Spaulding Rehabilitation Hospital Cape Cod

Community Health Needs Assessment

2016

Table of Contents

ABOUT SPAULDING REHABILITATION HOSPITAL CAPE COD

SPAULDING REHABILITATION NETWORK MISSION STATEMENT

The Spaulding Rehabilitation Network is committed to delivering compassionate care across the healthcare continuum to improve quality of life for persons recovering from, or learning to live fully with, illness, injury and disability.

SPAULDING REHABILITATION NETWORK VISION STATEMENT

The Spaulding Rehabilitation Network will be the nationally recognized leader in innovation, research and education, will achieve exceptional patient outcomes, and will be known for delivering a broad range of integrated health care solutions. We will exercise leadership to shape health policy and to advocate for our patients, their families and our staff.

SPAULDING REHABILITATION HOSPITAL CAPE COD MISSION STATEMENT

Spaulding Rehabilitation Hospital Cape Cod is committed to delivering compassionate care across the healthcare continuum to improve quality of life for persons recovering from, or learning to live fully with, illness, injury and disability.

BACKGROUND AND PRIORITY COMMUNITIES

Spaulding Rehabilitation Hospital Cape Cod (formerly Rehabilitation Hospital of the Cape and Islands - RHCI) is a 60-bed, not-for-profit, acute rehabilitation hospital. Part of the Spaulding Rehabilitation Network, Spaulding Cape Cod (SCC) is the only provider of hospital-level rehabilitation serving the Cape and Islands, occupying a unique place in the continuum of health care providers in the region. Inpatient rehabilitation programs help people transition to home following a stay in an acute care hospital for a serious illness, injury or surgery. Outpatient programs provide access to unique expertise and specialty programs to continue recovery post-discharge, to manage chronic illness, and to support ongoing recovery. The outpatient pediatric center is a regional resource, offering on-site subspecialty medical clinics in collaboration with Massachusetts General Hospital and Boston's Children's Hospital.

SCC's primary service area is Barnstable County (Table 1), a region comprised of Cape Cod and handful of minor nearby islands[1]. For the purposes of this report, Barnstable County and Cape Cod will be used interchangeably. Cape Cod is a peninsula separated from the Massachusetts mainland by a canal, thereby limiting access to goods and resources available to the rest of the State and lending a semi-rural quality to life in the area. Consequently, public transportation and IT infrastructure add to the challenges of meeting the needs of Cape residents.

[1] Not including Martha's Vineyard Island (a part of Dukes County) or Nantucket Island (a part of Nantucket County).

Table 1 - Top MA Communities Served

County	% of SCC Patients
Barnstable	78.5%
Plymouth	16.8%
Dukes	0.4%
Nantucket	0.2%
Other	4.0%

Data source: SCC internal database, FY2015

Through SCC's clinical programs, residents of Barnstable County have convenient, local access to specialized services without burdensome travel time, disruption to work and family life, and cost of receiving care in more metropolitan areas, i.e. Boston or Providence. In addition, SCC conducts a robust community outreach program, which includes education of the public and professional communities about prevention, diagnosis and treatment of rehabilitation-related conditions; wellness programs; adaptive sports; and screenings.

Given the communities the hospital serves, and the specialty nature of the care provided, SCC defines its target populations geographically as Barnstable County, and especially older persons and persons living with a disability.

ASSESSMENT OF COMMUNITY HEALTH NEEDS, GOALS, AND ASSETS

In 2016, SCC implemented a Community Health Assessment (CHA) using a collaborative and dynamic approach to review available data, existing programs, and views from people who represent the broad interest of the community served by the hospital.

The goals of the 2016 CHA were to:

1. Identify the health needs and assets of our target populations in Barnstable County
2. Engage community members in the process
3. Determine priorities for the next 3 years
4. Develop a plan and implementation strategy

PAST COMMUNITY HEALTH ASSESSMENTS

In compliance with section 501(r)(3) of the Internal Revenue Code, in 2013 SCC reached out to Cape Cod Health Care (CCHC), the primary comprehensive health care provider on Cape Cod, to better understand the community health needs of our shared geographic area. At the time, Cape Cod Healthcare had just published its own extensive CHA. Rather than duplicating effort with limited resources, SCC sought approval from CCHC to use its CHA report as the basis for exploring and developing services to meet community needs.

The Community health priorities identified in CCHC's CHA report were: Support community-based activities to improve chronic and infectious disease management; Expand access to healthcare services to reduce health disparities and promote health equality; Support programs for outreach, education, navigation and intervention targeted at individuals and families facing mental health issues; Support community-based substance abuse prevention and intervention programs; Support programs that address senior health challenges; Support community-based programs that encourage positive health and lifestyle choices by youth and young adults. The full report can be found here:
http://www.capecodhealth.org/app/files/public/198/Community-Health-Needs-Assessment.pdf

METHODOLOGY

Overall Approach

The 2016 Spaulding Rehabilitation Hospital Cape Cod Community Health Assessment (SCC CHA) values all the factors within its communities that influence health. Data collection for this CHA involved both quantitative and qualitative data to help identify major aspects of the community that impact the health of its priority populations. This assessment was developed in close collaboration with Partners Community Health.

During the collection of both qualitative and quantitative data, the social determinants of health were considered. Beyond individual physiology and health-related behaviors, there are economic, environmental, and social factors that influence health. Collectively, we refer to

these as social determinants of health (SDOH). Social determinants are societal influences that help to describe the circumstances in which people are born, grow up, live, work and age[2]. Research has identified a wide range of social factors that are associated with differences in health outcomes:

- Employment
- Access to Healthy Food
- Access to Health Care
- Exposure to Violence
- Insurance Coverage
- Education
- Access to Health Resources
- Income
- Housing Conditions
- Transportation Options
- Environmental Safety
- Occupational Safety

Source: Healthy People 2020

Our report describes how many health-promoting resources (including income and employment) are unevenly distributed within Barnstable County among those of differing races and ethnicities, socioeconomic status, and geographic locations.

Quantitative Data

The SCC CHA uses several secondary data sources to pull information on health indicators, as well as social, economic, and environmental factors in the community. The major sources of quantitative data used in the SHC CHA are the American Community Survey (2010-14), the 2010 Census, the Bureau of Labor Statistics and the Massachusetts Bureau of Substance Abuse Services (BSAS), Massachusetts Hospital Inpatient Discharges (UHDDS), Massachusetts Hospital Emergency Visit Discharges, Massachusetts Vital Records Mortality, Massachusetts Communicable Disease Program Epidemiology Program, MA Behavioral Risk Factor Surveillance System and the MA Healthy Aging Database. A literature review of published articles and research was also conducted as a part of this assessment.

Cape Cod Healthcare is conducting its own extensive 2016-2018 Community Health Assessment for Barnstable County and has generously shared the secondary data it collected with SCC for the purposes of the SCC CHA. Wherever possible, this report will indicate which data points were collected by CCHC. SCC and Cape Cod Healthcare are working to identify common goals to address jointely and/or with other community partners.

[2] CSDH. "Closing the gap in a generation: health equity through action on the social determinants of health." Final Report on the Commission on Social Determinants of Health. Geneva : World Health Organization, 2008.

Qualitative Data

In the spring of 2016, SCC developed and conducted a Quality of Life Survey (2016 SCC QOL Survey) with the assistance of Partners Community Health. The survey was designed to obtain information about community perceptions of the quality of life on Cape Cod and to enhance Spaulding's understanding of the specific barriers to health and wellness that older persons, caregivers and persons with disabilities face. For 2 months, the survey was available online and hard copies were made available throughout the hospital, at SCC's outpatient centers, and at local events. The survey was distributed by email to support groups, SCC's contacts, and associated groups located in SCC's priority communities. A total of 357 surveys were completed.

Additionally, Spaulding and JSI conducted three provider/community focus groups, to spark thoughtful and insightful conversation about the needs and challenges of residents living across the Cape. The team also conducted interviews with key stakeholders representing underserved populations and/or services with significant health impacts. Findings from all these forums and interviews were combined into a single report by JSI and incorporated into this report.

For further information on the 2016 SCC QOL Survey, key informant interviews, and focus group, see the Community Perceptions Section of this CHA and Appendix 1 and 3.

DEMOGRAPHIC FINDINGS

Population

Between 2000-2010, the population of Barnstable County declined by nearly 3%; in contrast, the State grew by just over 3% (Table 2). Of the 357 SCC QOL Survey respondents, 93% were residents of Cape Cod and 74% were female.

Table 2: Population by City and by Gender, 2010

	Barnstable County		Massachusetts	
Total Population, 2010	215,888		6,547,629	
Growth Rate, 2000-2010	(6,342)	-2.85%	198,532	3.13%
Female	113,034	52.36%	3,381,001	51.64%
Male	102,854	47.64%	3,166,628	48.36%

Data Source: US Census Bureau, 2010 Census

Since 2000, there has been a notable population decline in Barnstable County, especially among residents aged 25 to 44 years. While a similar trend has been seen across the State (down 13%) and even nationally (down 3%), the problem is no where near as prominent as in Barnstable County (down 27%).[3]

Cape Cod is a major summer tourist destination in New England, receiving over 5 million visitors each year primarily during the summer and early fall.[4] Furthermore, 25% of the 15,000-20,000 seasonal workforce are filled by foreign workers on short-term temporary visas. These large seasonal variations in visitors and residents are not reflected in the Census population data.

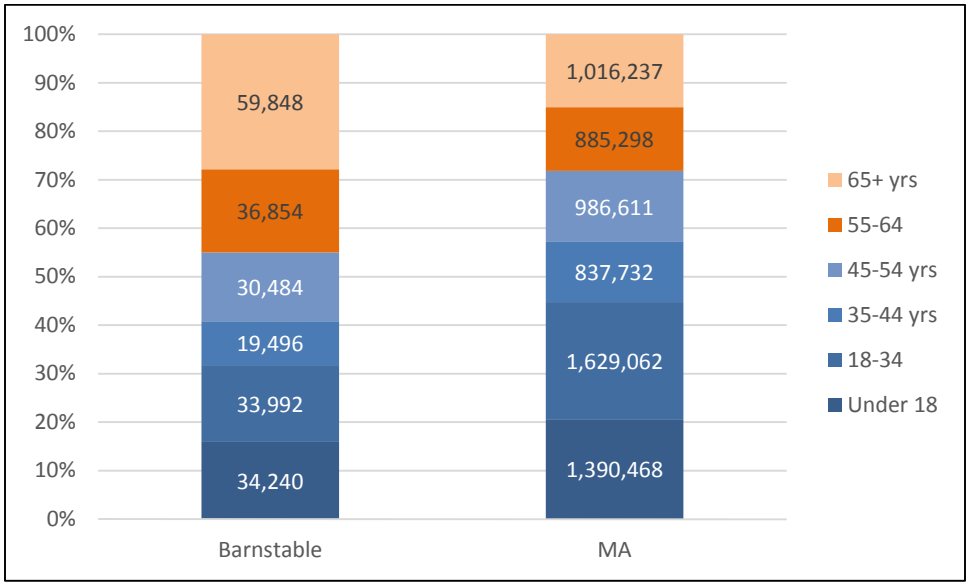
Age Distribution

Over 45% of residents in Barnstable County are 55 years or older (Figure 1), and 74% of respondents to the SCC QOL Survey indicated their age as 55 or older. In contrast, less than 30% of the overall Massachusetts population is aged 55 or older.

