Community Health Needs Assessment Report

and Implementation Plan 2020-2022

Cape Cod Hospital & Falmouth Hospital
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Introduction

About Cape Cod Healthcare

Cape Cod Healthcare is the leading provider of healthcare services for residents and visitors of Cape Cod, Massachusetts. With more than 450 physicians, 5,300 employees and 790 volunteers, Cape Cod Healthcare (CCHC) includes two acute care hospitals, the Cape’s leading provider of homecare and hospice services (VNA), a skilled nursing and rehabilitation facility (JML Care Center), an assisted living facility (Heritage at Falmouth), an ambulatory surgery center, and numerous primary and specialty care physician practices along with many other health programs. To fulfill its mission of coordinating and delivering the highest quality, accessible health services, which enhance the health of all Cape Cod residents and visitors, Cape Cod Healthcare annually contributes over $27 million in uncompensated care, community health improvement, community benefits, health professions education, subsidized health services, research, and community education and awareness.

Mission Statement

To coordinate and deliver the highest quality, accessible health services, which enhance the health of all Cape Cod residents and visitors.

Vision Statement

We will be the health service provider of choice for Cape Cod residents by achieving and maintaining the highest standards in healthcare delivery and service quality. To do so, we will partner with other health and human service providers as well as invest in needed medical technologies, human resources and clinical services. Above all, we will help identify and respond to the needs of our community.

Values Statement

To be compassionate, respectful and professional in the way we deliver care. To be relentless in pursuing the highest standard of quality through continuous improvement, emphasizing the power of teamwork. To be honest, ethical and open in all our relationships. To be responsible stewards of the community’s resources by working efficiently and cost effectively. To serve all without regard to sex, race, creed, residence, national origin, sexual orientation or ability to pay.

Cape Cod Healthcare Community Benefits

Cape Cod Healthcare, Inc., through its Community Benefits initiative, is committed to enhancing the quality of and access to comprehensive healthcare services for all Cape Cod residents. Through continuous assessment of community needs, coordinated planning and the allocation of resources, this commitment includes a special focus on the unmet needs of the financially disadvantaged and underserved populations. We will assume a leadership role in collaborative efforts joining our resources, talent, and commitment with that of other providers, organizations and community members.
Community Health Needs Assessment and Strategic Implementation Plan Summary

Improving the health of a community is essential to enhancing the quality of life for residents in the region and supporting future social and economic well-being. To fulfill the federal IRS requirements and the Massachusetts Attorney General Community Benefits Guidelines and as a continuing best practice in community health, Cape Cod Healthcare (CCHC) engaged in a community health planning process to improve the health of residents in Barnstable County, Massachusetts. This effort included two phases: (1) a community health needs assessment (CHNA) to identify the health-related needs and strengths of the region and (2) a strategic implementation plan to identify major health priorities, develop goals, select strategies and identify partners to address these priority issues across the region.

Methods

The community health needs assessment was guided by a participatory, collaborative approach, which examined health in its broadest sense. Qualitative and quantitative methods were implemented throughout this assessment. This process included integrating existing quantitative, secondary data on social, economic, and health issues in the region with qualitative methods to get an understanding of individual thoughts and opinions from the following methods:

- **1 community health survey** which was administered online and disseminated through multiple channels to individuals who live or work in Barnstable County. The survey was translated and distributed in English, Portuguese and Spanish. Community interest and participation went beyond our expectations and led to a total of 2,011 people completing the survey.
- **2 focus groups**; one in Portuguese and one in Spanish, with residents in service-related occupations, and residents in the healthcare field.
- **2 community stakeholder dialogs**, which were conducted with stakeholders and human/social service providers in the community.
- **25 interviews with community stakeholders**, including health centers, public safety, housing and tribal organizations and human service groups.

CHNA Key Findings

The following key health issues emerged most frequently from a review of the available data and community input and were considered in the selection of the Strategic Implementation Plan (SIP) health priorities:

- **Housing**: All stakeholders described the cost and availability of housing as a major concern in Barnstable County. Housing or homelessness was most highly selected as the top social concern for the community (65.5% of survey respondents). This concern impacts residents’ ability to afford child care, food, and other necessities. The populations perceived as at-risk include: seasonal employees, families with children, senior citizens, and veterans. It also impacts the retention of healthcare professionals, some of whom also struggle to afford housing. Other housing related concerns include: housing quality (e.g., mold), lack of year-round housing, and lack of home ownership.

- **Transportation**: Private and public transportation were cited as concerns, with 29% of survey respondents saying that the availability of public transportation was high concern. Bridges and roads struggle to support the population influx in the summer. There was discussion about the number of routes and lines available through the public transit system; mostly centered on sufficiency. Transportation is particularly challenging when discussing healthcare access for residents. The majority
(81.5% of survey respondents) of working population drives alone to and from work, while few utilize public transportation (1.4%), however access to a vehicle is not universal among Barnstable County residents.

- **Seasonal Economy and Employment Variation**: There is high employment in the summer and low employment during in the winter. Many residents must earn the majority of their annual income in a few months leading to financial insecurity. The lack of year-round professional jobs deters young professionals from remaining in the area. ‘Employment’ was the third most frequently selected social concern by survey respondents as impacting the community in which they live (44.5% of respondents).

- **Behavioral Health (including Substance Use and Mental Health)**: Depression, anxiety, and substance use disorder were named as primary concerns. Substance use was 2nd most selected top health concern for the community (57.7% of survey respondents). 46.4% of survey respondents said mental health issues was a top health concern for the community and 29.5% said it was for themselves. Many said poor access is not due to lack of resources, but a need for more resources (i.e., there are many treatment facilities, but they are constantly at capacity). While stakeholders agreed that risk for mental and behavioral health problems transcend age groups, transitional-aged youth were perceived as having the highest risk.

- **Aging Population**: ‘Aging health concerns’ was most frequently selected as a top health concern impacting the community (72.6% of survey respondents). The age distribution of the Barnstable County population skews older than for the state (Population aged 65 years and older is 15.1% for MA and 27.8% for Barnstable County). Further exploration of the population age 65 years and older show that several towns have sizeable proportions of their population who are considerably older than 65, with rates that are three times that of the state overall. Primary aging concerns were dementia, Alzheimer's, and social isolation, with higher isolation risk for residents living alone and/or without a regular caregiver. Other aging concerns include elder abuse, fall-related injuries, and susceptibility to communicable diseases (e.g., influenza). Availability of affordable housing for older adults and availability of transportation for older adults were also cited as issues of “high concern”.

- **Physical Health Conditions**: Top health concerns for the community cited by respondents included chronic health conditions (43.8% of respondents) and cancer (36.4% of respondents). Cancer incidence is higher than the state for most types. Mortality is higher than the state for breast, prostate, and skin cancers. The rate of Cardiovascular-related Emergency visits among Barnstable County residents is notably higher than for the state (729.2 per 100,000 vs. 379.0 per 100,000) and the rate of Diabetes-related Emergency visits among Barnstable County residents is slightly higher than for the state (159.9 per 100,000 v 129.8 per 100,000).

- **Healthcare Access**: 60% percent of survey respondents stated barriers while 40% said no barriers. For those who cited barriers, they included long waits (28.9%), cost of care (21.3%), and difficulty with scheduling appointments (18.3%). 22.2% said transportation to medical appointments was of high concern. Access to Providers (specialists and primary care providers); 45.2% said access to primary care provider (PCP) is a top health concern for the community and 31.8% said for themselves. The population to provider ratios for primary care physicians, mental health providers, and dentists is similar in Barnstable County and the state.
*Priority Health Issues for the Strategic Implementation Plan*

In early February 2019, HRiA led a facilitated process with leadership from Cape Cod Healthcare and community stakeholders including Barnstable County Human Services and behavioral health and infectious disease representatives from CCHC, to identify the priorities, goals and objectives for the Strategic Implementation Plan (SIP). HRiA presented the key health issues identified in the FY2020-FY2022 community health needs assessment (CHNA) project, including the magnitude and severity of these issues and their impact on priority populations. HRiA facilitated a discussion with CCHC leadership and community stakeholders to evaluate possible priorities based on key criteria outlined in Figure 1.

**FIGURE 1: CRITERIA FOR PRIORITIZATION**

<table>
<thead>
<tr>
<th>RELEVANCE</th>
<th>APPROPRIATENESS</th>
<th>IMPACT</th>
<th>FEASIBILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>How Important Is It?</td>
<td>Should We Do It?</td>
<td>What Will We Get Out of It?</td>
<td>Can We do It?</td>
</tr>
<tr>
<td>Burden (magnitude and severity, economic cost; urgency of the problem)</td>
<td>Ethical and moral issues</td>
<td>Effectiveness</td>
<td>Community capacity</td>
</tr>
<tr>
<td>Community concern</td>
<td>Human rights issues</td>
<td>Coverage</td>
<td>Technical capacity</td>
</tr>
<tr>
<td>Focus on equity and accessibility</td>
<td>Legal aspects</td>
<td>Builds on or enhances current work</td>
<td>Economic capacity</td>
</tr>
<tr>
<td></td>
<td>Political and social acceptability</td>
<td>Can move the needle and demonstrate measurable outcomes</td>
<td>Political capacity/will</td>
</tr>
<tr>
<td></td>
<td>Public attitudes and values</td>
<td>Proven strategies to address multiple wins</td>
<td>Socio-cultural aspects</td>
</tr>
</tbody>
</table>

Through thoughtful consideration of the data presented, the prioritization criteria and knowledge of the existing and planned programs already in place, the group decided on the five priority areas listed below. The level of feedback and data from the assessment led the group to also include the aging population and healthcare access as cross-cutting themes to be included in objectives and/or strategies in each of the priority areas chosen.

**Priorities Areas for the 2019-2021 Strategic Implementation Plan (SIP):**
1. Physical Health Conditions
2. Behavioral Health
3. Transportation
4. Housing
5. Workforce Development – This priority emerged during the planning process

Cross-cutting themes to be represented in each of the above priority areas:
- Aging Population
- Healthcare Access

Later in February 2019, HRiA led a SIP planning session that included mapping current and emerging programs and initiatives against these needs, as well as decision-making regarding which existing
programs and initiatives would be continued and what new programs or initiatives would be developed. The resulting plan is meant to be reviewed annually and adjusted to accommodate revisions that merit attention.

**Vulnerable Populations Addressed by this Strategic Implementation Plan**

- Residents across Barnstable County with focus on specific regions of the Cape most acutely impacted by geographic isolation, access to services, transportation barriers, and economic opportunity
- Residents over the age of 65
- Transitional-aged youth (18-24 yrs. old)
- Low-income individuals and families
- Populations managing mental health and/or behavioral health disorders
- Non-English speaking individuals

**Social Determinants of Health Issues Addressed by this Strategic Implementation Plan**

- Employment, education and economic opportunities
- Housing
- Transportation
- Access to Healthy Food, Nutrition

**Rationale for Priority Community Needs Not Addressed**

**Seasonal Economy & Employment Variation:** CCHC is best positioned to support and collaborate on initiatives that aim to develop the regional healthcare workforce as part of this SIP. In this way, we are hoping to have a positive influence on the economy and employment opportunities in Barnstable County. Addressing the complex challenges created by a seasonal economy and employment variation in the region in industries outside of healthcare is beyond the core competencies of CCHC and our mission.

