changing community needs.

<table>
<thead>
<tr>
<th>Priority 1: Alcohol and Substance Use Disorders/Addiction</th>
<th>Timeline: Year 1,2,3</th>
<th>Partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal: To address the issue of alcohol and substance use disorders in the Nantucket community, identify gaps in services for those in need, and support the efforts of the Nantucket Behavioral Health Task Force in these areas.</td>
<td>1,2,3</td>
<td>A Safe Place, Family &amp; Children’s Services, Sherburne Commons, Access Nantucket, Autism Speaks, Nantucket Police Department, Community Foundation for Nantucket, Our Island Home, Town of Nantucket Human Services Dept., Alliance for Substance Abuse Prevention, the Nantucket Board of Health</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Action</th>
<th>Action Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Strengthen and support the ongoing work of the Nantucket Behavioral Health Task Force, which was spearheaded by NCH in response to the identified need for substance use and behavioral health services on Nantucket, by meeting monthly with the task force partners.</td>
<td>Enhance awareness of the Task Force’s efforts; support efficient use of grant funds for substance use disorders; work to secure additional grant funds</td>
<td>In FY14, NCH was instrumental in securing a two-year, $400,000 grant for the Behavioral Health Task Force. The funds were budgeted for training, education and advocacy. Currently working toward establishment of new providers and counselors to provide mental health/substance use services using the grant funds.</td>
</tr>
<tr>
<td>2. Create greater awareness of the opioid crisis on Nantucket as well as the resources available to community members.</td>
<td>Provide opportunities for education and dialogue with NCH; continue to provide space for AA/NA meetings</td>
<td>Organized an Opioid Symposium for the community with the Town of Nantucket Board of Health in May 2015, as well as a follow-up Q&amp;A session. Hospital staff participated. Plans to hold more in the future.</td>
</tr>
</tbody>
</table>
3. Continue to support Nantucket’s NARCAN program in collaboration with Nantucket’s first responders, including the Nantucket Police Department and Fire Department

<table>
<thead>
<tr>
<th>Priority 2: Housing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal:</strong> Play a proactive role in helping to address the island’s affordable housing crisis, and use NCH’s position as one of the largest private employers on the island to advocate for solutions</td>
</tr>
<tr>
<td><strong>Timeline:</strong> Year 1, 2, 3</td>
</tr>
<tr>
<td><strong>Partners</strong></td>
</tr>
<tr>
<td>1, 2, 3</td>
</tr>
<tr>
<td>Housing Nantucket, Town of Nantucket</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Action</th>
<th>Action Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Maximize NCH’s existing resources for housing for employees and support the work of the newly formed internal NCH Housing Task Force.</td>
<td>Seek to understand the problem using data and feedback from NCH employees</td>
<td>In FY14 NCH formed a Housing Task Force and completed a survey of employees</td>
</tr>
<tr>
<td>2. Collaborate with island housing advocates and public/private agencies on potential solutions</td>
<td>Engage these groups and participate in ongoing island housing efforts</td>
<td>Initiated contact with Housing Nantucket ahead of Town Meeting</td>
</tr>
</tbody>
</table>
## Priority 3: Mental Health

**Goal:** Continue to serve as the acute safety net for island patients requiring psychiatric evaluation, stabilization, observation and/or transfer off-island. Identify gaps in services and support the work of the Behavioral Health Task Force to fill them.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Action</th>
<th>Action Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Strengthen and support the ongoing work of the Nantucket Behavioral Health Task Force, which was spearheaded by NCH in response to the identified need for substance use and behavioral health services on Nantucket, by meeting monthly with the task force partners.</td>
<td>Enhance awareness of the Task Force’s efforts; support efficient use of grant funds for mental health services; work to secure additional grant funds.</td>
<td>In FY14, NCH was instrumental in securing a two-year, $400,000 grant for the Behavioral Health Task Force. The funds were budgeted for training, education and advocacy. Currently working toward establishment of new providers and counselors to provide mental health/substance use services using the grant funds. Assisted in the organization and promotion of the Nantucket Behavioral Health Symposium.</td>
</tr>
<tr>
<td>2. Leverage affiliation with MGH and Partners to increase available resources to Nantucket patients</td>
<td>Establish contact with Tony James, MGH’s senior VP of Network Development and Integration, to collaborate</td>
<td>Pending</td>
</tr>
<tr>
<td>3. Continue financial support of Nantucket mental health agencies and providing on-call clinicians for insured patients who present to NCH emergency dept. with behavioral health issues</td>
<td>Formalize relationships with these agencies and groups</td>
<td>Pending</td>
</tr>
</tbody>
</table>
### Priority 4: Cancer

**Goal:** To provide cancer screenings and education to the Nantucket community while sustaining the growth in NCH’s cancer care program to provide more on-island services to cancer patients.

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Action</th>
<th>Action Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sustain and grow Mass General Hematology/Oncology program at NCH to allow island cancer patients to receive as much care as possible on Nantucket.</td>
<td>Support Swim Across America event, which raises funds to cover the cost of this program.</td>
<td>SAA- Nantucket is in the midst of its third annual event and on track for its largest fundraising total to date.</td>
</tr>
<tr>
<td>2. Support the island’s cancer support services, including PASCON and the Marla Lamb Cancer Travel Fund.</td>
<td>Collaborate on education, awareness through marketing and communication strategies, as well as fundraising.</td>
<td>NCH works collaboratively with PASCON and promotes events that support the Marla Lamb Fund.</td>
</tr>
<tr>
<td>3. Expand and/or enhance opportunities for preventative screenings and education</td>
<td>Sustain mammography clinic for uninsured women and review potential for additional free screening events</td>
<td>In FY14 NCH continued its free mammography clinic for uninsured women</td>
</tr>
</tbody>
</table>