[3] Northeastern University, Dukakis Center for Urban and regional Policy, "Shaping the Cape's Future", June 2014, Published for Cape Cod Young Professionals, http://www.capecodyoungprofessionals.org/images/uploads/ShapeTheCapeSummaryReport.pdf, Date accessed: June 27, 2016

[4] Center for Policy Analysis, University of Dartmouth, "Help! Wanted Cape Cod's Seasonal Workforce," Prepared for the Cape Cod Commission, October 2000, https://www.umassd.edu/media/umassdartmouth/seppce/centerforpolicyanalysis/helpwanted.pdf, Date accessed: June 24, 2016.

Figure 1: Age Distribution, 2010-2014



Data Source: US Census Bureau, American Community Survey, 2010-2014 5-year estimates

The largest age group in the Barnstable County are those 65 years and older. The elderly population's overall health is linked both to disability and chronic disease, with about 77% of the elderly population living with two chronic diseases nationally,[5] and 59.7% of elderly Barnstable County residents living with four or more chronic conditions.[6] Key informants and forum participants indicated that older adults with limited financial and social means are the most at-risk population on the Cape. They cited numerous health conditions as well as underlying risk factors that prevent elderly residents from receiving needed care (e.g. inadequate public transportation options, lack of care coordination and fragmentation of services, little support available for caregivers, issues adapting to new technology, etc.).

Although a significantly smaller population within Barnstable County, children and youth were identified by key informants and forum participants as another vulnerable segment of the population, particularly in need of pediatric behavioral health support and substance abuse prevention.

Racial and Ethnic Diversity

According to the Institute of Medicine,[7] race and ethnicity have a notable impact on health outcomes and access to healthcare. There are significant socioeconomic status disparities across all races, which compound the inequities seen in health outcomes and quality of care.

[5] Lochner KA, Cox CS. Prevalence of Multiple Chronic Conditions Among Medicare Beneficiaries, United States, 2010. Prev Chronic Dis 2013.
[6] Massachusetts Healthy Aging Data Report: Community Profiles, 2015
[7] Williams, David R., and Ronald Wyatt. Racial Bias in Health Care and Health. Jama 314.6 (2015): 555.

Racial diversity is defined using the categories of the U.S. Census. With the overwhelming majority of residents being White, Barnstable County is significantly less racially diverse than the rest of the State (Table 3). This was also true of respondents to the SCC QOL Survey, 96% of whom indicated that they were White. Notably, 14% of respondents indicated that they were Hispanic/Latino. Respondents from larger towns (Orleans, Harwich, Dennis and Barnstable Town) reflected slightly more racial diversity with closer to 7-10% of respondents indicating another race besides White in their surveys.

Table 3: Race and Ethnicity (2010-2014)

	Barnstable County		Massachusetts	
White	200,273	93.10%	5,326,774	80.00%
Black/African American	5,384	2.50%	465,792	7.00%
Hispanic	5,267	2.40%	681,824	10.20%
Asian	2,864	1.30%	384,642	5.80%
Other	2,914	1.30%	290,116	4.30%

Data Source: US Census Bureau, American Community Survey, 2010-2014 5-year estimates

Disabled Residents

Disability is defined broadly as persons living with a variety of conditions that limit their daily activities. These limitations can be physical, cognitive, mental/psychiatric or perceptual/sensory in nature and can be the result of certain chronic diseases (e.g. Parkinson's Disease, Multiple Sclerosis, etc.) or an adverse health event (e.g. stroke, traumatic brain injury, etc.).

Disabled individuals comprise a vulnerable population that requires targeted services and outreach by providers. According to numerous reports by the Centers for Disease Control and Prevention (CDC),[8] the disabled community faces many barriers related both to accessing health care and participating in public health interventions to improve the health of the disabled population. There is growing support in improving the methods through which public health interventions include and support the disabled community.

Barnstable County has a higher proportion of the population living with a disability than the State (Table 4), with more than half of their disabled population being 65 years or older. This further compounds the challenges the elderly population faces. Table 5 reveals the distribution of disability types among this population.

[8] Centers for Disease Control and Prevention. Morbidity and Mortality Weekly Report: CDC Grand Rounds: Public Health Practices to Include Persons with Disabilities. 62(34);697-701, 2013, http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6234a3.htm?s_cid=mm6234a3_w

Table 4: Disability as a Percent of Total Population by Age (2010-2014)

	Barnstable County		Massachusetts	
Total Civilian Noninstitutionalized Population with a Disability	**27,566**	**13.00%**	**744,676**	**11.32%**
Under 18 years old	1,354	0.64%	61,927	0.94%
18-64 years old	11,426	5.38%	375,363	5.71%
65 years or older	14,786	7.00%	307,386	4.67%

Data Source: US Census Bureau, American Community Survey, 2010-2014 5-year estimates

Table 5: Disabilities in 65+ Population, 2010-2011

	Barnstable County		Massachusetts	
	65-74 years old	**75+ years old**	**65-74 years old**	**75+ years old**
Hearing Impairment	5.00%	18.80%	7.40%	21.20%
Vision Impairment	1.40%	4.60%	3.20%	9.30%
Cognition Impairment	3.50%	7.80%	4.70%	12.10%
Self-care Impairment	2.70%	8.30%	3.70%	12.20%
Independent living impairment	2.90%	15.00%	7.20%	24.30%
Ambulatory Impairment[9]	7.20%	20.70%	12.90%	29.40%

Data Source: Massachusetts Healthy Aging Data Report: Community Profiles, 2015

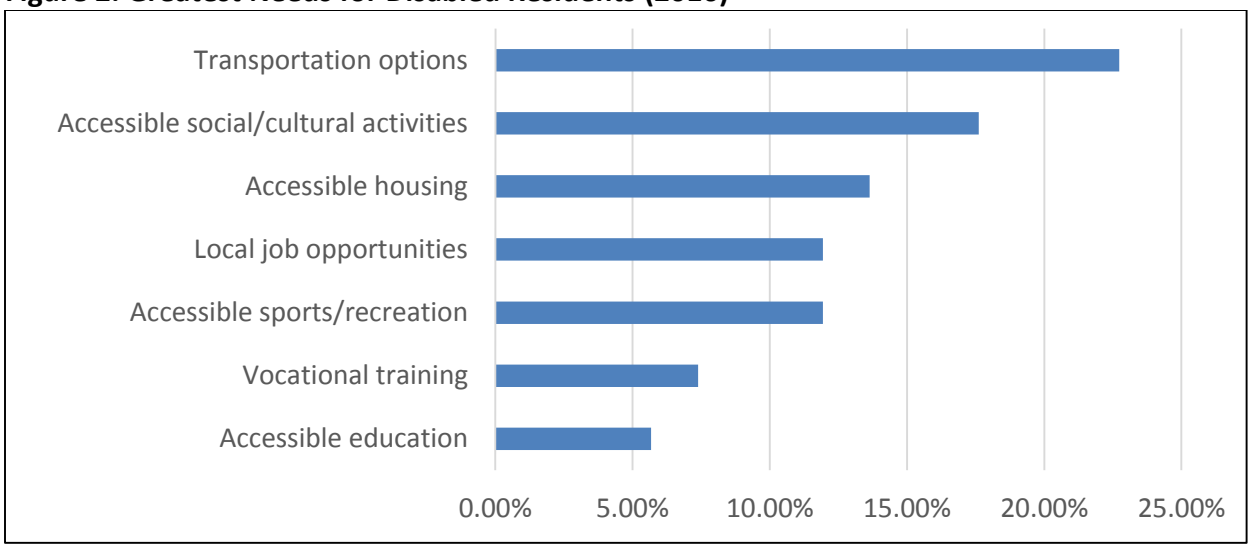
One quarter of SCC QOL Survey respondents indicated that they are living with a disability. Of these respondents,

- 51% indicated that they were living with a physical disability,
- 58% were aged 65 years or older,
- 65% indicated that they had been living with this disability for greater than 5 years, and
- 35% had an event in the last 12 months that had significantly increased their level of disability/need.

Disabled respondents identified sport/recreational activity, social interaction, community involvement, volunteer activitiy and employment as the areas of daily life most impacted by their disability. Figure 2 illustrates what disabled respondents perceive to be the greatest needs and challenges they face.

[9] Defined as having serious trouble walking or climbing stairs.

Figure 2: Greatest Needs for Disabled Residents (2016)



Data Source: 2016 SCC QOL Survey

SOCIAL, ECONOMIC AND PHYSICAL ENVIRONMENT FINDINGS

Income, Poverty, and Employment

Numerous studies have shown that the higher an individual's income, the better their health outcomes and health status. Moreover, the unequal distribution of income across races further exacerbates the health disparities seen across minority populations.

Income

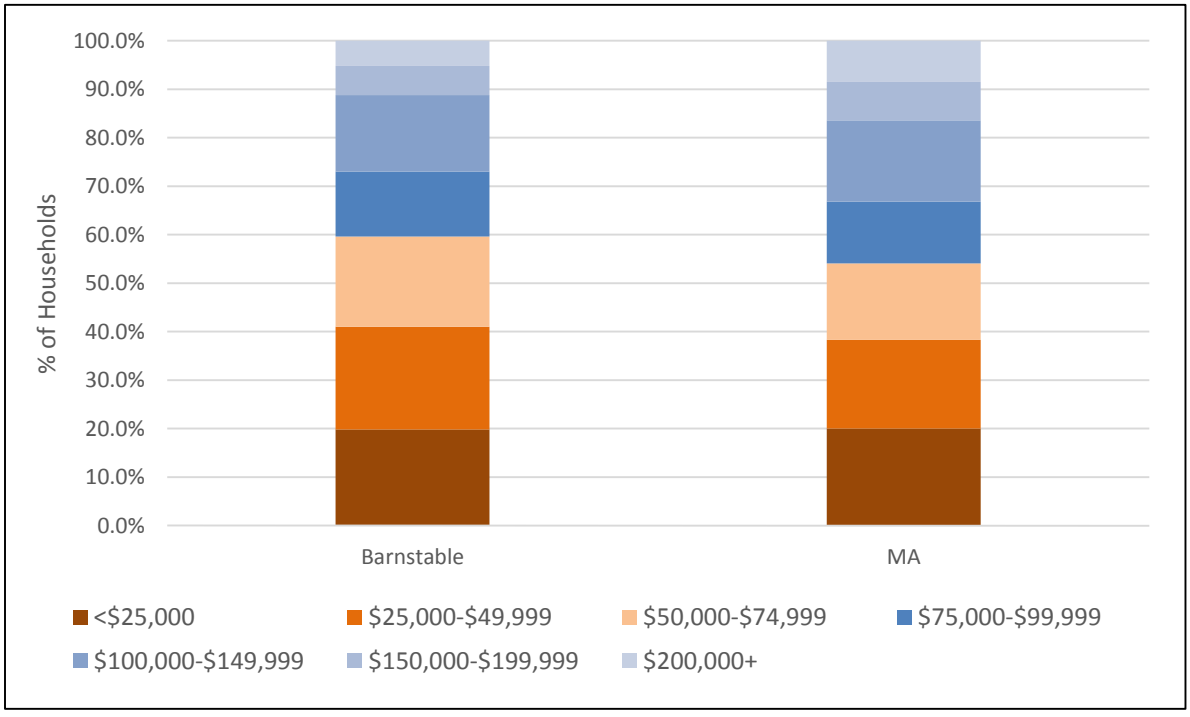
Mean and median income for Barnstable County residents is approximately 10% lower than for the State (Table 6). Roughly 60% of Barnstable County households earn less than $50,000 annually, compared to 54% for the State (Figure 3).