**Community Health Needs Assessment (CHNA) Introduction and Background**

**Purpose of the Community Health Needs Assessment**

Cape Cod Healthcare (CCHC) is the leading provider of health care services for residents and visitors of Cape Cod. With more than 450 physicians, 5,300 employees, and 790 volunteers, CCHC is the parent company of Cape Cod Hospital and Falmouth Hospital, the two acute care hospitals serving year-round residents and visitors to the region. CCHC is also the Cape’s principal provider of homecare and hospice services (Visiting Nurse Association of Cape Cod). CCHC operates a skilled nursing and rehabilitation facility (JML Care Center), an assisted living facility (Heritage at Falmouth), and numerous health programs.
CCHC collaborates with community partners across the region to assess community needs, identify promising programs, and implement strategies to improve people’s health. Through an open and competitive Annual Strategic Grants program, CCHC funds projects addressing a variety of health needs, prioritizing efforts that focus on chronic and infectious disease, behavioral health, access to care, and disease prevention and wellness. Additionally, CCHC has invested in new and expanded hospital programs in areas such as cancer support, chronic disease self-management, case management for individuals living with HIV/AIDS, suicide prevention, and support for new families, among others. CCHC community benefits’ funding also supports medical interpreter services for limited English-speaking patients, hospital social workers and case managers, and financial counselors. Finally, CCHC plays a leadership role through participation in, among others, the Barnstable County Economic Development Council, the Barnstable County Human Services Advisory Council, the Barnstable County Regional Substance Use Council, the Cape Cod Chamber of Commerce, and the Cape and Islands Community Health Area Network (CHNA 27) Steering Committee.

Cape Cod Hospital (CCH) and Falmouth Hospital (FH) share the service area of Barnstable County, also known as Cape Cod, and jointly conduct a community health needs assessment (CHNA) every three years. CCH and FH have released two prior joint Community Health Needs Assessment Reports and Implementation Plans (in 2014 and 2017).

The purpose of the CHNA is to undertake a data-driven and community-led process that identifies and prioritizes the health needs of residents of the region based on the frequency, size, scope, and magnitude of the issues. In addition, the CHNA process provides CCH and FH the opportunity to:

- Identify vulnerable, disadvantaged, and medically underserved target populations
- Identify key areas of significant community need and vulnerable populations
- Examine the impact and role of social determinants of health in the community
- Monitor regional health data and maintain an inventory of available resources
- Facilitate the development of multi-year implementation strategies to guide hospital community health initiatives and community investments to improve health
- Promote partnership and dialogue between the hospitals and community organizations

In 2014, the Internal Revenue Service (IRS) established requirements for non-profit hospitals to conduct health needs assessments and develop approaches to address identified needs. These requirements provide specific guidance for how hospitals assess and prioritize health needs in their service area and identify specific implementation strategies to address those needs.

In February 2018, the Massachusetts (MA) Attorney General released updated Community Benefits Guidelines for Non-Profit Hospitals. These new guidelines include recommendations to ensure that CHNAs align with the IRS requirements. In response to these new guidelines, CCHC collected and examined data related to the social determinants of health as part of the 2019 CHNA process. The inclusion of such data encourages communities to define health needs broadly including the social, behavioral, and environmental factors that impact health in the community.

CCHC’s CHNA work has also informed the prior CHNA processes conducted by Spaulding Rehabilitation Hospital Cape Cod, a sub-acute hospital operating in Barnstable County. In both 2013 and 2016, CCHC shared its preliminary CHNA report and data with Spaulding and involved Spaulding in data collection efforts. Spaulding leveraged these resources to develop its implementation strategies in prior years. CCHC and Spaulding have also identified opportunities to collaborate beyond the CHNA process. For example, CCHC and Spaulding are collaborative partners with the steering committee for Healthy Aging.
Cape Cod under the leadership of Barnstable County Health and Human Services where assessment and planning for the region include municipal governmental organizations.

Project Collaborators

CCHC extends a special thanks to the Barnstable County Department of Human Services, the Cape Cod Commission, the Cape Cod Regional Transit Authority, and the Housing Assistance Corporation on Cape Cod for their contributions of data and research for this CHNA. The Visiting Nurse Association of Cape Cod’s Public Health and Wellness Division provided a part-time project staff member to assist the CCHC Community Benefits Director with organizing assessment activities and synthesizing and disseminating information throughout the project.

More than 30 health, human, and public service agencies from across Barnstable County contributed to the assessment including organizations representing low-income, vulnerable, and medically underserved residents. Through various engagement activities, these organizations validated data findings, identified information gaps, identified specific target populations and populations experiencing health inequities, and offered input for health improvement strategies. For a complete list of participating organizations and the resident populations they represent, please see Appendix A.

Truven Health Analytics, a subsidiary of IBM Watson Health, served as a consultant on the project to collect and analyze publicly available data on the physical health, social conditions, behavioral risk factors, and environmental factors that influence the health of residents of Barnstable County.

Health Resources in Action (HRiA), a Boston-based public health research firm, provided valuable contributions to this project through the facilitation of community engagement activities such as stakeholder forums and key informant interviews, administration of the community health survey, analysis and synthesis of data, and summary of the findings shared in this report.

Role and Review of Previous Community Health Needs Assessments

Previously released CCH and FH CHNA Reports and Implementation Plans spanning FY2014-FY2016 and FY2017-FY2019 serve as the foundation for this FY2020-FY2022 CHNA project (feedback from community residents was encouraged after the release of each report, to-date CCHC has not received any written comments on the information distributed.)

Chronic and infectious disease, access to care, and behavioral health remained consistent concerns for Barnstable County in the previous assessments. These issues are longstanding and complex. Solutions addressing these issues require significant resources and community-wide collaboration and support.

Inclusion of disease prevention and wellness as a priority in the FY2017-FY2019 CHNA report represented a shift in focus and a commitment to support upstream prevention of disease through education and improving risk factors that influence health. The FY2020-FY2022 CHNA will continue to evolve the assessment process by identifying and analyzing social determinants of health as critical drivers of health outcomes.

The CHNA process and report ultimately inform the development of multi-year implementation strategies to guide hospital community health initiatives and investments to improve health. Since the
release of the FY2017-FY2019 CHNA in September of 2016, CCHC has invested more than $50 million in community health initiatives including over $2 million in grants to local non-profit organizations.

In addition to grants, other CCHC community investments have included charity care for vulnerable populations, new and expanded hospital-based programs, support and strategic collaboration with Federally Qualified Health Centers (FQHCs), leadership participation in regional health and human service initiatives, and workforce development partnerships that addressed workforce gaps in the regional health care sector.

Examples of hospital-based initiatives at CCH and FH:

- Expanded oncology programs including support groups and counseling services, nutrition and dietary support, physical conditioning and wellness programs, and screening initiatives for the uninsured
- Launched a Congestive Heart Failure Clinic providing individuals with support to self-manage chronic diseases
- Implemented a Recovery Specialists program in CCH and FH emergency departments assisting patients with substance use disorders
- Increased behavioral health services through providing support and peer groups, creating a Community Crisis Line, and establishing partnerships in the community through the Zero Suicide initiative to reduce suicides in the region
- Created local Moms Do Care program; an integrated system of medical and behavioral health care including access to medication assisted treatment (MAT) and recovery support throughout the pregnancy and postpartum period through the use of peer recovery coaches

Examples of new and expanded community programs supported through CCHC community benefits grants included:

- Expanded MAT and Office-Based Addiction Treatment (OBAT) programs at FQHCs across the region
- Launched new education and awareness campaigns and programs to address tick borne illness, HPV, Hepatitis C, and suicide
- Developed new models expanding access to healthy and locally sourced food to low-income seniors, families, and individuals
- Increased support and counseling services for caregivers of individuals with Alzheimer’s disease and with mental health and substance use disorders

Although progress has been made in each health priority area, challenges exist to fully address some issues or achieve anticipated outcomes. Areas in need of continued focus include:

- Recruitment of health care providers to the region
- Development of information systems for direct electronic referrals between health care providers and community-based programs that support health (e.g., CCH, FH, and Physician Practices are implementing Epic in 2020)
- Created local Moms Do Care program that uses an integrated system of medical and behavioral health care including access to medication assisted treatment (MAT) and recovery support throughout the pregnancy and postpartum period through the use of peer recovery coaches
- Surveillance and reporting of regional disease information
- Implementation of evidence-based practices for prevention and disease management
- Engagement of patients to self-manage chronic diseases and reduce risky health behaviors

The successes and challenges of implementing strategies to address health priorities identified in previous CHNAs are recognized and woven into the assessment, analysis, and planning phases of the FY2020-FY2022 CHNA process.
Methodology and Community Profile

Project Approach

The following sections detail how the CHNA process was conducted including the engagement of stakeholders and community members, methods for data collection and analyses, and the broader lens that was used to guide this process. The detailed timetable for CHNA activities is shared in Appendix B. The CHNA process was conducted in three phases:

- Collection of health indicator data, social determinants of health data, and community input
- Prioritization of health needs and community resource analysis
- Development of CHNA report and implementation strategies

Data Sources and Methodologies

Many sources and data collection methodologies were used to obtain a comprehensive view of the health and health care needs of the region and the people served by CCH and FH. Input on the design of data collection instruments was solicited from public health experts, health care consumers, and persons representing vulnerable and medically underserved populations and minorities. Conscientious efforts were made to reach a wide-ranging population of residents during data collection to ensure broad representation of community interests and perspectives. Detailed descriptions of these methodologies are provided in Appendix C. Briefly, the data sources and methodologies included:

- **Secondary Data.** Existing data from national, state, and local sources were reviewed. The types of data collected included demographics, vital statistics, and public health surveillance, as well as self-reported health behaviors from large, population-based surveys such as the Massachusetts Behavioral Risk Factor Surveillance Survey (BRFSS).
- **Community Stakeholder Dialogues.** Two facilitated “stakeholder dialogues” were held with staff from a broad array of agencies and organizations actively working in the health and human services sectors of Barnstable County. Approximately 70 people attended these sessions.
- **Interviews.** Twenty-five telephone interviews were conducted with leaders from a variety of organizations serving Barnstable County including health centers, public safety organizations, housing organizations, and other human service groups.
- **Focus Groups.** Two focus groups, one conducted in Spanish and one in Portuguese, were held with residents to gather information about the community, health challenges and needs, and existing and needed services. These specific language groups were targeted based upon data collection gaps identified in the prior the prior CHNA process. A total of 20 residents participated in the focus groups.
- **Community Survey.** A community survey asking about community and individual health and health care needs was developed and made available on-line and on paper to residents of Barnstable County. The survey was conducted in English, Spanish, and Portuguese and was completed by 2,011 total residents. The demographic characteristics of the survey respondents are detailed in Appendix E.

Data Limitations and Information Gaps

As with all data collection efforts, there are several limitations that should be acknowledged. A number of secondary data sources were drawn upon in creating this report. Although all are considered highly credible, each source may use different methods, assumptions, or time periods and may not be directly comparable to one another. For the Community Health Survey, convenience sampling was used and data were collected from those who were readily available and willing to participate. Thus, findings may not be generalizable to the larger population or to specific sub-populations of Barnstable County residents. Finally, while key informant interviews, stakeholder dialogues, and focus groups provide
valuable insights, results are not statistically representative of a larger population due to non-random recruiting techniques and a small sample size.