Table 6: Mean and Median Household Income (2010-2014)

	Barnstable County	Massachusetts
Median Household Income	$61,597	$67,846
Mean Household income	$82,356	$92,850

Data Source: US Census Bureau, American Community Survey, 2010-2014 5-year estimates

Figure 3: Household Income (2010-2014)



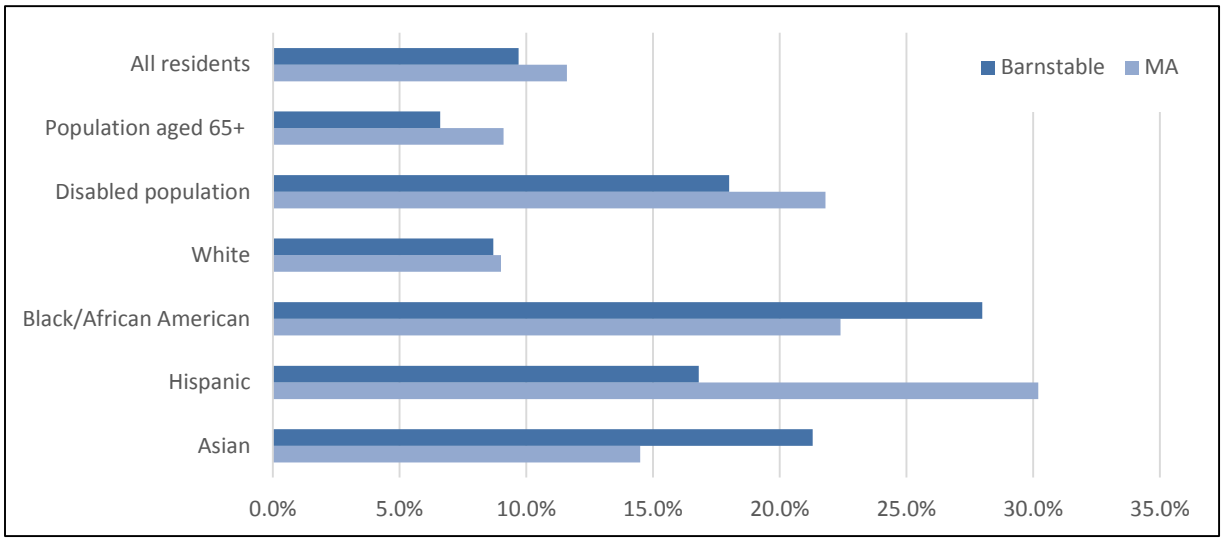
Data Source: US Census Bureau, American Community Survey, 2010-2014 5-year estimates

Poverty

Barnstable County has a lower percentage of the population living below the Federal Poverty Level (FPL) than across the State (Figure 4).

When taking race or disability into consideration, significant differences in the poverty rates emerge. Compared to White residents, Black residents are nearly 3 times more likely to be living below the poverty level, and Asian and Disabled residents are twice as likely to be living below the poverty level (Figure 3). When comparing similar minority populations across the State, Barnstable County residents typically have a smaller percentage of residents living below the poverty level, especially Hispanic residents of Barnstable County who are 50% less likely to be living in poverty. However, this is not true in all cases: Asian residents are nearly 50% more likely and Black residents are 25% more likely to be living below the poverty level than across the State.

Figure 4: Percent of Population Below the Federal Poverty Level by City (2010-2014)



Data Source: US Census Bureau, American Community Survey, 2010-2014 5-year estimates

Cost of Living

Looking at household income and poverty rates alone does not give a complete picture of the financial challenges a given community faces. Although Barnstable County has a lower proportion of the population living below 100% of the FPL compared to the rest of the state, Table 7 shows that the overall cost of living in Barnstable County is higher than than across the State; housing is the main driver of this increased cost of living. The financial stress brought on by these additional costs to live on Cape Cod may force families to make poor lifestyle choices (i.e. less healthy diet, forgo gym membership, etc.), and the stress itself can lead to health complications for household members.

Table 7: Cost of Living (June 2014)

	Barnstable County	Massachusetts	United States
Overall	141	137	100
Grocery	109.8	111.3	100
Health	121	124	100
Housing	199	185	100
Utilities	118	115	100
Transportation	108	106	100
Miscellaneous	118	120	100

Data Source: Sperling's Best Places, Cost of Living Data Tool, http://www.bestplaces.net/cost_of_living/, Last Updated: June 2014, Last accessed: August 2016

Unemployment

The unemployment rate in Barnstable County is for the most part consistently higher than in Massachusetts (Table 8). Due to the seasonal nature of the tourist industry in Barnstable County,[10] the unemployment rate peaks each year during winter months and drops considerably in summer months. While unemployment in Massachusetts has seen a steady decline in the last 2 years, the high and low points of the unemployment rates in Barnstable County remain fairly consistent year-on-year.

Table 8: Unemployment Rate by city (2014-2016)

Unemployment Rate*	Barnstable County	Massachusetts
August 2014	5.3%	5.6%
December 2014	7.2%	5.2%
April 2015	6.3%	5.0%
August 2015	5.3%	4.8%
December 2015	6.8%	4.9%
April 2016	5.2%	4.2%

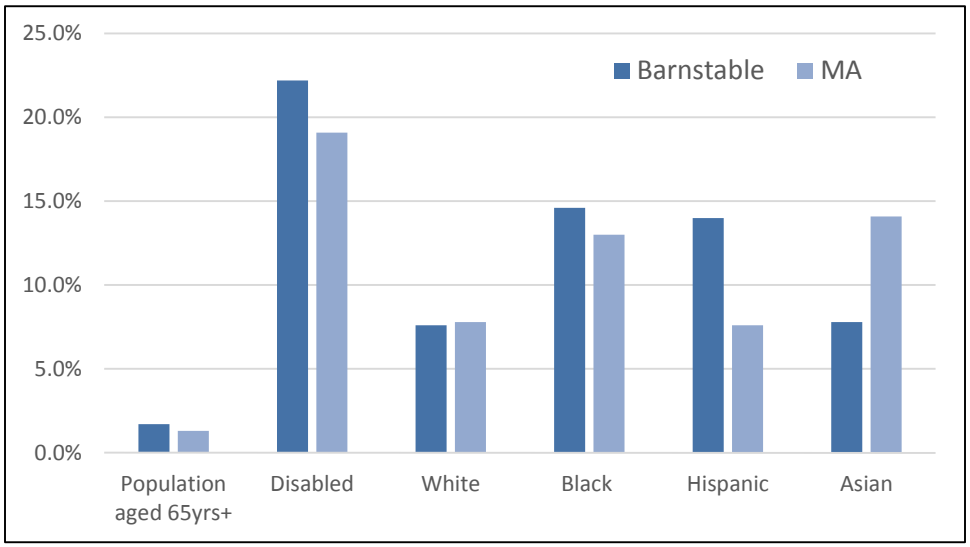
Data Source: BLS Data Viewer, Bureau of Labor Statistics

*Percent of population aged 16 years or over who are active in the labor force. Rates are not seasonally adjusted.

When looking at unemployment by race and disability, significant disparities emerge: Disabled residents are nearly 3 times more likely to be unemployed than White residents, and Black and Hispanic/Latino residents are nearly twice as likely to be unemployed (Figure 5). Of note, the unemployment rate of Asians in Barnstable County is roughly in line with that of White residents, and they appear to have a significantly lower unemployment rate than Asian residents across the rest of the State. Hispanic residents are nearly twice as likely to be unemployed on the Cape versus Massachusetts.

[10] Op.cit. Center for Policy Analysis, University of Dartmouth, October 2000

Figure 5: Unemployment by Race and Disability, (2010-2014)



Data Source: US Census Bureau, American Community Survey, 2010-2014 5-year estimates

Educational Attainment

A growing body of evidence indicates that educational attainment is a significant factor in determining health outcomes.[11] Similar to the State, the vast majority of residents in Barnstable County have either completed some college courses or have received a degree from an institution of higher education (Table 9).

Table 9: Educational Attainment for adults aged 25 or higher (2010-2014)

	Barnstable County	Massachusetts
Less than High School Graduate	5.1%	10.5%
High School Graduate	25.1%	25.6%
Some College or Associate's Degree	30.0%	24.0%
Bachelor's Degree or Higher	39.8%	40%

Data Source: US Census Bureau, American Community Survey, 2010-2014 5-year estimates

Housing

The quality, cost, and location of housing plays an important role in determining health outcomes and the ability to make healthy decisions.

Due to the seasonal nature of Cape Cod, more than 40% of all housing units in Barnstable County are 'vacant' (Table 10) and either rented to visitors during the peak season or kept as second homes. This extremely high vacancy rate stands in stark contrast to the rate seen across

[11] Robert Wood Johnson Foundation, Issue Brief 6: Education and Health, September 2009, http://www.commissiononhealth.org/PDF/c270deb3-ba42-4fbd-baeb-2cd65956f00e/Issue%20Brief%206%20Sept%2009%20-%20Education%20and%20Health.pdf, Accessed: June 23, 2016

the rest of the State (only 10%). Year-round occupied units are more likely to be owned rather than rented on Cape Cod than across Massachusetts.

Table 10: Housing (2010-2014)

	Barnstable County	Massachusetts
Occupied Units	58.6%	90.1%
Owner Occupied	*78.7%*	*62.3%*
Renter Occupied	*21.3%*	*37.7%*
Vacant Units	41.4%	9.9%
Cost Burdened Households - Owner occupied*	37.5%	31.5%
Cost Burdened Households - Renter occupied *	53.3%	47.8%

Data Source: US Census Bureau, American Community Survey, 2010-2014 5-year estimates
*Cost Burdened Households defined as owner- and renter-occupied housing units where either owner-costs or gross rent is 30% or more of monthly household income.

Housing, whether rented or owned, typically represents the single largest expense in a household budget each month. The rates of cost-burdened households in Barnstable County are higher than those seen in Massachusetts. When taken together, over 40% of all households in Barnstable County are classified as cost-burdened. This can considerably impact households both on their ability to live a healthy lifestyle (including eating a healthy, balanced diet, regularly exercising, etc.) and adds significant stress to household members which can cause numerous health issues.

Residents living in unstable housing (i.e. unable to afford their home/rent, couch surfing) is a growing issue according to key informants and forum participants. There are few shelters, especially family shelters or shelters capable of taking a disabled person, on Cape Cod. Participants noted that there is a 2-4 year waiting list for affordable senior-specific housing units, and that even so called 'affordable' units aren't always affordable to residents living in them or seeking to move into them.

> *"Unstable housing is a huge precursor for a lot of other health issues, particularly mental health and substance abuse."*
> - *Community Participant*

HEALTH BEHAVIORS AND OUTCOMES FINDINGS

Coverage and Access

Health Insurance Coverage

Barnstable County has a smaller portion of its residents enrolled in Medicaid than in the rest of Massachusetts, but a higher portion who are enrolled in Medicare. This is primarily due to the larger proportion of residents aged 65 or older in the County (Table 11). In addition, Table 12 compares the financial access to care in Barnstable County to the State for the 65 and older population.

Table 11: Financial Access to Care, All ages, 2014-2015

	Barnstable County		Massachusetts	
Uninsured population (2010-2014)	4.8%		3.8%	
Population receiving Medicare (2015)	69,995	32.7%	1,219,355	17.9%
Population receiving Mediaid (2014)	39,535	18.6%	1,520,501	22.8%
Medicaid, Under 18 years (2014)	*10,370*	*30.5%*	*462,321*	*33.3%*
Medicaid, 18 to 34 years (2014)	*8,285*	*24.7%*	*359,212*	*22.3%*
Medicaid, 35-64 years (2014)	*16,365*	*18.9%*	*540,154*	*20.1%*
Medicaid, 65 years or older (2014)	*4,515*	*7.7%*	*158,814*	*16.3%*
Population that did not see a doctor in the past year due to cost (2013-2014)	6.1%		8.5%	

Data Sources: US Census Bureau, American Community Survey, 2014 1-year estimates (2014 Medicaid data only); US Census Bureau, American Community Survey, 2010-2014 5-year estimates (2010-2014 Uninsured data only); Centers for Medicare & Medicaid Services, Medicare Enrollment Dashboard (2015 Medicare data only); BRFSS Data on Access, Prevention and Risk Behaviors, 2013-2014 Aggregate, Courtesy of: Cape Cod Health Care (2013-2014 Care not received due to cost data only)

Table 12: Financial Access to Care in 65+ Population, 2010-2011

	Barnstable County	Massachusetts
% Medicare managed care enrollees	10.60%	21.20%
% dually eligible for Medicare and Medicaid	8.20%	15.90%
% did not see doctor when needed due to cost	3.10%	3.70%

Data Source: Massachusetts Healthy Aging Data Report: Community Profiles, 2015

While the rate of uninsured in Massachusetts is now at historic low levels, roughly 37% of insured Massachusetts residents said they went without necessary medical care in 2015, and this number is significantly higher amongst low-income residents (52% for individuals at or below 138% of the Federal Poverty Level). Trouble finding a provider, trouble getting an appointment in a timely manner, and costs were the three main reasons care was not

received.[12] Health insurance premium rates continue to grow year-on-year[13] As a result, 19% of Massachusetts commercial market members are in high deductible health plans[14] which offer lower premium costs up front in exchange for high cost sharing/out of pocket costs later on.

Regulatory changes for the Health Safety Net (HSN) (released June 2016) and MassHealth plan enrollment (due Fall 2016/Winter 2017) will also significantly impact the access low income people have to care. HSN changes will increase cost sharing as well as the administrative burden for patients to prove that they have paid their annual deductible. Given that this fund is to a large extent used by undocumented residents, who are already an underserved population, these changes may further expand health inequities in communities across the State. Changes to MassHealth are proposed to incentivize MassHealth members to enroll with a Managed Care Organization (MCO) plan rather than with the State's own managed Primary Care Clinician (PCC) Plan by reducing the services offered under the PCC Plan. Members in MCO plans would be locked into their plan until the next annual open enrollment period (in line with what Commercially insured and ConnectorCare members must commit to). Further changes to MassHealth may also come in 2017 as the State prepares to launch its MassHealth ACO.

Access to Care

Due to Cape Cod's geographic location, access to specialty care can be challenging for residents and often requires travelling to Boston, MA and Providence, RI to receive needed care. Key informants and forum participants identified the following gaps in specialty care:

- Lack of psychiatric assessments/care for older adults, children, or people with traumatic brain injuries
- Lack of neurologists specializing in Parkinson's Disease or other movement disorders
- Lack of physicians specializing in dementia
- Lack of Applied Behavioral Analysis programs
- Lack of autism disorder specialists
- Lack of wheelchair specialists
- Lack of tickborne disease specialists and treatment programs

In addition to areas of specialty care, Barnstable County has the highest incidence of tickborne diseases, most notable is Lyme disease.[15] The largest barrier in reducing the incidence of Lyme disease is the ability to go off-Cape to receive both diagnosis and treatment. According to a local public health officer, "There are fewer doctors on Cape that recognize Lyme as valid and

[12] Blue Cross Blue Shield Foundation, "2015 Massachusetts Health Reform Survey", http://bluecrossfoundation.org/sites/default/files/download/publication/MHRS_2015_Summary_FINAL.pdf , Visited 4/13/16

[13] Center for Health Information and Analytics (CHIA) ,"Annual Report Premiums Databook", http://www.chiamass.gov/premiums/, Updated November 2015

[14] Center for Health Information and Analytics (CHIA) ,"The Performance of the Massachusetts Health Care System Series – Massachusetts High Deductible Health Plan Membership", http://www.chiamass.gov/the-performance-of-the-massachusetts-health-care-system-series/#hdhp, Updated November 12, 2015

[15] Massachusetts Department of Public Health, "Lyme Disease Surveillance in Massachusetts," http://www.mass.gov/eohhs/docs/dph/cdc/lyme/lyme-disease-surveillance-2014.pdf

fewer who would treat it. When doing tick-borne illness and intervention, we find a lot of folks frustrated to find treatment." Due to the gaps in the diagnosis and treatment, the acess to care for Lyme disease and other tick-borne illnesses proves to be a major issue.

Accessible care for disabled residents was also highlighted by key informants and forum participants. While doctors' offices are typically wheelchair accessible, many of the elements within them (i.e. scales, exam tables) are not. Some facilities do not have the technology necessary to communicate with deaf or hard-of-hearing patients. Some participants also commented that physicians often do not adapt their behaviors to fit the needs of people with development disabilities or traumatic brain injuries.

Table 13 shows utilization of care across the over 65 populations in Barnstable County and Massachusetts.

> *"Psychiatry assessments for older adults do not exist. They don't have the same resources younger people have. Dementia is such a big part of the picture, but there are so few places to send people for the cognitive piece to differentiate a diagnosis."*
> - *Community Participant*

Table 13: Utilization in 65+ Population, 2010-2011

	Barnstable County	Massachusetts
Physician visits per year	8.1	7.6
Emergency room visits/1000 persons 65+ years per year	658	646
Inpatient hospital stays/1000 persons 65+ years per year	281	354
Inpatient hospital readmissions (as % of admissions)	16.30%	17.80%
Skilled nursing facility stays/1000 persons 65+ years per year	103	117

Data Source: Massachusetts Healthy Aging Data Report: Community Profiles, 2015

Transportation on Cape Cod is a major barrier to care highlighted by key informants and forum participants as they pointed out that **"Transportation is the number one need."** There is a growing elderly population who are unable to drive; however, local public buses are infrequent, unreliable, and as a result underutilized. Poor transportation in the region also breeds social isolation, another key issue for elderly and disabled residents on Cape Cod. Participants mentioned that even if there were more reliable transportation alternatives, some patients lack confidence, knowledge or the skills/tools to arrange it. There are many groups working to address the transportation issues on the Cape, and participants indicated that a 10-year plan to develop a better transportation is already underway.

Substance Use and Mental Health

Substance Use Disorders

Substance use alters judgment, perception, attention, and physical control.[16] The effects of substance use are cumulative, significantly contributing to costly social, physical, mental, and public health problems.

Substance use is a growing issue both across Massachusetts and particularly in Barnstable County. From 2010-2014, Barnstable County had the highest per-capita rate of death from opioid overdose among all counties in Massachusetts.[17] According to the Barnstable County Department of Human Services, 7.9% of residents are addicted to alcohol, at least 3.1% of residents are addicted to heroin or prescription opioids, and 3.1% of residents are addicted to 'other drugs' (including cocaine, sedatives, etc.).[18] Barnstable County has significantly higher admission rates to DPH-funded treatment programs, substance use related ED discharges and opioid-related overdose deaths per 100,000 residents than the rest of Massachusetts (Table 14). In addition, Barnstable County currently has a higher percentage (10.70%) of elderly residents excessively drinking compared to the State (9.20%).[19]

Table 14: Substance Use Indicator Rates per 100,000 population (2008-2012, except where indicated)

	Barnstable County	Massachusetts
Admissions to DPH funded treatment programs (2013)	2,214.1	1,590.8
Admissions to DPH funded treatment programs where alcohol was the primary substance (2013)	1,009.5	506.9
Alcohol/substance-related hospitalizations (age-adjusted rate)	219.1	337.6
Opioid-related hospitalizations (age-adjusted)	261.8	315.6
Alcohol/substance-related ED discharges (age-adjusted rate)	1,061.9	858.8
Opioid-related Fatal Overdoses	10.9	9.4

Data Source: MassCHIP, 2013 Massachusetts Bureau of Substance Abuse Services (BSAS), 2008-2012 Massachusetts hospital Inpatient Discharges (UHDDS), 2008-2012 Massachusetts hospital Emergency Visit Discharges, 2008-2012 Massachusetts Vistal Records Mortality, Courtesy of: Cape Cod Health Care

[16] Center for Substance Abuse Treatment. Substance Abuse Treatment for Persons With Co-Occurring Disorders. Rockville : Substance Abuse and Mental Health Services Administration (US), 2005.5. WebMD. Substance Abuse. Mental Health Center.

[17] Massachusetts Department of Public Health, Unintentional Opioid Overdose Death Rate by County, January 2013-September 2015

[18] Barnstab le County Department of Human Services, "Analysis of Substance Abuste on Cape Cod: A Baseline Assessment," Preparted for Barnstable County Regional Substance Abuse Council, March 2015, http://www.bchumanservices.net/library/2015/03/RSAC-Baseline-Report-FULL-REPORT-3-11-15-Final.pdf, Date accessed: June 24, 2016

[19] MA Healthy Aging Report Community Profiles: Barnstable County, 2011.