**Community Profile**

**Definition of Community Served**

CCHC’s primary service area is Barnstable County. Barnstable County is a geographically isolated region located on the eastern seaboard of Massachusetts. The narrow peninsula spans over 70 miles in length and hosts a year-round population of 214,703 residents.\(^1\) Barnstable County consists of 15 towns that vary in population size from about 45,000 residents (Barnstable) to slightly more than 1,500 residents (Truro).\(^2\) In addition to serving year-round residents, the regional community infrastructure, including CCH and FH, must meet the demands of a significant influx of seasonal residents and visitors each year which, by one estimate, is equivalent to about seven million visitors and residents on Cape Cod in a given summer season.\(^3\)

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\(^1\) U.S. Census Bureau. American Community Survey 5-year estimates, 2012-2016.


Population Demographic Trends

Nearly half of the total population of Barnstable County reside in the three largest towns (Barnstable, Falmouth, and Yarmouth) and population size becomes increasingly smaller in towns of the lower (Harwich, Brewster, Chatham, and Orleans) and outer cape (Eastham, Wellfleet, Truro, and Provincetown), many of which are considered rural.

Between 2011 and 2016, the overall population of Barnstable County remained stable with a slight decrease of -0.9%. In comparison, the state population grew by 3.5% during that time period. The overall population of Barnstable County and the islands of Nantucket and Martha’s Vineyard is projected to decline in coming decades (an estimated -13.0% between 2010 and 2035), attributed to out-migration of younger residents and to the fact that deaths currently outnumber births.

Consistent with the previous CHNA, the population of Barnstable County is older than for the state overall. The median age in Barnstable County is 51.8 years compared to 39.4 years for the state overall (Table 1). Proportionally, residents age 65 years and older comprise 27.8% of the population in Barnstable County, compared to the state at 15.1%. In contrast, the proportion of residents under 18 years is lower in Barnstable County than in the state at 15.9% vs. 20.6%, respectively. Similarly, the proportion of residents between 18 and 24 years is lower in Barnstable County than in the state at 7.3% vs. 10.4%, respectively. Several towns on the lower and outer cape have a notably higher proportions of residents age 65 years and older, including Chatham (38.9%), Orleans (38.7%), and Wellfleet (38.0%), compared to the County average.

TABLE 1: AGE DISTRIBUTION OF POPULATION, 2016

<table>
<thead>
<tr>
<th>PERCENT OF TOTAL POPULATION</th>
<th>BARNSTABLE COUNTY</th>
<th>MASSACHUSETTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEDIAN AGE (YEARS)</td>
<td>UNDER 18 YEARS</td>
<td>18 TO 24 YEARS</td>
</tr>
<tr>
<td>Barnstable County</td>
<td>51.8</td>
<td>15.9%</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>39.4</td>
<td>20.6%</td>
</tr>
</tbody>
</table>

DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2012-2016

More detailed data on the age of residents reveal that Barnstable County also has a higher proportion of residents who are within the ‘oldest’ age categories compared to Massachusetts overall, including those age 75 to 84 (8.8% vs. 4.4%, respectively) and those age 85 years and older (3.9% vs. 2.3%, respectively) (Figure 1).

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4 U.S. Census Bureau, American Community Survey 5-Year Estimates, 2007-2011 and 2012-2016

Concern about meeting the needs of an aging population was a prominent theme in key informant interviews, stakeholder dialogues, and the community survey. ‘Aging health concerns’ was the most frequently identified health concern for the community by survey respondents (72.6%) (Figure 22) with ‘health care services focused on seniors’ and ‘support to older adults to maintain independent living’ ranking among the most frequently selected health and social service priorities by survey respondents (Figure 43 and Figure 18).
FIGURE 22: PERCENT OF SURVEY RESPONDENTS IDENTIFYING ISSUE AS A TOP HEALTH CONCERN FOR COMMUNITY

<table>
<thead>
<tr>
<th>Issue</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aging health concerns</td>
<td>72.6%</td>
</tr>
<tr>
<td>Drug use (e.g. alcohol, marijuana, prescription or illicit drugs,...</td>
<td>57.7%</td>
</tr>
<tr>
<td>Mental health issues (e.g. anxiety, depression, suicide)</td>
<td>46.4%</td>
</tr>
<tr>
<td>Access to primary care providers</td>
<td>45.2%</td>
</tr>
<tr>
<td>Chronic health conditions (e.g. obesity, diabetes)</td>
<td>43.8%</td>
</tr>
<tr>
<td>Cancer</td>
<td>36.4%</td>
</tr>
<tr>
<td>Cardiovascular or heart disease</td>
<td>29.4%</td>
</tr>
<tr>
<td>Disabilities (physical or cognitive)</td>
<td>18.7%</td>
</tr>
<tr>
<td>Dental and oral health</td>
<td>16.3%</td>
</tr>
<tr>
<td>Injuries (e.g. car accidents, falls, concussion)</td>
<td>12.9%</td>
</tr>
<tr>
<td>Tobacco use or cigarette smoking</td>
<td>10.7%</td>
</tr>
<tr>
<td>Respiratory issues (e.g. asthma, COPD, emphysema)</td>
<td>9.4%</td>
</tr>
<tr>
<td>Women’s health issues (e.g., reproductive health, etc.)</td>
<td>8.5%</td>
</tr>
<tr>
<td>Children’s health concerns</td>
<td>8.0%</td>
</tr>
<tr>
<td>Infectious diseases (e.g. pneumonia, flu, pertussis, Hep C)</td>
<td>7.1%</td>
</tr>
<tr>
<td>Sexually transmitted infections (e.g. HIV/AIDS, chlamydia, etc.)</td>
<td>3.1%</td>
</tr>
</tbody>
</table>

DATA SOURCE: CCHC Community Health Survey, 2018
NOTES: Percentages were based on sample size of n=1,727; respondents were asked to select up to five responses; percentages may not sum to 100%
FIGURE 43. PERCENT OF SURVEY RESPONDENTS IDENTIFYING HEALTH CARE SERVICE AS A TOP PRIORITY

DATA SOURCE: CCHC Community Health Survey, 2018
NOTE: Respondents were asked to select up to five responses; percentages may not sum to 100%; percentages are based upon sample size of n=1,503

FIGURE 18. PERCENT OF SURVEY RESPONDENTS IDENTIFYING SOCIAL SERVICE AS A TOP PRIORITY

DATA SOURCE: CCHC Community Health Survey, 2018
NOTE: Respondents were asked to select up to five responses; percentages may not sum to 100%; percentages are based upon sample size of n=1,466
Key informant interviewees also noted that the population in the region is older and aging, which affects and will continue to affect the health and social service infrastructure.

One phenomenon discussed by key informant interviewees and substantiated by existing data is the large and growing number of seniors who are caring for grandchildren. Between 2011 and 2016, the proportion of grandchildren residing with their grandparents, who are responsible for them, declined in Massachusetts from 29.8% to 28.0%, while it increased substantially in Barnstable County from 27.0% to 42.8% (Figure 2). This increase occurred in parallel timing with the inception of the opioid epidemic in 2012, which has disproportionally impacted Barnstable County. While grandparents’ homes can provide stability and support when parents are unable to care for their children, caring for grandchildren can be physically and emotionally demanding for seniors, create financial challenges, and strain social and family relationships. These all contribute to poorer mental and physical health among grandparents.6

FIGURE 2: PERCENT OF GRANDCHILDREN RESIDING WITH THEIR GRANDPARENTS WHO ARE RESPONSIBLE FOR THEM, 2011 VS. 2016

Related in part to the older age of the population, Barnstable County has a larger proportion of veterans and residents with disabilities than the state overall. Eleven percent (11.0%) of county residents identified as veterans compared to 6.4% for the state overall.7 The largest proportion of veterans residing in Barnstable County is of the Vietnam era (36.2%). Approximately 14% of residents in Barnstable have a disability, compared to 11.6% for the state.

Between about 5% to 7% of Barnstable County residents have a hearing, cognitive, ambulatory, or independent living disability (Figure 3).

7 U.S. Census Bureau, American Community Survey 5-Year Estimates, 2012-2016; NOTE: Rates are based upon the civilian population aged 18 years or older.
In terms of race and ethnicity, the population of Barnstable County is less diverse than the state overall. Ninety percent (90.6%) of Barnstable County residents identify as White, non-Hispanic compared to 73.7% in the state overall (Figure 4). Though comprising a small proportion of the overall population, approximately 20,000 Barnstable County residents identify as a racial or ethnic minority.

**Figure 3: Percent of Population with a Disability, By Type, 2016**

DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2012-2016

**Figure 4: Racial/Ethnic Distribution of Population, 2016**

DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2012-2016
Similarly, smaller proportions (7.8%) of Barnstable County residents speak a language other than English compared to the state overall (22.7%). While language minorities comprise a small portion of the county’s population, Spanish and Portuguese-speaking focus group participants shared those language barriers are a substantial barrier to economic advancement and the ability to access some health and social services. Focus group participants further reported that limited spaces in English as a Second Language (ESL) classes make it difficult for immigrants to learn English.

**Social Determinants of Health and Health Findings**

**Social Determinants of Health Framework**

The review of secondary data was undertaken with a broad definition of health that recognized numerous factors, beyond individual behaviors, that impact individual, community, and regional health. It is important to recognize that these multiple factors have an impact on health and that there is a dynamic relationship between real people and their lived environments. **Figure 5** provides a visual representation of this relationship.

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**FIGURE 5: SOCIAL DETERMINANTS OF HEALTH FRAMEWORK**

![Diagram showing Social Determinants of Health Framework](image)

DATA SOURCE: Health Resources in Action, 2018

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8 U.S. Census Bureau, American Community Survey 5-Year Estimates, 2012-2016; NOTE: Rates are based upon the population aged 5 years or older.
Given the impact that social factors have on health, community survey respondents were asked to identify the social issues most affecting the community. Housing or homelessness was identified as the top concern affecting the community by 65.5% of respondents, followed by access to health care services, identified by 53.7% of respondents (Figure 6). Other pressing issues identified by respondents included employment (44.5%), access to affordable and healthy food (40.3%), and transportation (39.0%).

**Figure 6: Percent of Survey Respondents Identifying Issue as a Top Social Concern for the Community**

<table>
<thead>
<tr>
<th>Issue</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing or homelessness</td>
<td>65.5%</td>
</tr>
<tr>
<td>Access to health care services</td>
<td>53.7%</td>
</tr>
<tr>
<td>Employment</td>
<td>44.5%</td>
</tr>
<tr>
<td>Access to affordable and healthy food</td>
<td>40.3%</td>
</tr>
<tr>
<td>Transportation</td>
<td>39.0%</td>
</tr>
<tr>
<td>Environment (e.g., green spaces, water/air quality, etc.)</td>
<td>37.8%</td>
</tr>
<tr>
<td>Poverty</td>
<td>33.2%</td>
</tr>
<tr>
<td>Community engagement (e.g., social connections, etc.)</td>
<td>28.8%</td>
</tr>
<tr>
<td>Violence or crime</td>
<td>21.0%</td>
</tr>
<tr>
<td>Education</td>
<td>18.4%</td>
</tr>
<tr>
<td>Discrimination (based on race, ethnicity, etc.)</td>
<td>14.2%</td>
</tr>
</tbody>
</table>

DATA SOURCE: CCHC Community Health Survey, 2018
NOTES: Percentages were based on sample size of n=1,469; respondents were asked to select up to five responses; percentages may not sum to 100%

Poverty as a social concern ranked more highly among survey respondents with household incomes less than $35,000 (42.6%) while the environment ranked more highly among survey respondents age 65 years or older (42.3%). The leading social concerns identified in the survey were echoed by key informant interviewees, focus group participants, and those participating in stakeholder dialogues and are discussed in subsequent sections by topic area.

**Housing and Homelessness**

“[Residents’] ability to earn wages doesn’t match the cost of housing.” (Key Informant Interviewee)

“Every day we hear about somebody who has to leave the Cape because the prices of housing are going up more and more.” (Key Informant Interviewee)

Quantitative data consistently show that the housing stock located in Barnstable County is unique within the state. Based on a 2017 real estate and housing report, 49% of all the seasonal units that exist in
Massachusetts are located in Barnstable County.\textsuperscript{9} Furthermore, the number of seasonal units is growing twice as fast as year-round units with implications for the availability of housing to year-round residents. The cost and availability of housing in Barnstable County was mentioned as an area of concern in almost every focus group and interview, as well as in stakeholder dialogues, and was seen as a fundamental challenge affecting overall well-being and health. Housing—both ownership and renting—was described by participants as very expensive and increasing in cost as demand for seasonal housing increases. The high cost of housing contributes to an overall high cost of living in the community, which creates substantial pressure for year-round families, especially those who are low-income. Demand for vacation rental properties likewise means that less housing is available for those who need it all year long with implications for employment and the workforce.

The cost of housing also affects the ability to retain healthcare professionals with year-round employment, including nurses, medical assistants, physician assistants, and nurse practitioners, which interviewees described as potentially having a long-term impact on the availability of health care. Regarding the housing that is available, some focus group participants further expressed dismay with the quality of the housing (e.g., mold).

As of 2018, an estimated 358 homeless individuals reside in the Cape Cod region, including 102 dependent children.\textsuperscript{10} The annual count has remained consistent over the past 3 years.

As noted above, 65.5\% of community survey respondents identified housing and homelessness as the top social concern in the community (Figure 6). When asked to rate their level of concern for specific housing and economic issues impacting their community, the issues of ‘affordable housing for older adults’, ‘housing costs and issues associated with renting’, and ‘housing costs and issues associated with home ownership’ were rated as a ‘high concern’ by the largest proportions of survey respondents (57.6\%, 54.6\%, and 54.4\%, respectively) (Figure 7). Among survey respondents living on the lower or outer cape, each of these issues was rated as a ‘high concern’ by an even larger proportion of respondents (69.0\%, 66.6\%, and 65.6\%, respectively).

\textsuperscript{9} Cape Cod Commission, Cape Cod Regional Housing Market Analysis Report, 2017.

\textsuperscript{10} Cape and Islands Regional Network on Homelessness, Annual Point in Time Count for Barnstable, Dukes, and Nantucket Counties, 2016, 2017, 2018.
Households in Barnstable County are predominately owner-occupied with less than one quarter (20.8%) being renter-occupied (Figure 8). However, some towns have larger proportions of renter-occupied households than the county, specifically Provincetown (33.2%), Barnstable (25.4%), and Bourne (24.6%).

Median monthly housing costs for residents of Barnstable County are similar to the state regardless of housing type (owners with a mortgage: $2,067 in MA vs. $1,826 in Barnstable County; owners without a mortgage: $730 in MA vs. $656 in Barnstable County; renters: $1,129 in MA vs. $1,137 in Barnstable County) (Figure 9). However, these estimates may not reflect shorter-term seasonal pressure on housing
costs as the U.S. Census American Community Survey captures data using a 2-month residency rule (i.e., those residing in a place for less than 2 months are not included in the survey).

**FIGURE 9: MEDIAN MONTHLY HOUSING COSTS BY OWNERSHIP STATUS, BY STATE AND COUNTY, 2016**

![Median Monthly Housing Costs by Ownership Status](image)

DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2012-2016

In Barnstable County, over one third (39.1%) of renters and nearly one third (32.8%) of owners with a mortgage are identified as ‘housing cost burdened’ (i.e., the household devotes 35% or more of household income to housing costs) *(Figure 10)*. These rates exceed those for the state overall, at 37.9% and 24.5% for renters and owners with a mortgage, respectively.

**FIGURE 10: PERCENT OF HOUSING UNITS THAT ARE COST BURDENED, BY OWNERSHIP STATUS, 2016**

![Percent of Housing Units Cost Burdened](image)

DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2012-2016

NOTE: Cost burdened is defined as housing costs that equal 35% or more of household income
In thinking about the future, focus group and stakeholder dialogue participants as well as interviewees stressed the importance of improving housing quality, availability, and affordability for year-round residents and seasonal workers. The market rate cost of renting, for example, is tremendous – it’s more than Boston.” Implications for the aging population looking to downsize were also brought up by key informant interviewees. Participants identified improvements to the wastewater system and updated zoning regulations for spaces that can support housing as possible solutions to improving housing. Participants stressed that updates to city/town zoning regulations could also be a feasible way to meet the increasing needs regarding affordable housing availability and the growing aging population.

Overall, participants emphasized the importance of improving housing with a thoughtful approach and smart design of neighborhoods. Along those same lines, participants supported a comprehensive community approach to homelessness, as many homeless individuals must also manage physical and/or mental health concerns. Participants also identified access to residential and public spaces as a community need. Some participants highlighted the fact that many elderly residents and individuals with disabilities find buildings to be inaccessible due to a lack of accommodations. These challenges can increase the risk for social isolation for some residents.

**Income and Poverty**

“Most people here have to have two jobs because the salaries are low, the income is low. There is no social life because when people leave work, they have to go to their second job.” (Focus Group Participant)

“I think that there is a perception that everyone that lives on the Cape is wealthy, which of course is not true. The people that live here year-round that are in the service industry, it’s common practice for so many folks to move out of their homes in the summer...to rent their homes because they can get so much money through the summer to take them through the winter.” (Key Informant Interviewee)

Although the prevailing view is that residents of Barnstable are primarily wealthy, key informant interviewees shared that this is a misperception as there are many residents in the county who are low-income and face financial instability. One third (33.2%) of community survey respondents identified poverty as one of their top social concerns (Figure 6).

The overall median household income for Barnstable County is slightly below the state ($65,382 vs. $70,954), and generally much lower in non-family and renter-occupied households than in owner-occupied and family households ($37,140, $36,077, $73,364, and $82,945, respectively, in Barnstable County) (Table 2). Median household incomes were noted as particularly low for non-family households in Wellfleet ($25,667), Orleans ($29,881), and Provincetown ($31,958) and for renter-occupied households in Orleans ($15,662), Wellfleet ($21,458), and Dennis ($23,425).11

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The individual poverty rate for Barnstable County is lower than for the state, at 8.2% vs. 11.4%, respectively (Figure 11). However, there is variability between towns, with Provincetown (13.2%) and Chatham (12.7%) having higher rates of poverty than the state. Furthermore, the poverty rate for individuals age 65 and older is lower for Barnstable County than for the state (5.4% vs. 9.0%, respectively), whereas Provincetown has a higher rate of poverty for individuals age 65 and older than the state (15.0%).

**FIGURE 11: PERCENT OF INDIVIDUALS WITH INCOME BELOW 100% OF FEDERAL POVERTY LINE, 2016**

**Employment**

“We’re primarily a service industry, meaning the hospitality, restaurants – things that support the tourism business, which is our prime economic driver. So, we have plenty of service-related jobs, but they’re not jobs that can support a family and can support the higher cost of housing here.” (Key Informant Interviewee)


13 U.S. Census Bureau, American Community Survey 5-Year Estimates, 2012-2016.
“It is a problem, not just for the lower income people, but the children of the middle-income people, the upper middle class even. If they go away to college, they often don’t come back because the good, entry-level professional jobs are not here.” (Key Informant Interviewee)

Community participants expressed substantial concern about the seasonal job cycle (i.e., high employment in the summer and low employment in the winter) and the impact it has on the overall economy and poverty. The prevalence of seasonal service-based jobs and the lack of year-round professional jobs leads to reduced opportunities for upward job mobility, which – in addition the high cost of housing – deters young professionals from living and working in Barnstable County.

Quantitative data confirm that unemployment rates in Barnstable County are highly variable, swinging from highs of 6% to 7% in the winter months to lows of 3% to 4% in the summer months (Figure 12). In 2018, the seasonal swing in unemployment rates was particularly pronounced for towns of the Outer Cape. Between January and August 2018, Provincetown swung from a low of 2.5% to a high of 22.1%, Truro swung from a low of 1.8% to a high of 14.4%, and Wellfleet swung from a low of 2.5% to a high of 12.4%.  

![Figure 12: Trend in Unemployment Rate, January 2017 through March 2019](image)

A seasonal economy forces many residents to earn much of their income for an entire year over the course of five months. This leads to many residents experiencing financial insecurity during the

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remainder of the year. Concerns were expressed that there is a lack of support for the working poor (individuals working more than one job, but still falling under the federal poverty line).

There was also a primary concern for young adults (persons aged approximately 18 to 26 years old). This cohort was described as being vulnerable to the effects of the seasonal economy and the overall lack of professional jobs in Barnstable County. Immigrants, who tend to be lower skilled, likewise face challenges in the economy. Focus group participants reported that the experience of economic instability during winter time brings with it stress, anxiety, and depression.

Generally, participants expressed desire for more overall funding and investments in economic development in the county. Additionally, participants would like to see improvements in the creation of incentives to hire older adults. Many of these residents want to continue working, but preferred part-time work, making them less competitive applicants.

**Education**

Barnstable County residents are well educated. Focus group participants and key informant interviewees reported that schools in the community are strong.

In Barnstable County, 4.6% of residents have less than a high school diploma, compared to 10% at the state level. However, 70.2% or residents have completed at least some amount of college or obtained a college degree, compared to 65.0% at the state level (Figure 13). The four-year high school graduation rate for Barnstable County is slightly lower than the rate for Massachusetts in 2017 (86.0% vs. 88.3%, respectively)\(^{15}\), which reflects the current population of youth residing year-round in the County.

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**Figure 13: Educational Attainment for Population Age 25 Years and Over, 2016**

![Bar chart showing educational attainment](chart)

DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2012-2016

NOTE: Rates shown are based upon the population aged 25 years or older

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\(^{15}\) Massachusetts Department of Elementary and Secondary Education, School/District Profiles, 2017.
Transportation

“If you have a car, you’re fine. But if you do not and you live in Provincetown and you need get over to the next town or two towns over, you might as well be going to Boston because it’s that difficult to navigate around the Cape without a car.” (Key Informant Interviewee)

Both public and private transportation access and availability were a top concern in the community. Interviewees acknowledged that the Regional Transit Authority (RTA) makes a significant effort to meet the needs of residents who require public transportation, but rural geography and insufficient infrastructure creates challenges. As one key informant interviewee said, “If you don’t own car it’s nearly impossible to live on Cape Cod.”

Existing data suggest that access to a vehicle is not universal in Barnstable County. A fairly small proportion of owner-occupied households (2.7%) do not have access to a vehicle. However, the rate is over five times higher (16.5%) among renter-occupied households (Figure 14).

FIGURE 14: PERCENT OF HOUSEHOLDS WITH NO VEHICLE AVAILABLE, 2016

![Graph showing vehicle availability by household type and location]

DATA SOURCE: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2012-2016

Reduced public transit service in the winter months was noted as particularly difficult for year-round residents. While Cape Cod Healthcare has endeavored to reduce the number of residents who need to travel to Boston for health care, there are still transportation challenges for residents who do not have a vehicle. Some participants mentioned that existing transportation services are not well marketed to those who need them.

Thirty-nine percent (39.0%) of community survey respondents identified transportation as a top social concern in the community (Figure 6). When asked to rate their level of concern for specific transportation issues impacting their community, the issues of ‘summer traffic congestion’ and ‘availability of transportation for older adults’ were rated as ‘high concern’ by the largest proportion of
survey respondents at 51.0% and 32.9%, respectively; 29.2% identified ‘availability of public transportation’ as an issue (Figure 15).