These substance use trends were also reflected in the results of the SCC QOL Survey. When asked what methods respondents used to manage stress, 8.5% said prescription drugs[20], 7.1% said alcohol, 1.4% said cigarettes, and 1.2% said other drugs. Despite the obvious need, there remains only one detox center on Cape Cod, and according to one forum participant they **"Can't come close to filling the demand."**

Substance use prevention is an important issue for adolescents in Barnstable County. Forum participants indicated that substance use counselors have been placed in local high schools and cited a recent study that found a 25-40% decrease in drinking and drugs in the past 5 years in one school. More work however is still needed.

Forum participants stated that older adults often turn to medication, specifically opioids, when other forms of treatment and rehabilitation fail. According to one participant, **"For the 60 or so people admitted to a skilled nursing facility, at least 20 percent have drug seeking behaviors or alcohol abuse diagnoses, as well as the 'valid' diagnosis they're coming in with."**

Mental Health

Mental and behavioral health were identified as important health concerns, especially for elderly residents on Cape Cod by the qualitative results of this assessment. The issue is primarily driven by the lack of providers as a key informant pointed out: **"Patients with MassHealth have no psychiatrists they can access right now."** There is a specific need for geriatric psychiatric evaluations or services provided in-home for patients who are home bound.

> *"Mental health is not treated in a way to prevent a person from having other issues, which is particularly true for the elder population who may have other chronic diseases."*
>
> - Community Participant

Furthermore, key informants and forum participants cited that treatments for mental and behavioral health are not well integrated into care a patient may be receiving for other co-morbid factors.

Health Outcomes

Barnstable County for the most part fares better than the State with regards to hospitalizations and deaths (Table 15). The indicators where the County performs worse than the State (falls-related ED discharges, Alzheimer's deaths and Parkinson's Disease deaths) are in areas where a higher prevalence rate would be expected amongst older adults.

[20] Respondents were not asked to indicate whether or not these prescription drugs were in fact prescribed to them or not.

Table 15: Cause of Death, Infectious Disease and Chronic Illness, Age-adjusted rate, per 100,000 persons (2008-2012, except where indicated)

	Barnstable County	Massachusetts
Diabetes-related hospitalizations	1,372.9	1,845.6
Hypertension-related hospitalizations	3,306.3	4,025.1
Major Cardiovascular disease hospitalizations	1,120.9	1,344.0
Asthma-related hospitalizations	657.0	899.2
Falls-related ED discharges	3,448.7	2,763.9
All deaths	644.0	671.8
Cancer deaths (2007-2011)	166.3	169.9
Alzheimer's deaths	25.9	20.6
Parkinson's Disease deaths	7.3	5.9
Lyme disease incidence (2013)	86.2	62.0
Hepatitis C incidence (2013)	143.6	118.9

Data Source: MassCHIP, 2008-2012 Massachusetts hospital Inpatient Discharges (UHDDS), 2008-2012 Massachusetts hospital Emergency Visit Discharges, 2008-2012 Massachusetts Vistal Records Mortality, 2007-2011 Massachusetts Cancer Registry, 2013 Massachusetts Communicable Disease Program Epidemiology Program, Courtesy of: Cape Cod Health Care

Cape Cod and its nearby islands are known hot spots for tick-borne illnesses (including Lyme disease) and the rate of incidence in Barnstable County is nearly 40% higher than in Massachusetts (Table 15). The incidence of Hepatitis C is 20% higher in Barnstable County than in the State, which is especially concerning in light of the high rates of injection-based substance use (Table 14).

While a fall can happen at any age, they are especially concerning in older adults in part because they can lead to serious injury, loss of independence, hospital stays and disability. Informants and forum participants note that **"falls are very expensive,"** but few evaluations to identify home modifications to prevent a fall are conducted. Nearly 1 in 4 respondents to the SCC QOL Survey indicated that they had fallen in the past year, of which

- 54% required medical attention as a result,
- 72% of falls requiring medical attention occurred to adults aged 65 or older,
- 47% of respondents who fell said the fall had restricted their activities, and
- 25% of respondents who fell said the fall resulted in a long-term loss of function.

In addition to these issues identified by residents, Tables 16 shows impact of chronic diseases on the 65 and older population compared to the state.

Table 16: Chronic Disease in 65+ Population, 2010-2011

	Barnstable County	Massachusetts
% with Alzheimer's disease or related dementias	11.0%	14.4%
% with stroke	12.4%	12.6%
% with diabetes	26.4%	32.1%
% with chronic obstructive pulmonary disease	23.5%	23.3%
% with hypertension	77.5%	77.5%
% ever had a heart attack	4.6%	5.0%
% with ischemic heart disease	39.9%	44.1%
% with congestive heart failure	21.7%	24.8%
% with atrial fibrillation	16.6%	16.1%
% with osteoporosis	22.0%	21.7%
% women with breast cancer	10.8%	10.3%
% with 4+ chronic conditions	59.7%	61.5%

Data Source: Massachusetts Healthy Aging Data Report: Community Profiles, 2015

Healthy Behaviors

When compared with the State, residents of Barnstable County appear to be more engaged with their primary health and dental care providers and maintaining their health through healthy eating and physical activity (Table 17). That being said, they are also more likely to be overweight or obese.

Table 17: Wellness and Prevention (2013-2014)

	Barnstable County	Massachusetts
Overweight or Obese	61.1%	58.0%
Smokers	15.1%	16.6%
Routine checkup with a doctor in the past year	82.1%	77.7%
Visited the dentist in the past year	83.4%	76.2%
Consume 5+ servings of fruits and vegetables per day	20.7%	19.0%%
Physically active in past 30 days	84.7%	80.2%

Data Source: BRFSS Data on Access, Prevention and Risk Behaviors, 2013-2014 Aggregate, Courtesy of: Cape Cod Health Care

Specifically within the 65+ population in Barnstable County, a larger percentage of residents have reported healthier wellness and prevention behaviors and prevention when compared to the State (Table 18).

Table 18: Wellness and Prevention in 65+ Population, 2010-2011

	Barnstable County	Massachusetts
% any physical activity within last month	80.3%	72.4%
% injured in a fall within last 3 months	5.4%	5.1%
% with 15+ physically unhealthy days last month	11.5%	14.0%
% with physical exam/check-up in past year	88.4%	90.2%
% flu shot past year	65.9%	67.8%
% pneumonia vaccine	61.0%	60.8%
% shingles vaccine	17.0%	14.9%
% cholesterol screening	96.1%	95.8%
% mammogram within last 2 years (women)	83.5%	85.4%
% colorectal cancer screening	65.2%	65.6%
% with 5 or more servings of fruit or vegetables per day	27.4%	24.9%
% current smokers	6.9%	9.1%

Data Source: Massachusetts Healthy Aging Data Report: Community Profiles, 2015

The SCC QOL Survey also revealed positive signs with regards to healthy behaviors:

- 79% of respondents recognize their own personal role in maintaining their health.
- 58% of respondents always/often exercise at least 3 times per week.
- 73% of respondents always/often eat a healthy balanced diet most days of the week.
- 24% used aerobic exercise, 21% used medication/relaxation techniques, and 11% used Yoga/Tai Chi to manage stress.

COMMUNITY PERCEPTIONS

Quality of Life Survey

Community Perceptions

The SCC QOL Survey attempted to gauge residents' perceptions of life on the Cape. While on a whole these perceptions were generally positive, areas where responses were notably different are highlighted in Table 19.

Table 19: Perception of life on Cape Cod and The Islands (2016)*

	Overall Response	Notable differences
Cape Cod and The Islands are a good place to live	26.1% Agree 24.4% Neutral 13.2% Disagree	• 27.8% of residents aged 35-44 Disagree • 56.3% of residents aged 85+ Agree
I have the support I need to live independently as I age	41.3% Agree 20.5% Neutral 14.3% Disagree	• 26.6% of disabled residents Disagree • 21.9% of residents aged 35-54 Disagree
I am satisfied with the healthcare options on Cape Cod and the Islands	47.8% Agree 15.7% Neutral 22.2% Disagree	• 38.5% of Outer Cape[21] residents Disagree • 38.1% of disabled residents Disagree • 31.9% of residents aged 18-64 Disagree

Data Source: 2016 SCC QOL Survey

* Respondents were not required to answer any questions. Percentages herein are of all respondents regardless of whether or not they responded to the question.

One possible reason for the discrepancy across age groups is the perceived lack of career opportunities available on the Cape. A recent study conducted by the Northeastern University Dukakis Center for Urban & Regional Policy showed that only 1 in 3 residents feel that they are able to earn a livable wage on the Cape and that there are sufficient opportunities for career advancement on the Cape.[22]

Caregivers

With an aging population, the role of unpaid caregivers has grown in recent years; however, resources for caregivers on Cape Cod remain scarce and very limited in scope. This echoes sentiments from forum participants who stated that **"Caregivers don't have the support they need."** There are some programs available to offer caregivers respite from their caring responsibilities, but these are financially out of reach for many as participants stated that **"There is not enough affordable programming to really support the day-to-day needs of caregivers."** Table 20 displays responses from caregivers to the 2016 SCC QOL. Key informants and forum participants cited isolation, physical limitations and financial stress as key issues for caregivers.

[21] See footnote 20.

[22] Northeastern University, Dukakis Center for Urban and regional Policy, "Shaping the Cape's Future", June 2014, Published for Cape Cod Young Professionals, http://www.capecodyoungprofessionals.org/images/uploads/ShapeTheCapeSummaryReport.pdf, Date accessed: June 27, 2016

Table 20: Caregiver Profile (2016)

24.8% of respondents are a caregiver to someone with a disabling/limiting condition.		
Caregivers by age (% of all respondents)	35-54 years	40.6%
	55-74 years	20.8%
	75+ years	28.2%
Caregivers care for…. (% of caregivers)	Spouse	42.7%
	Child	24.7%
	Parent	15.7%
	Other	16.9%
Caregiving responsibilities impact…. (% of caregivers)	Mental Health/Stress	32.4%
	Social Activities	30.1%
	Employment	16.0%
	Sport/Recreation	14.6%
	Education	6.8%

Data Source: 2016 SCC QOL Survey

Key informant Interviews and Focus Groups: Community strengths and assets

Emergency Service Providers

Local emergency service providers (i.e. police, firefighters) are collaborating with social service providers to conduct home visits to ensure patients are doing well in their homes. In some communities, the police are beginning to treat substance use and mental illness as behavioral health issues and not crimes.

Community Organizations

The Department of Veterans Affairs and the Senior Services and Councils on Aging were all cited as strong resources for residents of Cape Cod that have done tremendous work supporting and advocating for patients, despite chronic under-funding. SCC's workshops and speaking engagement opportunities were praised, as were the networks of support groups on Cape Cod: **"Community-based support group structure is fantastic and there is a vibrant network."**

In addition, the Barnstable County Department of Health and Human Services is coordinating a prevention and willness trust fund that aims to support chronic disease self-management, including hypertension and diabetes. Partners in this fund include 3 community health centers and 3 community organizations.