**FIGURE 15: PERCENT OF SURVEY RESPONDENTS REPORTING “HIGH CONCERN”, BY TRANSPORTATION ISSUE**

![Chart showing percent of survey respondents reporting high concern by transportation issue.](chart)

*DATA SOURCE: CCHC Community Health Survey, 2018
NOTES: Percentages were based on sample size of n=1,648*

When asked about what needs to change, participants envisioned improvements to the both the roadways and the public transportation system, so that the community can better handle the population influx during warmer months and residents without personal vehicles can better travel throughout the county.

**Food Access**

Geographic access to food is more limited in Barnstable County where 9.7% of low-income households are estimated to have limited access to healthy food compared to 4.1% low-income households in the state overall. 16

Forty percent (40.3%) of community survey respondents identified ‘access to affordable and healthy food’ as a top social concern in the community (Figure 6) and 29.6% of survey respondent rated the ‘cost of healthy food options’ as a ‘high concern’ for the community (Figure 7).

Overall, the proportion of the population estimated to be food insecure is slightly lower in Barnstable County than the state overall (8.2% vs. 9.6%, respectively). However, the proportion of children estimated to be food insecure is slightly higher in Barnstable County than the state overall (12.9% vs. 12.1%, respectively) (Figure 16). Furthermore, among the 8.2% who are food insecure in Barnstable County, an estimated 36% of these individuals have incomes above the income threshold of less than

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200% of the federal poverty line and are therefore not eligible for Supplemental Nutrition Assistance Program (SNAP) benefits.17

**FIGURE 16: PERCENT OF POPULATION THAT IS FOOD INSECURE, 2016**

![Figure 16: Percent of population that is food insecure, 2016](image)

DATA SOURCE: Feeding America, Map the Meal Gap, Food Insecurity Estimates at the County Level, 2016

The percent of households that received SNAP benefits in the prior year is lower in Barnstable County than the state (7.8% vs. 12.5%, respectively).

**Social Environments**

“I think the community has a wonderful ability to come together and solve problems.” (Key Informant Interviewee)

“Because we’re an older community and there is wealth on the Cape, it’s a very generous community. There are a lot of public and charitable resources on the Cape for folks who are struggling. A lot of partnerships exist, both private and public.” (Key Informant Interviewee)

Barnstable County was described by key informant interviewees as a “very collaborative region” and a caring, cooperative community with the ability to respond to issues with strong connectivity. Awareness and collaboration were considered major factors in addressing community issues. Some noted that the collaboration is unavoidable due to the location of Barnstable County relative to the rest of the state. Regarding community cohesion, one key informant? Interviewee explained, “There’s a resiliency here that you don’t necessarily see in other areas.” Focus group participants likewise praised their communities and reported that they enjoyed living on Cape Cod. As one focus group participant stated, “People are kind and polite.”

18 Federal Bureau of Investigation, Criminal Justice Information Services (CJIS), Uniform Crime Reporting (UCR), Offenses Known to Law Enforcement, by State and by City, 2017; NOTE: Data not available for county; property crime includes burglary, larceny-theft, and arson.
Despite these perceptions, 28.8% of community survey respondents identified ‘community engagement/social connections’ as a top social concern for the community (Figure 6) and 37.1% identified this as a concern for themselves individually and/or their families. Additionally, ‘social isolation or loneliness’ was rated as a ‘high concern’ for the community by 21.6% of survey respondents. Several focus group participants noted, for example, that there are few things for younger adults to do, especially in the winter months.

Participants in both key informant interviews and stakeholder dialogues discussed the impact of social isolation/loneliness on residents of the Cape. Social isolation/loneliness is particularly felt when the tourism season ends, as seasonal occupations end and there are fewer social events in the community. Participants acknowledged that all residents can be affected by social isolation and loneliness, most expressed concern for older adults and young adults. For older adults, the risk for isolation was made worse for residents who live alone and those who do not have a regular/local caregiver. The perceived impact for both groups included declines in mental health (e.g., increased anxiety, depression), and substance use/misuse. Young adults were viewed as having the highest risk for substance use disorder because the shift in the job market could lead to boredom, depression, and financial insecurity.

Environment and Safety

About 38% (37.8%) of community survey respondents identified environmental issues as a top concern for the community (Figure 6). When asked to rate their level of concern for specific issues, the issues of ‘pedestrian or bicycle safety’, ‘air or water quality’ were rated as a ‘high concern’ by the largest proportion of survey respondents at 27.9% and 26.9%, respectively (Figure 17).

Environment-related health issues were identified by a few focus group participants who shared concerns about public water and bacteria in produce. A handful of key informant interviewees
expressed concern with rising sea levels, problems with water filtration, wastewater leeching into the groundwater supply, as well as tick and mosquito borne illness.

Crime and Violence
The majority of towns in Barnstable County have property crime rates that are on par or below the state rate of 1,437.0 crimes per 100,000 residents. However, the property crime rate is markedly higher in Provincetown (4,243.2 per 100,000). The majority of towns in Barnstable County also have violent crime rates that are on par or below the state rate of 358.0 crimes per 100,000. However, the violent crime rate is higher in Provincetown (768.5 per 100,000), Truro (693.8 per 100,000), and Yarmouth (680.4 per 100,000).

Twenty-one percent (21.0%) of community survey respondents identified violence and crime as a community social concern (Figure 6). The specific issues of ‘property crime’, ‘interpersonal violence (e.g., domestic violence, sexual violence, bullying)’, and ‘community violence (e.g., gangs, guns, street crime)’ were each rated as a ‘high concern’ for the community by about 15% of survey respondents. The issue of domestic violence came up consistently in focus groups and stakeholder dialogues. Focus group participants in particular noted that domestic violence is a concern for the Hispanic community and that access to services is limited by availability and fear in seeking help.

Community Health Issues

Overall Health and Mortality
Survey respondents generally rated their own/family’s health higher than the health of the community (Figure 19). Overall, 18.1% of all survey respondents rated community health as ‘Fair’ or ‘Poor’, while 9.5% of all survey respondents rated their own/family’s health as ‘Fair’ or ‘Poor.’ Survey respondents with low household incomes (<$35,000) were more likely to self-report their own/family’s health as ‘Fair’ or ‘Poor’ (22.7%) compared to the overall survey sample, though their rating of the community’s health was similar to the overall population (data not shown).

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18 Federal Bureau of Investigation, Criminal Justice Information Services (CJIS), Uniform Crime Reporting (UCR), Offenses Known to Law Enforcement, by State and by City, 2017; NOTE: Data not available for county; property crime includes burglary, larceny-theft, and arson.
19 Federal Bureau of Investigation, Criminal Justice Information Services (CJIS), Uniform Crime Reporting (UCR), Offenses Known to Law Enforcement, by State and by City, 2017; NOTE: Data not available for county; violent crime includes murder and non-negligent manslaughter, forcible rape, robbery, and aggravated assault.
Overall, mortality rates for Barnstable County are on par with that of the state (Figure 20). Premature mortality rate (defined as deaths that occur before the age of 75) is slightly higher for Barnstable County than in the state, at 703.8 per 100,000 vs. 684.5 per 100,000 respectively. Several towns had premature mortality rates that were higher than the county, specifically Yarmouth (401.5 per 100,000) and Bourne (401.2 per 100,000).

**Figure 20: Overall and Premature Mortality Rates per 100,000 Population, 2015**

NOTE: Rates shown are age adjusted; premature mortality is defined as deaths that occur before age 75
Existing data show that cancer and heart disease are the top two leading causes of death in Barnstable County and in Massachusetts (Figure 21). Injuries and poisonings ranks third for Barnstable County residents (compared to ranking fourth for the state overall) due, in part, to the higher rate of opioid-related deaths in Barnstable County. Alzheimer’s disease ranks fourth for Barnstable County residents (compared to ranking sixth for the state overall), likely due to the older population in the County.

**Figure 21: Leading Causes of Mortality, Age-Adjusted Rates per 100,000 Population, 2015**

<table>
<thead>
<tr>
<th>RANK</th>
<th>Massachusetts</th>
<th>Barnstable County</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cancer</td>
<td>Cancer</td>
</tr>
<tr>
<td></td>
<td>152.8</td>
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</tr>
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<td>Injuries and Poisonings</td>
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<td></td>
<td>17.1</td>
<td>17.7</td>
</tr>
</tbody>
</table>

Data Source: Massachusetts Department of Public Health, Registry of Vital Records and Statistics, 2015

Among community survey respondents, the most frequently selected health issues impacting the community were ‘aging health concerns’ (72.6%), ‘drug use’ (57.7%), ‘mental health issues’ (46.4%), ‘access to primary care’ (45.2%), and ‘chronic health conditions’ (43.8%) (Figure 22).
Survey respondents age 65 and older were more likely to select ‘aging health concerns’ as a top health concern for the community (81.7%) compared to the overall survey sample. Respondents that live on the lower or outer cape were more likely to select ‘access to primary care providers’ as a top health concern (57.6%) compared to the overall survey sample. Additionally, respondents of minority race/ethnicity and respondents with household incomes <$35,000 were more likely to select ‘dental and oral health’ as a top health concern (32.9% and 30.6%, respectively) compared to the overall survey sample.

Expanding health care services for seniors was consistently suggested by key informant interviewees and stakeholder dialogue participants. Participants saw a need for more geriatric providers, as well as enhanced capacity to address issues of dementia and Alzheimer’s, including caregivers, caregiver support, and education. Key informant interviewees suggested expanded use of telemedicine to reach home-bound seniors. Several participants mentioned a need for more education and services related to falls prevention. In addition to general comments about increasing care quality and access for seniors, some participants felt that all Barnstable Councils on Aging should expand their current obligations in the community. Specifically, participants suggested that councils adopt a more active role in chronic disease management for seniors and intergenerational programming.
**Chronic Disease**

Chronic health conditions were consistently identified as a community concern by community survey respondents, focus group participants, stakeholder dialogue participants, and key informant interviewees. Of community survey respondents, 43.8% identified chronic disease as a top health concern for the community (Figure 22). When survey respondents were asked to rate their level of concern for specific physical health conditions impacting their community, the issues of ‘cancer’ (28.0%), ‘heart disease or heart attack’ (22.5%), and ‘overweight/obesity’ (20.5%) were rated as a ‘high concern’ by the largest proportion of survey respondents (Figure 23).

**FIGURE 23: PERCENT OF SURVEY RESPONDENTS REPORTING “HIGH CONCERN” FOR COMMUNITY, BY CONDITION**

DATA SOURCE: CCHC Community Health Survey, 2018
NOTES: Percentages were based on sample size of n=1,808

**Cardiovascular Disease and Related Conditions**

More than half of the Medicare population in Barnstable County currently has a diagnosis of hypertension or hyperlipidemia (61.9% and 55.5%, respectively), which is slightly higher than for the state (59.5% and 48.4%, respectively. About one quarter (25.8%) of the Medicare population in Barnstable County has a diagnosis of Ischemic Heart Disease, on par with the state (26.2%) (Table 3).
TABLE 3: PERCENT OF MEDICARE POPULATION DIAGNOSED WITH CARDIOVASCULAR-RELATED CONDITIONS, 2015

<table>
<thead>
<tr>
<th>Condition</th>
<th>Massachusetts</th>
<th>Barnstable County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension</td>
<td>59.5%</td>
<td>61.9%</td>
</tr>
<tr>
<td>Hyperlipidemia</td>
<td>48.4%</td>
<td>55.5%</td>
</tr>
<tr>
<td>Ischemic heart disease</td>
<td>26.2%</td>
<td>25.8%</td>
</tr>
<tr>
<td>Chronic kidney disease</td>
<td>20.4%</td>
<td>18.1%</td>
</tr>
<tr>
<td>Heart failure</td>
<td>14.3%</td>
<td>12.2%</td>
</tr>
<tr>
<td>Stroke</td>
<td>4.2%</td>
<td>4.4%</td>
</tr>
</tbody>
</table>

DATA SOURCE: Center for Disease Control and Prevention, 2015
NOTE: Rates show are based on Medicare beneficiaries age 65 and older

The rate of cardiovascular disease emergency room discharges among Barnstable County residents is notably higher than for the state (729.2 per 100,000 vs. 379.0 per 100,000, respectively) (Figure 24). Cardiovascular disease inpatient discharge rates are similar between Barnstable County and the state (1,018.6 per 100,000 vs. 934.65 per 100,000, respectively). However, the rate is notably higher in some towns. Bourne, Falmouth, Dennis, Yarmouth, Barnstable, and Sandwich all have cardiovascular disease inpatient discharge rates that exceed 1,500.0 per 100,000.

FIGURE 24: CARDIOVASCULAR DISEASE EMERGENCY AND INPATIENT DISCHARGE RATES PER 100,000 POPULATION

DATA SOURCE: Inpatient Discharges - Fiscal Year 2017 Massachusetts Health Data Consortium; ED Discharges – Fiscal Year 2015 Massachusetts Health Data Consortium; based on Cape Cod hospital discharge data and using state weights for age adjustment.
Heart disease mortality rates are similar in Barnstable County and the state (149.0 per 100,000 vs. 138.7 per 100,000).  

**Diabetes**

It is estimated that 8% of Barnstable County adults aged 20 and older have been diagnosed with diabetes compared to 9% in MA overall. More recent data based on the patient populations served by three Federally Qualified Health Centers located within Barnstable County suggest that between 6 to 10% of adults’ age 18-75 have a current diabetes diagnosis.  

The rate of diabetes-related emergency department visits among Barnstable County residents is higher than for the state (219.8 per 100,000 vs. 159.9 per 100,000) ([Figure 25](#)). The overall diabetes inpatient discharge rate is slightly lower in Barnstable County than the state (127.0 per 100,000 vs. 143.0 per 100,000). However, several towns have higher rates than the county, specifically Bourne (206.8 per 100,000), Dennis (194.5 per 100,000), Mashpee (194.4 per 100,000), and Orleans (187.5 per 100,000).  

**Cancer**

Over one third (36.4%) of community survey respondents identified cancer as a top health concern in the community ([Figure 22](#)), and over one quarter (28.0%) of community survey respondents rated cancer as a ‘high concern’ for the community ([Figure 23](#)). The overall cancer incidence rate is slightly higher among Barnstable County residents than for the state, at 539.0 per 100,000 vs. 508.5 per 100,000.

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21 CDC Diabetes Interactive Atlas, based on 3-years of aggregated BRFSS data, 2014.  
22 Health Resources & Services Administration (HRSA), Health Center Program Grantee Data, Uniform Data System (UDS), 2017; NOTE: Rates shown are based upon adult patients age 18 to 75.
100,000, respectively. The incidence rates for several specific cancer types are also slightly higher for Barnstable County residents including breast cancer, prostate cancer, and melanoma, compared to the state (breast cancer: 202.2 per 100,000 vs. 178.9 per 100,000; prostate cancer: 118.6 per 100,000 vs. 107.6 per 100,000; melanoma: 49.7 per 100,000 vs. 32.8 per 100,000 respectively) (Figure 26).

**FIGURE 26: CANCER INCIDENCE RATE PER 100,000 POPULATION BY TYPE, 2011-2015**

The overall cancer mortality rate is similar in Barnstable County and the state (163.2 per 100,000 vs. 152.8 per 100,000, respectively). However, the mortality rates for breast and prostate cancers are over twice that for the state (breast cancer: 23.5 per 100,000 vs. 9.8 per 100,000; prostate cancer: 21.0 per 100,000 vs. 7.0 per 100,000, respectively) (Figure 27). Key informant interviewees identified both skin and breast cancer as important and emerging concerns for the community.

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Respiratory Health

Respiratory conditions, such as asthma, Chronic Obstructive Pulmonary Disorder (COPD), and emphysema were not identified as a leading health issue in the community by community survey respondents (Figure 22). However, these conditions impact individual well-being and may be related or exacerbated by environmental factors, such as exposure to tobacco smoke or unhealthy homes (e.g., mold, pests, etc.).

The asthma inpatient discharge rate is lower in Barnstable County than the state (34.3 per 100,000 vs. 62.1 per 100,000) respectively data for the patient populations served by three FQHCs located within Barnstable County suggest that between 5% and 10% of patients have a current asthma diagnosis.24 Within the public school population, 9.8% of students in Barnstable County have a current asthma diagnosis which is the same as the state (9.8%). However, several school districts have higher proportions of students with asthma than the county overall, specifically Falmouth (15.8%) and Mashpee (14.9%).25

The overall rate of COPD inpatient discharges is much lower for Barnstable County than for the state (119.0 per 100,000 vs. 246.8 per 100,000).

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24 Health Resources & Services Administration (HRSA), Health Center Program Grantee Data, Uniform Data System (UDS), 2017
25 Massachusetts Department of Public Health, Bureau of Environmental Health, 2016-2017; Rates are based on public school students in K through 8th grade.
Alzheimer’s Disease

“We’re an older population to start with and as more and more of our seniors are not able to care for themselves, it is creating some stresses on our nursing homes, our assisted living facilities.” (Key Informant Interviewee)

The population of Barnstable County is older than the state overall and has a higher proportion of residents over age 75. Key informant interviewees and stakeholder dialogue participants shared concerns about the growing prevalence of Alzheimer’s disease and dementia in the community, and the ability of the health and social systems to address them. They reported that the community does not have a sufficient number of physicians and other health professionals skilled in geriatric issues. Noting that many seniors prefer to “age in place,” respondents also shared that one of the biggest current challenges is finding enough in-home workers to effectively care for Alzheimer’s patients and residents over age 70. The demand for these types of services is expected to increase in the coming years, yet Barnstable County’s younger population of potential caregivers is declining.

The 2018 Massachusetts Healthy Aging Community Data profile cites Center for Medicare data indicating that the rate of Alzheimer’s disease or related dementias among those age 65 or older ranges from a low of 6.0% in Wellfleet to a high of 11.7% in Bourne, with all of Barnstable County having a lower rate compared to the state (13.6%).26 Alzheimer’s disease inpatient discharge rates are the same in Barnstable County and the state, with both rates at 20.9 per 100,000.27 Alzheimer’s disease mortality rates are higher in Barnstable County compared to the state (29.2 per 100,000 vs. 20.2 per 100,000, respectively).28

Behavioral Health

“It’s addiction and it’s mental health. And they are often connected, and they often end up in our correctional facility or our offices are dealing with them on the street as part of the homeless population or the drug trade.” (Key Informant Interviewee)

“The lack of resources is a problem. The lack of ability to find care and find treatment causes constant, perpetual calls for service from the police department.” (Key Informant Interviewee)

Mental health and substance use were seen as both deeply intertwined and pervasive concerns in Barnstable County. Behavioral health was identified as a top health concern across key informant interviewees, focus group participants, and stakeholder dialogue participants. Mental health and substance use were also identified as two of the top three health concerns (by 46.4% and 57.7% of community survey respondents, respectively) (Figure 22). Several focus group participants named the opioid crisis specifically, but many named depression, anxiety, and substance use disorder as overarching issues.


27 Fiscal Year 2017 Massachusetts Health Data Consortium; Based on Cape Cod hospital discharge data and using state weights for age adjustment.

28 Massachusetts Department of Public Health, Registry of Vital Records and Statistics, 2015; Rates shown are age adjusted.
While participants agreed that the risk for behavioral health problems transcends age groups, young adults (approximately age 18 to 26 years) were perceived to be at high risk.

Mental Health

Forty-six percent (46.4%) of community survey respondents identified mental health as a community concern, ranking it third among all concerns (Figure 22). Among key informant interviewees, focus group participants, and stakeholder dialogue participants, mental health concerns were also named a top issue. They mentioned anxiety and depression as well as trauma, including both adverse childhood experiences and post-traumatic stress disorder. A number of underlying causes of mental health issues were discussed, including economic instability, lack of things for young adults to do, and isolation in the off-season.

The issues of ‘social isolation or loneliness’, ‘depression or bipolar disorder’, and ‘the general stress of day-to-day life’ were rated as mental health issues of ‘high concern’ for the community by the largest proportions of survey respondents (21.6%, 19.7%, and 19.2%, respectively) (Figure 28). Survey respondents of minority race/ethnicity were more likely to rate ‘depression or bipolar disorder’ (31.3%) and ‘suicidal behaviors’ (23.8%) as a ‘high concern’ for the community compared to the overall survey sample.

FIGURE 28: PERCENT OF SURVEY RESPONDENTS REPORTING “HIGH CONCERN” FOR THE COMMUNITY, BY MENTAL HEALTH CONDITION

![Mental Health Issues](image)

DATA SOURCE: CCHC Community Health Survey, 2018
NOTES: Percentages were based on sample size of n=1,808

Existing data related to the prevalence of mental health conditions or experiences of poor mental health are limited. Self-reported data suggest similar proportions of adults in Barnstable County and the state overall report 14 or more days of poor mental health in the prior month (11% vs. 12%).\textsuperscript{29}

\textsuperscript{29} Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, as reported by County Health Rankings, 2016.
Data on diagnoses of depression indicate rates are slightly higher among residents in Barnstable County than for the state overall, at 6.2% compared to 5.5%, respectively. Within Barnstable County, depression diagnoses rates were higher among women compared to men (7.7% vs 4.7%) and among residents age 18 to 34 years compared to residents aged 12 to 17 (6.1% vs. 3.5%) (Figure 29).

**Figure 29: Depression Diagnosis Rates, 2016**

The overall inpatient discharge rate for mental health conditions is higher in Barnstable County than the state (507.4 per 100,000 vs. 424.3 per 100,000, respectively). Several towns had higher rates compared to the county, specifically Provincetown (755.8 per 100,000), Chatham (751.3 per 100,000), Dennis (673.5 per 100,000), Yarmouth (641.3 per 100,000), and Barnstable (637.8 per 100,000).

The overall suicide mortality rate in Barnstable County is notably higher than the state (16.7 per 100,000 vs. 9.0 per 100,000). The rate in Bourne (20.6 per 100,000) and Barnstable (20.4 per 100,000) are higher than the county rate. However, in most towns, deaths due to suicide are low and rates are not reportable.

Throughout the interviews, key informant interviewees identified younger residents as vulnerable to mental and behavioral health issues due to the lack of economic mobility and lack of targeted community programming. Interviewees saw a need for enhanced services for this group. Additionally, while Barnstable County was seen as “veteran-friendly,” a handful of interviewees recognized that there are still barriers and health concerns related to this population.