Healthcare Providers

Cape Cod Healthcare and Spaulding Cape Cod were called out by participants as strong resources for residents of Cape Cod. Chronic disease management at Emerald Health and the Visiting Nurses Association (VNA) have improved recently, with programs developed to support patients in need of these services. The expansion of community health centers on the Outer Cape has been a boon to the area.

ADDRESSING PRIORITY NEEDS

The Spaulding Cape Cod community was evaluated using both qualitative and quantitative evidence in order to capture a holistic view of the community's current needs. Based on the findings and insights of key community members, the following are areas of need for Barnstable County:

- Access to specialty care
- Housing assistance
- Substance use disorders
- Support/services for disabled residents
- Support/services for elderly residents to age in the community
- Transportation

In consideration of all the needs stated above, SCC used the following criteria to prioritize needs identified by this assessment:

- Community need: review of current data and assessments from local, State and national organizations
- Collaborative opportunities: overview and evaluation of partnerships with local community organizations
- Community interest and readiness: in-depth and thoughtful dialogue and input from individuals though stakeholder meetings, focus groups and survey opportunities
- Estimated effectiveness and impact
- Adequate resources for implementation

In light of the needs identified and the considerations above, SCC is committed to addressing the following priorities:

- Access to specialty rehabilitation care
- Support and advocacy to improve safety and independence for older adults
- Support and advocacy for persons living with a disability

Given the specific clinical expertise and limited resources of Spaulding Cape Cod, addressing all of the issues identified by this CHA is not feasible. The hospital intends to focus its efforts where it can make the strongest impact. As a result, the following needs will not be addressed by the Hospital:

- Substance use disorders
- Housing assistance

There are other local organizations that are already embedded in the community and are better positioned to address these other unmet needs. For a current list of of resources and community organizations, see Appendix 2. Where possible, SCC will look for opportunities to collaborate with these local agencies to be a part of the conversation to address unmet needs.

Spaulding Cape Cod will work to develop a 3-year Implementation Strategy to address the designated priority areas in the coming months and will release this strategy to the public once finalized.

CONTACT US

This report was co-authored by:

Carole Stasiowski
Director of Community Relations and Marketing
Spaulding Rehabilitation Hospital Cape Cod
cstasiowski@partners.org

Karen Piatt
Senior Program Analyst
Partners Community Health
kpiatt@partners.org

Shamoore Simpson
Project Co-ordinator/Analyst
Partners Community Health
ssimpson3@partners.org

We welcome comments and questions regarding this report.

APPENDICES

Appendix 1: Key Informant & Community Provider Forum List

Key Informants

- **Elizabeth Albert**, Director of Barnstable County Department of Health and Human Services
- **George Heufelder, MS, RS,** Director/Chief Health Officer, Barnstable County Department of Health and Environment
- **Andy Lowe**, Director of Program Resources at Outer Cape Health Services
- **Kevin Rosario**, Regional Outreach Representative at Gosnold Treatment Center
- **Stacey Schakel**, Elementary School Nurse in Mashpee
- **Cathy Taylor**, Assistant Director of Cape Organization for Rights of the Disabled (CORD)
- **Cathi Thomas**, Clinical Nurse Specialist and Advisor to the Board of Parkinson's Support Network of Cape Cod

Provider Forum Participants

- **Craig Bautz**, Director of Therapeutic Activity at Spaulding
- **Lois Carr,** Outreach Coordinator, Bourne Council on Aging
- **Susan Donovan**, Advanced Illness Care Manager at VNA of Cape Cod
- **Debbie Downy**, Site Manager at Spaulding Outpatient Center Orleans
- **Mary Jo French**, Outpatient Care Coordinator, Spaulding Outpatient Center Sandwich
- **Jeff Garrison**, MA-BIA, conducts support groups for brain injury patients, mental health therapist
- **Gail Glanville**, Board Member at Parkinson Support Network of Cape Cod
- **Rachel Greenfield**, External Community Relations Director, Maplewood at Brewster
- **Jerilyn Lamont**, VP and Chief Experience Officer at Broadreach Healthcare (Liberty Commons)
- **Kari Leighton,** Outreach Worker, Bourne Council on Aging
- **Maryellen Louckes**, Caregiver Homes
- **Andy Lowe**, Outer Cape Health Services
- **Ellen McDonough**, Director of Clinical Services, Elder Services of Cape Cod and the Islands
- **Lauren Melillo**, Sandwich Partnership for Families
- **Ed Merigan**, Director of Veteran Services of Cape Cod
- **Janet Mooney**, Social Worker (Inpatient), Spaulding Cape Cod

- **Kazmira Nedeau**, Grant Submission and Compliance Analyst at Outer Cape Health Services
- **Diane O'Connell**, Rehab Director at Gentiva
- **Amanda Parent**, Addiction Coordinator at Odonata Center
- **Carol Stronjy**, Social Worker with Cape Cod Senior Residences
- **Sandy Topalian**, MA-BIA, Brain Injury Association, Manager of Southeastern Region
- **Lynne Waterman,** Director, Mashpee Council on Aging
- **Judi Wilson**, Director, Orleans Council on Aging

Appendix 2: Community Resources in Housing and Substance Use

Substance Use Groups

- Arbour Counseling
- Gosnold on Cape Cod
- Habit OPCO
- Hyannis Family Medical care, Suboxone Outpatient Treatment Program
- Learn to Cope
- Massachusetts Opioid Abuse Prevention Collaborative
- Regional Substance Abuse Council
- Substance Abuse Prevention Collaborative
- Town of Sandwich Committee on Substance Abuse and Prevention

Housing Groups

- Barnstable County HOME Consortium
- Cape Community Real Estate
- Communiton Action Council of Cape Cod and the Islands
- Community Housing Resource (CHR)
- Housing Assistane Corporation
- Homeless Prevention Council
- Island Affordable Housing Fund
- Island Housing Trust
- NOAH Shelter

Appendix 3: Summary of Community Engagement Activities

Prepared by: John Snow, Inc., August 2016

Purpose

Tax-exempt hospitals like Spaulding play essential roles in the delivery of health care services and, as a result, are afforded a range of benefits including Commonwealth and Federal tax-exempt status. With this status comes certain fiduciary and public obligations; one of these obligations is that the hospital is expected to conduct periodic Community Health Needs Assessments (CHNAs) and support the implementation of community-based programs geared to improving health status and strengthening the health care systems in which they operate. More specifically, the IRS requires tax-exempt hospitals to conduct a CHNA and to develop an associated Community Health Improvement Plan (CHIP) every three years. It is expected that these activities be done in close collaboration with the area's health and social service providers, other key stakeholders, and the public-at-large. Spaulding recognizes the merit and importance of these activities. The CHNA process facilitates community partnerships and fosters broad community engagement, and can promote the development of more targeted, integrated, and sustainable community benefits activities.

Approach and Methods

This report was produced by John Snow, Inc. (JSI), a public health research and consulting firm, with guidance from Spaulding Cape Cod. Qualitative findings were gathered through two strategies, key informant interviews and community forums. Data collection took place in August of 2016.

JSI conducted two community/provider forums in Spaulding's service areas to gather input on the major needs and health issues in the community, to identify segments of the population most at-risk, and to discuss what strategies Spaulding could adopt to be more effective in improving health status and health outcomes. Two JSI staff members were present at each of the forums to ensure continuity of understanding of findings. JSI also conducted five key stakeholder interviews to understand what health issues were perceived by service providers to be most critical. Finally, JSI incorporated information from a meeting of local Council on Aging directors.

This report summarizes the qualitative research findings that were gathered through this community engagement strategy. This information will be used to inform Spaulding Cape Cod's CHNA and future CHIP.

Findings

Target and At-risk Populations

Spaulding Rehabilitation Hospital Cape Cod is committed to improving the health status and well-being of those living throughout its service area. This assessment's findings indicated that the health needs of two groups need to be prioritized: older adults and persons with disability. Additionally, low-income individuals and families, youth and adolescents, and other vulnerable populations, such as transient seasonal workers and the unstably housed, have been identified as target populations.

Older Adults

In 2014, Barnstable County had a median age of 50.8, the highest median age of any county in the Commonwealth, and one of the highest on the Eastern Seaboard.[23] According to the assessment's interviews and community forms, older adults with limited financial and social means were the populations most at-risk and faced the most pressing health care issues. Participants cited a broad range of health conditions that affected this population, including depression, anxiety, and social isolation, alcohol and prescription drug abuse, neurological conditions, cardiovascular disease, and issues with mobility. Participants also identified a number of underlying risk factors that prevented this population from receiving adequate care, including a lack of transportation services, food insecurity, lack of care coordination and fragmentation of services, and lack of support for caregivers. Finally, one participant cited older adults as a target population

Persons with Disabilities

Individuals with developmental and physical disabilities face significant disparities in health and medical care utilization compared to non-disabled individuals.[24] According to the CDC, disabled adults are more likely than non-disabled adults to be affected by a number of specific health conditions, including obesity and cardiovascular disease, and are more likely to engage in certain health risk behaviors, such as tobacco use and sedentary lifestyles. Related to health disparities, adults with physical and developmental disabilities are also more likely to be affected by certain social factors, including unemployment and violent crime.[25]

Participants identified persons with disabilities as a key target population. Spaulding serves people with a variety of disabilities, from those with physical and cognitive disabilities and impairments, to those living with chronic conditions, such as Parkinson's Disease, Multiple

[23] U.S. Census Bureau, American Community Survey, 2010-2014
[24] Havercamp, S.M., Scandlin D., and Roth, M., "Developmental Disabilities, Adults with Other Disabilities, and Adults Not Reporting Disability in North Carolina," in Public Health Reports 119, 2004: 418-426.
[25] CDC, "Disability and Health," 2015, http://www.cdc.gov/ncbddd/disabilityandhealth/features/unrecognizedpopulation.html

Sclerosis (MS), stroke, and traumatic brain injuries (TBI), that limit their activities. Due to the Cape's aging population, there are more adults with cognitive and behavioral issues in this region, many of whom are not adequately treated. Participants expressed a strong need for psychiatric and neurological practitioners who specialize in working with disabled populations with the aforementioned conditions.

Low-Income Populations

Socio-economic status (SES) has long been recognized as a critical determinant of health. Research suggests that individuals of lower SES bear a higher disease burden and have higher rates of mortality compared to those in higher socioeconomic groups.[26] Residents of communities with low SES are less likely to be insured, less likely to have a usual source of primary care, more likely to use the emergency department for non-emergent care, and less likely to access health services of all kinds. Moreover, children born to low income families are, as they move into adulthood, less likely to be formally educated, less likely to have job security, and less likely to rise into higher socioeconomic categories.[27] Although Cape Cod has a higher median income compared to the Commonwealth overall, there are pockets of the population who live in poverty, have limited formal education, are unemployed, or struggle to afford food and other essential household items. Participants specifically identified the low-income, non-Medicaid eligible population as a group that faces social and economic barriers to accessing care. One participate noted that low-income populations are less likely to receive general health education (e.g. healthy food choices, basic self-care), which may lead to higher disease burden.