Access to mental health services was described as a substantial barrier in Barnstable County. Twenty-nine (28.9 %) percent of community survey respondents rated counseling or mental health care for

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30 Fiscal Year 2017 Massachusetts Health Data Consortium; Based on Cape Cod hospital discharge data and using state weights for age adjustment.

adults as ‘hard’ or ‘very hard’ to access and 25.4% of respondents rated mental health services for children/adolescents similarly. Participants in interviews and stakeholder dialogues stated that there is a shortage of mental and behavioral health services in the community, particularly psychiatrists, nurse practitioner psychiatrists, and in-patient services for children and adolescents. Interviewees also noted a lack of “wraparound” services when patients leave mental/behavioral health treatment.

When asked what was needed to address mental health issues in Barnstable County, key informant interviewees, focus group participants, and stakeholder dialogue participants stated that the region needs more services to address mental health issues. One key informant interviewee suggested that one way to address this would be for primary care clinics to provide care for less complicated psychiatric conditions, so that psychiatrists could focus on people with more complicated conditions. Participants also reported that more prevention of mental health problems was needed as well as efforts that reduce the stigma surrounding behavioral health.

Substance Use

“The largest concern facing the Cape...is the opioid-fentanyl drug problem. It’s literally impacted every community – rural, urban, and suburban. There are no demographic lines, there are no town lines, there’s no socioeconomic lines. It has affected the wealthy, the educated, the poor and we have a higher number of, not only overdoses, but people in treatment. It has been the issue for at least five years affecting virtually every part of the Cape.” (Key Informant Interviewee)

“Addiction is another problem in our community. Access to services related to addiction is difficult.” (Focus Group Participant)

Substance use was noted as a primary concern for Barnstable County. The opioid epidemic was mentioned most frequently, and participants stated that it has impacted all age groups and communities, as well as the criminal justice system, employment, and homelessness. Tobacco use and alcohol use disorder were mentioned as concerns as well. Participants also expressed concern about the growth in the use of marijuana since legalization and the popularity of vaping among young people.

Substance use was identified as the second top health concern among community survey respondents, with over half (57.7%) of respondents identifying this as a top health concern (Figure 22). When survey respondents were asked to rate their level of concern for specific substance use issues impacting their community, the issues of ‘opioid misuse, ‘alcohol or binge drinking’, and ‘other illicit drugs’ were rated as a ‘high concern’ by the largest proportion of survey respondents (45.6%, 36.7%, and 34.4% respectively) (Figure 31). Survey respondents of minority race/ethnicity were more likely to rate ‘other illicit drugs’ (47.5%) and ‘vaping or e-cigarettes’ as a ‘high concern’ for the community (33.8%) compared to the overall survey sample.
FIGURE 31: PERCENT OF SURVEY RESPONDENTS REPORTING “HIGH CONCERN” FOR THE COMMUNITY, BY SUBSTANCE ABUSE ISSUE

DATA SOURCE: CCHC Community Health Survey, 2018
NOTES: Percentages were based on sample size of n=1,808

FIGURE 32. PERCENT OF 12TH GRADERS REPORTING SUBSTANCE USE IN PRIOR 30 DAYS, 2016-2017

DATA SOURCE: Youth Health Survey, MA Department of Health (2017), Monomoy Regional High School (2016), and Nauset Regional High School (2017). NOTE: Rates shown reflect students in grade 12 only
Existing data on the prevalence of substances use is sparse. Available self-reported data indicate similar proportions of adults who binge drink (approximately 20%) or smoke cigarettes (approximately 14%) in Barnstable County and the state overall.\textsuperscript{32}

Vaping in particular is emerging as a serious issue for adolescents nationally, in Massachusetts, and in Barnstable County. Self-reported vaping among high school seniors, for example, has increased by ten percentage points (from 27.8% to 37.3%) nationwide between 2017 and 2018.\textsuperscript{33} In Massachusetts in 2015, almost half of high school students reported that they have ever used an electronic vapor product.\textsuperscript{34} (Figure 32)

Substance abuse-related inpatient discharge rates are lower in Barnstable County than the state (158.3 per 100,000 vs. 264.5 per 100,000). One town, Falmouth, has a rate that exceeds the state rate (273.8 per 100,000).\textsuperscript{35}

Data from the Massachusetts Bureau of Substance Abuse Services (BSAS) demonstrates that the overall substance abuse treatment admission rate is higher in Barnstable County than the state (1,979.9 per 100,000 vs. 1,564.5 per 100,000).\textsuperscript{36} Over half (52.8%) of all BSAS admissions in Barnstable County were for alcohol, which is a higher proportion than the state, at 34.5% (Figure 33).

\textbf{FIGURE 33: PERCENT OF BSAS TREATMENT ADMISSIONS LISTING ALCOHOL AND HEROIN AS PRIMARY SUBSTANCE, FISCAL YEAR 2018}

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{figure33.png}
\caption{Percent of BSAS treatment admissions listing alcohol and heroin as primary substance, fiscal year 2018.}
\end{figure}

\textbf{DATA SOURCE: Massachusetts Department of Public Health, Bureau of Substance Abuse Services, Office of Statistics and Evaluation, Fiscal Year 2018}

\textsuperscript{32} Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, as reported by County Health Rankings, 2016.


\textsuperscript{35} Fiscal Year 2017 Massachusetts Health Data Consortium; Based on Cape Cod hospital discharge data and using state weights for age.

The overall opioid mortality rate in 2015 was higher in Barnstable County than the state (41.0 per 100,000 vs. 24.6 per 100,000, respectively). The rates in Mashpee (80.8 per 100,000), Falmouth (65.0 per 100,000), and Yarmouth (58.9 per 100,000) were also higher, although in most towns, deaths due to opioids are low and rates are not reportable from the MA DPH.

More recent preliminary data on opioid-related overdose deaths for 2016 and 2017 suggest slight downward trends both statewide (from 31.9 to 30.6 per 100,000) and in Barnstable County (from 37.7 to 31.2 per 100,000) (Figure 34). However, these data should be considered only preliminary rates that are likely to change as final mortality data are not yet available from MA DPH after 2015.

As described earlier, key informant interviewees discussed, and existing data show the impact of the opioid crisis on family structures, specifically the higher number of grandparents raising grandchildren. Responsibility for grandchildren can be a source of emotional and financial stress for grandparents, having negative consequences for their physical and mental health. This has substantial implications for the health and social services supporting seniors in the community.

When asked about substance use treatment facilities in the community, interviewees and stakeholder dialogue participants reported that current facilities were insufficient and at capacity and as a result, residents are transported out of the county to receive treatment. Over 20% of community survey respondents rated alcohol or drug treatment services for adults (22.3%) and youth (21.9%) as ‘hard’ or ‘very hard’ to access. Interviewees and stakeholder dialogue participants cited a need for more treatment beds, sober houses, and community-based services.

37 Massachusetts Department of Public Health, Registry of Vital Records and Statistics, 2015. NOTE: Rates are age adjusted.
Overall, participants agreed that there is a need for more availability of regionalized care so that residents can live and work in their own community while receiving treatment for drug and alcohol use disorders. Participants also saw a need for better care coordination including through hospital social workers and patient navigators, follow-up visits to homes after overdose, and re-entry supports for those being released from prison. Finally, participants suggested more education, both relative to substance use prevention (and beginning with children) and relative to addressing the stigma associated with behavioral health and seeking care.

**Maternal and Child Health**

Maternal and child health were not prominent topics identified by key informant interviewees, focus group participants, stakeholder dialogue participants, or community survey respondents. However, existing data highlight some potentially important issues related to the current health of mothers and children in Barnstable County. A total of 1,601 births occurred in 2016 to residents of Barnstable County. Over half of these were to women in the towns of Barnstable (424 births), Falmouth (241 births), and Yarmouth (170 births). Teen birth rates (births to mothers aged 15 to 19 years) were slightly lower in Barnstable County than the state (7.4 per 1,000 vs. 8.5 per 1,000) in 2016.

Over one quarter (28.1%) of women who gave birth in Barnstable County were identified as having inadequate prenatal care, a proportion that is higher than the state (17.7%) (Figure 35).

**FIGURE 35: PERCENT OF BIRTHS WITH INADEQUATE PRENATAL CARE, 2016**

![Chart showing percent of births with inadequate prenatal care](image)


NOTE: Inadequate prenatal care defined as care that began month 5 or later and/or less than 50% of expected prenatal care received.

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The proportion of births that are pre-term (<37 weeks gestation) is similar for Barnstable County and the state overall (9.1% vs. 8.7%, respectively) (Figure 36).

**FIGURE 36: PERCENT OF BIRTHS THAT ARE PRE-TERM OR LOW BIRTH WEIGHT, 2016**

The proportion of births that are low birth weight is also similar for Barnstable County and the state (7.0% vs. 7.5%, respectively). However, the infant mortality rate for Barnstable County is twice as high as the state rate (8.8 per 1,000 vs. 4.3 per 1,000, respectively).40

**Infectious Disease**

**Sexually Transmitted Infections**

Sexually transmitted infections (STI) and infectious disease in general, were not identified as prominent topics by community survey respondents (Figure 22). However, several key informant interviewees and stakeholder dialogue participants identified STIs as problematic in Barnstable County, particularly the stigma associated with HIV/AIDS. As one stakeholder dialogue participant said, “People will avoid care to avoid that stigma.”

Barnstable County has the third highest HIV prevalence rate of all counties in Massachusetts (385 per 100,000) behind Suffolk County (846 per 100,000) and Hamden County (481 per 100,000) and is slightly above the state rate (338 per 100,000).41 The annual incidence rate for HIV in Barnstable County was on par with the state (8.2 per 100,000 vs. 9.7 per 100,000) between the years of 2014 and 2016.42

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41 National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention as reported by County Health Rankings, 2015; NOTE: Rates are based on population age 13 years and older.
42 Massachusetts Department of Public Health, Bureau of Infectious Disease and Laboratory Sciences. 2018 Massachusetts HIV/AIDS Epidemiologic Profile: Regional HIV/AIDS Epidemiologic Profile of Barnstable County.
The rate of reported chlamydia cases is lower in Barnstable County than the state (271.9 per 100,000 vs. 446.0 per 100,000, respectively) (Figure 37). Likewise, the overall rate of reported gonorrhea cases is lower in Barnstable County than the state (50.5 per 100,000 vs. 111.6 per 100,000, respectively). The rate of reported syphilis cases in Barnstable County is on par with the state (14.8 per 100,000 vs. 16.7 per 100,000). While most towns’ rates are similarly low, Provincetown has markedly high rates of chlamydia (1,156.1 per 100,000), gonorrhea (1,054.1 per 100,000), and syphilis (544.1 per 100,000).

FIGURE 37: CHLAMYDIA, GONORRHEA AND SYPHILIS CASE RATES PER 100,000 POPULATION, 2017

DATA SOURCE: Massachusetts Department of Public Health, Bureau of Infectious Disease and Laboratory Sciences, Office of Integrated Surveillance and Informatics Services, 2017. NOTE: Rates shown are based on confirmed and probable cases

The Hepatitis C rate in Barnstable County is on par with the state (113.4 per 100,000 vs. 116.4 per 100,000, respectively). However, the rate is higher in several towns, including Falmouth (174.4 per 100,000), Bourne (141.7 per 100,000), and Yarmouth (130.3 per 100,000). The number and rate of new Hepatitis C cases among persons 15-29 years of age increased dramatically between 2009 and 2015 in both the state (from 140.2 to 190.2 per 100,000) and in Barnstable County (from 163.3 to 461.3 per 100,000), followed by a sharp decline between 2016 and 2017 in both the state (172.7 to 153.2 per 100,000) and in Barnstable County (441.3 to 212.0 per 100,000) (Figure 38). Rates in Barnstable County for this age group have been higher than the state since 2009. Although the reasons for the recent decline are unclear, the state report suggests the increase from 2009 to 2015 was most likely linked to the injectable opioid use epidemic.