Youth and Adolescents

Barnstable County had lower proportions of children/youth (0-19 years old) and young adults (20-44 years old), and higher proportions of middle-aged adults (45-64 years old) and older adults (65+) than the Commonwealth overall.[28] Despite this, a common theme throughout stakeholder interviews and community forums was that school-aged youth represented a vulnerable segment of the population. Participants cited a specific need for pediatric behavioral health services and substance abuse school prevention programs. In particular, infants born to addicted mothers, pre-school children exhibiting signs of developmental delays, and children of addicted or incarcerated parents are key groups for which expanded services would be beneficial. Furthermore, although there is no shortage of orthopedists and physical therapy

[26] Kaplan, G.A., Haan M.N., Syme, S.L., et al. Socioeconomic status and health. In "Closing the Gap: The burden of unnecessary illness." R.W. Amer and H.B. Dull, eds. New York: Oxford University Press, 1987, pp.125-29

[27] Wagmiller, R.L and Adelman, R.M. Childhood and intergenerational poverty: The long-term consequences of growing up poor. National Center for Children in Poverty, 2009. Retrieved from http://www.nccp.org/publications/pub_909.html

[28] U.S. Census Bureau, American Community Survey, 2010-2014

practices, youth and adolescents are at high risk for sports injuries. These injuries could be attributed to the elevated intensity of sports and equipment for increasingly younger kids.

Unstably Housed and Homeless

There was a lower proportion of residents in Barnstable County living in rental units (21.0% in Barnstable County vs. 37.3% in the Commonwealth), but residents who lived in rental units were more likely than residents in the Commonwealth to pay 35% or more of their total income on rent (48.4% in Barnstable County compared to 40.5% in the Commonwealth).[29] A high percentage of housing units in Barnstable County were reported as vacant (41.4% in Barnstable County vs. 9.9% in the Commonwealth), which limits access to affordable housing for year-round residents and has been associated with poor community cohesion, isolation, and limited opportunities for community engagement.[3031]

Forum participants expressed a desire to see community health programs that addressed the needs of individuals who were homeless or unstably housed, including the underlying social determinants of health (housing, employment, and food access.) There is an association between housing quality and overall health status; those living in poor conditions may be more susceptible to diseases and illnesses, including infectious diseases, injuries, poor nutrition, substance abuse, chronic conditions such as asthma and diabetes, and mental health conditions.[32] These health issues were proven to be more common in low income (<200% FPL) cohorts of the population who may struggle to decide between paying for safe housing, healthy food, or health care services. At the extreme are those without housing, either living on the street or in a transient housing situation, who have been shown to have significantly higher rates of illness and shorter life expectancy than those that are stably housed.[33]

Transient Populations

There is a body of research and evidence that illustrates the health disparities that exist for migrant, seasonal, and temporary workers. The Cape Cod Chamber of Commerce reports that every summer, Cape Cod adds between 15,000 to 20,000 workers to its year-round workforce of 117,000 people; approximately 25% percent of these seasonal jobs are filled by foreign workers with H-2B and J-1 visas, which allow for short-term, temporary stays.[34] According to

[29] U.S. Census Bureau, American Community Survey, 2010-2014
[30] U.S. Census Bureau, American Community Survey, 2010-2014
[31] Garvin, E., Branas, C., Keddem S., Sellman, J., and Cannuscio, C., "More Than Just an Eyesore: Local Insights and Solutions on Vacant Land and Urban Health," Journal of Urban Health 90(3), 2013: 412-426
[32] Hood, E., "Dwelling Disparities: How Poor Housing Leads to Poor Health," Environmental Health Perspectives 113(5), 2005: 310-317.
[33] Institute of Medicine Committee on Health Care for Homeless People, "Homelessness, Health, and Human Needs," in National Academies Press, 1988.
[34] Wendy Northcross, Cape Cod Chamber of Commerce, http://www.capecodtimes.com/article /20160401/NEWS/160409906

the office of Representative William Keating, 300 to 400 Cape businesses use H-2B visa workers to fill a critical need, mostly in the food service and hospitality industries. This has enormous implications not only for workers seeking health care, but for health care facilities that must shoulder the burden of an increased population due to tourism and seasonal employment.

Major Health-Related Issues

Physical and Developmental Disabilities

Key informants and forum participants identified accessibility as a barrier to care, and explained that while doctors' offices tended to be wheelchair accessible, aspects within, such as scales and exam tables, are not. The number of wheelchair specialists on the Cape is also limited, making it difficult for some patients to receive evaluations.

In addition to physical barriers, participants also cited the attitude and behavior of doctors as an emotional or social barrier to accessing care. One key informant explained that doctors do not adapt their behaviors to fit the needs of people with developmental disabilities. Moreover, clinics do not always have the adequate tools to communicate with all patients; for example, some health facilities lack communication technologies for people that are deaf or hard of hearing.

One participant stated that there are limited resources for children with autism on Cape Cod. Participants cited a lack of Applied Behavioral Analysis programs, restrictions for adolescent MassHealth patients, and a lack of autism disorder specialists.

Neurological Disorders and Brain Injuries

Parkinson's disease

There is a lack of specialized care for individuals with neurological disorders, including Parkinson's disease. One individual stated that **"General neurologists may be able to assess needs to a certain level, but for [people] with Parkinson's; [they] need a specialist."** In particular, there are no neurologists specializing in movement disorders. Due to this lack of specialists, participants in one forum estimated that half of the people with Parkinson's seek care off-Cape. Key informants and focus group members did, however, note that Spaulding's Parkinson's Program has extensive experience with Parkinson's and is an asset to the community.

Dementia

Similar issues were identified for individuals with dementia. One participant stated that **"Psychiatry assessments for older adults do not exist. They don't have the same resources younger people have. Dementia is such a big part of the picture, but there**

are so few places to send people for the cognitive piece to differentiate a diagnosis." Another focus group member shared a similar perspective, stating that many individuals with dementia are being cared for by primary care physicians and are not offered the most progressive medications and treatment regimens, and are not getting the specialized care that they need due to a lack of physician specialists. In addition to these gaps, participants did note that Cape Cod Healthcare has hired three neurologists within in the past year to help differentiate neurological disorders from mental health issues.

Traumatic Brain Injuries

There is also a pronounced gap in care for individuals with traumatic brain injuries (TBIs). One person stated that **"there is no good psychiatry service that targets people with traumatic brain injuries."** While veterans may access psychiatry services through the Home Base Program, they must travel to Boston or Providence to receive care. Furthermore, cognitive therapy and programs that assist people to reintegrate into the community are limited. One focus group member identified a need for legal assistance for individuals with TBIs. Finally, there is a need for cognitive therapy programs and for more emotional support, both formally through support groups and therapy, and more informally, through increased community awareness.

Behavioral Health and Substance Abuse

Mental illness and substance abuse have a profound impact on the health of people living throughout Cape Cod. Data from the Centers for Disease Control and Prevention suggests that approximately one in four (25%) adults in the United States has a mental health disorder, and approximately 1 in 10 Americans struggle with drug or alcohol problems. Qualitative findings from this assessment support the idea that behavioral health issues are a leading priority for the region.

The rampant misuse of opioids and prescription drugs has severely affected many areas of Massachusetts. From 2010-2014, Barnstable County had the highest per-capita rate of death from opioid overdose among all counties in Massachusetts.[35] According to one key informant, the lack of treatment facilities is the Cape's biggest weakness. Gosnold on Cape Cod, which was cited by some individuals as a strength of the Cape's health care system, is the only detox provider in the Cape and they **"can't come close to filling the demand."** Moreover, this interviewee explained that because most insurance plans only cover 7-14 days of detox, and not the full continuum of care, patients are sent back into the community before they are ready, perpetuating the cycle of misuse. Another key informant agreed that the treatment

[35] Massachusetts Department of Public Health, Unintentional Opioid Overdose Death Rate by County, January 2013-September 2015

model for substance abuse, as well as the insurance policies, need to change to adequately treat patients of substance abuse.

Older Adults

Key informants and forum participants identified behavioral health as a key health issue for older adults. At the core of this issue is a lack of providers, including specialists in geriatric psychiatry and gerontology. In addition, there is a lack of affordable providers for people without private insurance. According to one focus group member, **"patients with MassHealth have no psychiatrists they can access right now."** It is particularly difficult to find a doctor to perform geriatric-psychological evaluations, and there are a limited number of doctors who can do evaluations in-home, which is a need for homebound older adults.

Forum participants cited a number of problematic conditions, including depression that impedes the rehabilitation process, cognitive impairments with behavioral disturbances, bipolar disorder, isolation, hoarding, and anxiety. Furthermore, several individuals stated that co-morbid factors were often overlooked by providers. One participant said that, **"Mental health is not treated in a way to prevent a person from having other issues, which is particularly true for the elder population who may have other chronic diseases."**

Closely related to mental illness, substance abuse is another issue among older adults. One forum participant stated that, **"People are self-medicating because they haven't had access to treatments for mental health,"** thus leading to substance abuse. A key informant suggested that older adults resort to medication, specifically opioids, to manage chronic pain when other forms of treatment and rehabilitation fail. One forum participant said that **"For the 60 or so people admitted to a skilled nursing facility, at least 20 percent have drug seeking behaviors or alcohol abuse diagnoses, as well as the 'valid' diagnosis they're coming in with."** One barrier to care for people with substance abuse issues is stigma, especially in more affluent communities. For this reason, one treatment facility, the Odonata Center, has tried to create a more comfortable treatment environment.

Caregivers

The mental health and wellbeing of caregivers is often overlooked. One forum participant stated that, **"Caregivers don't have the support they need."** Participants and key informants also cited isolation, physical limitations, and financial stress as key issues for caregivers. There are some organizations that provide caregiver services in the region, such as the Department of Veterans Affairs, who brings patients into the hospital

to provide respite care for caregivers, and HopeHealth's programs for caregiver support, but there is a general lack of services. One forum participant mentioned Elder Care Services' respite program, but noted **"It is very underfunded and limited in what it provides, and is not enough to meet caregivers' needs."** Another barrier is cost; participants noted that people cannot afford home care agencies that would allow caregivers time off from providing care. As one key informant stated, **"It's exhausting for care partners. There is not enough affordable programming to really support the day-to-day needs of caregivers."**

Children and Adolescents

There are mixed perspectives regarding mental health services for children and adolescents. One focus group member cited children's mental health as a strength, and said that there were many good resources, though there would always be a gap for those not eligible for MassHealth. In contrast, one key informant stated that children and adolescent mental health resources are lacking, especially on the Lower Cape. This person also cited insurance as a barrier to care: **"It is difficult to bill for group therapy sessions and there is a huge demand for it."**

Several participants cited substance abuse as a major issue for adolescents. There was agreement that there should be more preventive services, including ones that target children of individuals with substance abuse issues. According to one focus group member, Gosnold on Cape Cod has some counselors at schools, but there is a need for more. One forum participant cited a study that found a 25-40% decrease in drinking and drugs in the past five years at Falmouth High School, which was attributed to robust in-school prevention programs.

Tickborne Diseases

Tickborne diseases, including Babesiosis, Anaplasmosis, and most-commonly, Lyme disease, are endemic throughout Massachusetts, with the highest incidence in Barnstable County.[36] In Massachusetts in 2014, the highest incidence rates were among young children aged 5-9, and older adults aged 65-74, who may not notice ticks due to their small size.[37] One participant cited tickborne illnesses as the most pressing public health issue Cape Cod, and explained that the biggest barrier to tackling this issue is controversy among the local community as to how to treat and diagnosis these conditions: **"We need the ability to get treatment and care for Lyme that persists beyond the initial treatments. [People] go off-Cape for treatment, but many**

[36] Massachusetts Department of Public Health, "Lyme Disease Surveillance in Massachusetts," http://www.mass.gov/eohhs/docs/dph/cdc/lyme/lyme-disease-surveillance-2014.pdf

[37] Massachusetts Department of Health and Human Services, "Overview of Tickborne Diseases," http://www.mass.gov/eohhs/gov/departments/dph/programs/id/epidemiology/ticks/public-health-cdc-tickborne-overview.html

don't have the resources to do that. Here, people are still not diagnosed and treated." This sentiment speaks to a need for more cohesive public health efforts aimed at the prevention and treatment of these illnesses.

Social Determinants of Health

Transportation

Transportation is a major barrier for individuals trying to access care on Cape Cod. As one focus group member stated, **"Transportation is the number one need."** Due to the large percentage of older adults who are unable to drive, as well as the geographic isolation of the Cape, the region is in great need of reliable transportation services. While the Cape Cod Regional Transit Authority operates some buses, they are not always predictable, and are therefore underutilized. One key informant suggested that individuals' lack of confidence could be another reason for underutilization of the service: **"It's one thing to have transportation available, but if people don't feel confident in arranging a ride to an exercise program, they will say 'forget it, I don't need it.'"** Other focus group members stated that even if transportation services were available, isolated or disconnected individuals might not know they exist. This exacerbates issues related not only to care access, but also social isolation.

Housing

Several key informant and focus group members identified lack of adequate housing as a key issue. This is an issue for people who are homeless and do not have a place to sleep, but also for individuals who are unstably housed and rely on couch surfing or other means. There is a lack of shelters, particularly family shelters, as well as shelters for people with disabilities. As one key informant stated, **"Unstable housing is a huge precursor for a lot of other health issues, particularly mental health and substance abuse."**

Housing is particularly an issue for older adults, who may lack the income to afford to stay in their homes. One participant noted that all 14 affordable units at a local assisted living facility are full, and even the reduced price is not affordable for most. This participant also noted that there is a two to four year waiting list for affordable senior-specific housing units. Older adults and low-income individuals and families with limited resources may be forced to make difficult choices on how their money is spent, whether they will pay for a prescription, respite care, food, or their electric bill.

Access to Healthy Foods

Food is at the core of humans' cultural and social beliefs about what it means to nurture and be nurtured. Issues related to food insecurity, food scarcity, hunger and the prevalence and impact of obesity are at the heart of the public health discourse in urban and rural communities across the United States. Many interviewees and forum participants identified a lack of access to

healthy foods as a health issue for segments of the population. Low income individuals and families, as well as low income and/or isolated older adults, were identified as at-risk with respect to food access. Interviewees and community forum participants reported that significant numbers of people struggled to buy fresh produce and other nutritional foods, and referred to food insecurity and food scarcity as contributors to obesity and chronic disease. Participants stated that although SNAP benefits allow people to access fresh produce, this program does not provide enough food for some individuals and families. While food pantries do exist, transportation to and from the facilities may be difficult. The Sandwich food pantry does offer delivery of goods, but requires the individual to set up this service; those with cognitive impairments or those without access to a phone or internet may not be able to coordinate this process.

Social Support

Several key informants and focus group members noted the limited number of caregivers and case managers to support individuals with health concerns. One key informant identified the need for a more robust continuum of caregivers and case managers, **"from paraprofessionals to highly trained professionals"** to work with patients on a range of needs. Technology assistance, for example, does not require a certified professional, but as this key informant stated, not everyone has family or others to assist with this type of matter. Furthermore, individuals stated the need for more navigators and case management services. One key informant stated, **"If we want to save big on hospitalization costs, people need more one-on-one interaction, but it doesn't have to be with a highly paid person."** There is a big gap, however, in the reimbursement of these case management services.

Strengths of the Regional Health System

Focus group members and key informants cited many strengths of the existing service system. People mentioned specific service providers that were particularly strong, including Cape Cod Health Care, Spaulding, Gosnold on Cape Cod, the Visiting Nurse Association (VNA) of Cape Cod, Elder Services, various Councils on Aging, and Veterans Affairs.

Participants noted the following areas as key assets of the regional health system:

Support Group Network

Several people agreed that the support group network is a major strength. One focus group member stated that the **"community-based support group structure is fantastic and there is a vibrant network."** People also praised Spaulding's workshops and speaker engagement opportunities.

Community Health Centers

Another strength of the service system was the presence of community health centers that offered various types of services including primary care, dental, and behavioral health. By offering a number of services in one location, individuals have fluid care coordination, fewer issues with transportation, and are less likely to miss appointments.

Emergency Services

Several forum participants and key informants highlighted the role of emergency services in improving the health needs of residents. Focus group members said that some local police departments and social service providers visit homes and collaborate, and firefighters in some locations have started to visit homes to ensure individuals are getting their medications. One key informant noted that police departments are now considering substance abuse and mental illness as behavioral health issues and not crimes.

Chronic Disease Management

Participants noted that there has been more focused attention on chronic disease management, and both Emerald Health and the VNA have programs to support patients who require these services. Barnstable County is also a coordinating partner for the Prevention and Wellness Trust Fund Grant, which involves three Community Health Centers and three community partners (VNA, Elder Services, and the YMCA). This grant aims to support chronic disease self-management.

Department of Veterans Affairs (VA)

One person highlighted VA for managing an **"excellent clinic"** and strong traumatic brain injury care program, in part due to strong collaboration with other local organizations.

Participants also noted several areas of the regional health system that have improved over the last 15 years, but where there is still progress to be made:

Senior Services and Councils on Aging

Senior services and Councils on Aging (COA) were cited as a strength, and one participant called them the **"epicenters of towns."** Focus group members said these organizations are great advocates for patients and have done tremendous work in helping older adults learn basic technology. While they are well-regarded, COAs are typically underfunded. One COA cited having 1 outreach worker in 1988 to serve 1,500 clients; today, 1 outreach worker is expected to serve 5,200 clients. The percentage of town budgets allocated to serving seniors does not typically reflect the percentage of seniors living in the town.

Forum participants also identified Senior Care Options (SSCO), a service offered for people with MassHealth, Tufts, and Fallon insurance plans, which helps to coordinate care services. This service does offer transportation coordination, but only for MassHealth clients who meet specific eligibility criteria.

Transportation System

While there are certainly gaps in the Cape's transportation system**,** people did note that there are a number of organizations and individuals working on improving it and have a 10-year plan to create an overall system as well as individualized schedules.

Visiting Nurse Association (VNA) Medical Model Day Centers

Finally, one focus group member noted an improved policy change for the medical model day centers run by the VNA, which means that people who self-medicate can take advantage of the services offered through these centers. While these medical model day centers are beneficial, there are too few of them on the Cape.

Falls Prevention

One key informant identified falls prevention as a new effort and stated that Community Health Centers are now doing screenings for fall prevention. A major gap, however, is home modification services and their accessibility. Durable Medical Equipment (DME), for example, is only covered for inpatients and not individuals seeing primary care providers.

Programmatic Recommendations for Spaulding

Recruit specialists for certain conditions

Many participants highlighted a need for additional specialists to treat specific conditions, including Parkinson's disease, dementia, and traumatic brain injury. One forum participant stated said there is a **"gap between the physician and patient"** when there are neurologists who do not understand brain injuries. Others had similar sentiments about a lack of specialists for other conditions.

Develop socialization programs

Key informants and forum participants identified a need for more socialization and community reintegration programs, especially for older adults and individuals with disabilities. One person suggested that Spaulding could develop programs for socialization and activity, so that people who feel isolated have opportunities to socialize. Similarly, one forum participant suggested that more group therapy for youth and adolescents would be helpful.

Expand Direct Admissions Program (DAP)

DAP at Spaulding is regarded by many as a strong player in the system, as it can be a good option for patients who cannot be admitted to an acute care hospital but are not safe to go home. Many agencies and physicians refer patients to DAP. At the same time, however, because DAP must be compliant with Center for Medicare and Medicaid Service (CMS) regulations, it has specific admission criteria that may be difficult for people to meet. Forum participants suggested that the eligibility requirements be expanded so that more people can access this program at Spaulding. One person said, **"The criteria [for admission] are so difficult to meet that it's not useful."** Other focus group members suggested that Spaulding continue to spread the word about the program, as not everyone is aware of it. Finally, one person stated that it would be helpful if Spaulding could reserve a bed at a skilled nursing facility before patients get into the program.

Offer assistance with discharge planning

Creating resources to help patients with their discharge planning is a key programmatic recommendation. Many forum participants noted that many patients feel overwhelmed by information following diagnosis, and it is helpful for them to receive information about services that they can access after discharge. One key informant suggested that Spaulding hire a professional whose sole job is to collect resource information and assist patients as they are discharged; this person would follow up with patients during the month following discharge, to assure that resources were in order and were being utilized.

Increase collaboration and information sharing

A number of key informants and forum participants recommended that there be more collaboration and information sharing between Spaulding and other service providers. One aspect of this collaboration pertains to patient care, which could be accomplished through a variety of procedures including creating mechanisms to increase referrals. Another aspect of collaboration and information sharing relates to Spaulding's community outreach educational programs.

One person stated that "**Spaulding has access to an incredible network of informed and current providers, and providing the community access to this information would be nice."** Forum participants believe that collaborating with other organizations and individuals could make Spaulding's programming more useful and well-attended. Spaulding has access to the specialists and speakers, and it could work more with regional providers to identify topics relevant to their group, decide on the best time and place to offer the program, and help market it to their networks.

Increase disability awareness and education

One key informant suggested that Spaulding provide more education to patients and staff about people with disabilities and their possible needs. This will help patients feel comfortable and receive the best care, for "**If people aren't comfortable going to a place they won't go, and if they do, they might not have enough confidence in the doctor to follow through with directions.**"