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43 Massachusetts Department of Public Health, Bureau of Infectious Disease and Laboratory Sciences, Office of Integrated Surveillance and Informatics Services, 2017. NOTE: Rates are based on confirmed and probable cases.
FIGURE 38: HEPATITIS C CASE RATE PER 100,000 POPULATION, AGE 15 TO 29 YEARS, 2007 TO 2017

DATA SOURCE: Bureau of Infectious Disease and Laboratory Sciences, Office of Integrated Surveillance & Informatics Services, Disease Status Report
NOTE: ‘Cape and Islands’ includes data for Barnstable, Dukes, and Nantucket Counties; data are current as of 11/15/2016 for the 2007-2015 data and as of 2/28/19 for the 2016 and 2017 data

**Tick Borne Diseases**

The prevalence of tick-related diseases was mentioned as a major health concern in Barnstable County by several key informant interviewees. Incidence rates for tick borne diseases are higher for Barnstable County than the state (Lyme disease: 122.0 per 100,000 vs. 86.0 per 100,000; human granulocytic anaplasmosis: 25.5 per 100,000 vs. 11.7 per 100,000; Babesiosis: 48.6 per 100,000 vs. 7.8 per 100,000, respectively) (Figure 39). Of tick-borne illnesses, Lyme disease is most common, followed by Babesiosis, and human granulocytic anaplasmosis.

FIGURE 39: TICK BORNE DISEASE INCIDENCE RATES PER 100,000 POPULATION, 2014-2016

DATA SOURCE: Massachusetts Department of Public Health, 2014 (Lyme), 2015 (HGA), and 2016 (Babesiosis).
NOTE: Rates shown are based on confirmed and probably cases
Health Care Access

Insurance Status
Massachusetts and Barnstable County experience lower uninsured rates than the nation overall. For the adult population, age 18 to 64 years of age, 3.5% are uninsured in Barnstable County, compared to 3.2% in the state and 16.4% in the U.S. (Figure 40). Among residents under 18 years of age, the uninsured rate is slightly higher in Barnstable County than the state (3.5% vs. 3.2%, respectively). Several towns have higher uninsured rates than the county, including Dennis (7.0%), Chatham (3.9%), and Mashpee (3.5%). However, many towns have virtually fully insured populations of children.

Figure 40: Percent of Population that is Uninsured, by Age Group 2016

The previously-described seasonal variation in employment impacts many Barnstable County residents’ insurance coverage. As stakeholder dialogue participants shared, for seasonal employees, access to insurance can be cyclical with employees having insurance in summer months but not in the off-season. Thus, access to health care services may be limited and inconsistent for many families.

Health Care Resources

“For the most part, I feel like the access to health care is one of the strengths of this area. We hear way more positives about health care from people here than negative.” (Key Informant Interviewee)

“I think our health care system here in the county is very good. I think the care that we get from our providers excellent. Whether it be a Cape Cod Healthcare person, or an Outer Cape Healthcare Services person, or even in some cases with some of these offices, folks from Beth Israel. But I think all in all, I like to think of us as a Cape Cod Healthcare region and I think that the services that they’ve been providing are really good.” (Key Informant Interviewee)
“...I think we have great service, but I also think it [the health care system] may be at capacity as well.” (Key Informant Interviewee)

Many key informant interviewees indicated that Barnstable County has abundant health care resources for those in need, including for aging adults. The increasing availability of urgent care clinics and the broad efforts of Cape Cod Healthcare itself were mentioned as essential elements of meeting the health care needs of residents. Interviewees also emphasized the importance of the health services offered by Barnstable County Human Service Department, the Barnstable County Department of Health and Environment, and by law enforcement for incarcerated individuals. Some of these services included infectious disease surveillance and referrals to substance use treatment.

Services by community health centers were emphasized by interviewees for their extended hours, language services, and navigator and counseling staff. Stakeholder dialogue participants praised the integrated approach taken by community health centers, which allows patients to receive most of their care in one location and thereby reduce emergency department use. Likewise, the collaboration of hospitals and emergency departments with community organizations as well as first responders was seen as important to reducing hospital readmissions. Community wellness programs and school programs for truancy prevention and drug education were also cited as successful efforts.

Despite these very clear strengths and essential assets in the region related to health care, key informant interviewees and stakeholder dialogue participants consistently expressed that more health care resources and a greater capacity at the system level were needed, as described in the following sections.

**Challenges to Accessing Health Care Services**

Community survey respondents were asked to identify how easy or hard it was to access different types of health care services. The health care services that were most frequently rated as “very easy” or “easy” to access included outpatient services (69.7%), immunizations (66.8%), urgent care services (64.5%), emergency department services (61.9%), hospital services (56.4%), and vision services (55.9%). In contrast, the types of services that were most frequently rated ‘hard’ or ‘very hard’ to access were specialty care (34.5%), primary care physicians (31.4%), counseling or mental health for adults (28.9%) and for children/adolescents (25.4%), and alcohol or drug treatment services for adults (22.3%) and for youth (21.9%) (Figure 41).
Community survey respondents who lived on the lower or outer cape were more likely to rate specialty care and primary care as ‘hard’ or ‘very hard’ to access (44.2% and 41.9%, respectively) compared to the overall survey sample. Survey respondents with household incomes <$35,000 were more likely to rate dental or oral health services as ‘hard’ or ‘very hard’ to access (28.9%) compared to the overall survey sample.

Key informant interviewees, focus group participants, and stakeholder dialogue participants shared several barriers to accessing health care services. These included a lack of primary care providers and specialists, cost, and lack of information about services. The most frequently-identified barriers experienced by community survey respondents were ‘long waits for appointments’ (28.9%), ‘cost of care’ (21.3%), ‘difficulty scheduling appointments’ (18.3%), and ‘lack of evening and weekend hours’ (16.7%) (Figure 42).
“We may not have as many positions [for health care providers] as what the area may need. There’s always a waiting list.” (Key Informant Interviewee)

“Primary care is very hard to come by.” (Key Informant Interviewee)

This perspective was echoed by 45.2% of community survey respondents who identified ‘access to primary care providers’ as one of the top health concerns impacting the community (Figure 22). Slightly over one third (34.5%) of community survey respondents rated specialty care services as ‘hard’ or ‘very hard’ to access in Barnstable County and 31.4% of respondents rated primary care services similarly. Interviewees and stakeholder dialogue participants specifically noted that dermatologists, ophthalmologists, gerontologists, and oral health providers are in limited supply. Further constraining access, according to focus group participants, is the fact that some specialists do not accept MassHealth, the state’s Medicaid and Children’s Health Insurance Program (CHIP).

Over one quarter (22.2%) of all community survey respondents noted ‘high concern’ for the issue of ‘transportation to medical appointments’ (Figure 15). These findings suggest geography and distance play an important role in the access to care. Concerns about the geographic distribution of health care services were specifically mentioned during stakeholder dialogues, with the observation that those who live on the outer and upper Cape often must travel far or even leave the Cape to receive necessary services. Key informant interviewees and stakeholder dialogue participants suggested that a Level 1 trauma center would improve care access in Barnstable County, particularly for emergencies and in the summer months when the roads are very crowded.

Health care costs were also mentioned as a barrier to accessing health care. Key informant interviewees, for example, noted that the increasing cost of insurance coverage makes it difficult for small business owners to fund insurance.
Focus group participants, who were all Spanish or Portuguese-speaking residents, reported that lack of interpreters and bilingual providers creates challenges to accessing health care. Interpretation services are especially difficult to access in specialty practices according to focus group participants.

Lack of access to information about existing services was mentioned by a few key informant interviewees, focus group participants, and stakeholder dialogue participants. Some participants attributed this access barrier to a lack of communication among organizations that can contribute to a “siloed” approach to addressing residents’ needs. Participants discussed that the lack of information or incorrect information can lead to incorrect referrals and underutilization of needed services.

Closely related to the issue of increasing access to information is care coordination. Participants in stakeholder dialogues suggested that care coordination could be improved by hiring health care navigators/liaisons that understand the health care system and can advocate for patients and connect them to community-based services. Participants also recommended enhancing discharge planning to ensure that patients and families are connected to needed community resources and are able to ask questions.
<table>
<thead>
<tr>
<th>Priority Areas</th>
<th>Goals</th>
<th>Objectives</th>
</tr>
</thead>
</table>
| **1 Physical Health Conditions** | Reduce and prevent the occurrence and severity of chronic and infectious disease in Barnstable County through collaborative approaches. | 1.1 Expand hospital-based initiatives and support regional efforts to prevent, screen, detect and treat chronic and infectious diseases. (Chronic Obj 1)  
1.2 Strengthen strategic collaborations between hospitals and community health centers to improve regional health safety net of care. (Access 2)  
1.3 Support initiatives that increase access to care through provider availability, interpreter services, and insurance coverage. (Access 4)  
1.4 Support local and regional initiatives to promote health and wellness across the lifespan. (Prevention and Wellness) |
| **2 Behavioral Health** | CCHC will be a leading partner in providing comprehensive regional health services and community resources for individuals with mental health conditions and substance use disorders. | 2.1 Expand hospital-based services and collaborations to assess and address mental health, substance use disorders and co-occurring disorders in various care settings.  
2.2 Strengthen the regional network of care for individuals with mental health and substance use disorders.  
2.3 Support efforts to build a recovery-friendly community. |
| **3 Transportation** | Regional transportation systems support increased access to health care services in Barnstable County. | 3.1 Increase transportation options to primary care, specialty care, urgent care, hospital system, and allied health services in our region.  
3.2 Increase transportation options to access services in the community that support health (e.g., food pantries, open spaces). |
| **4 Housing** | Vulnerable populations in our community show improved health indicators through access to stable and quality housing. | 4.1 Develop partnerships with regional organizations that address issues of housing and homelessness.  
4.2 Improve regional capacity to support transitions between health care settings and home. |
| **5 Workforce Development** | Our community is served by a strong, adequate health care workforce. | 5.1 Foster existing and new partnerships with educational institutions and academic medical centers.  
5.2 Invest in recruitment and retention of health care providers in the community to meet growth demands for health care services. |
Goal 1: Reduce and prevent the occurrence and severity of chronic and infectious disease in Barnstable County through collaborative approaches.

Objective 1.1: Expand hospital-based initiatives and support regional efforts to prevent, screen, detect and treat chronic and infectious diseases. (Chronic Obj 1)

Monitoring/Evaluation Approach
- Evaluation of cancer screening results and activities
- Annual community benefits reporting for hospital programs
- Annual Community Benefits Grant Outcomes and Summary Reports by grantees

Potential Partners
- Specialty Network for the Uninsured
- Federally-Qualified Health Centers
- Cape Wellness Collaborative
- Councils on Aging across Cape Cod
- YMCA Weny Diabetes Education Center
- American Diabetes Association
- American Cancer Society
- AIDS Support Group of Cape Cod
- Health Imperatives Cape Cod
- MA Department of Public Health
- Health Resources and Services Administration (HRSA) HIV/AIDS Bureau
- Cape Cod Cooperative Extension
- UMASS Laboratory of Medical Zoology
- Local health departments

Objective 1.2: Strengthen strategic collaborations between hospitals and community health centers to improve regional health safety net of care. (Access 2)

Monitoring/Evaluation Approach
- Annual community benefits reporting for hospital programs
- Annual Community Benefits Grant Outcomes and Summary Reports by grantees
- Monitoring of ACO social determinants of health projects

Potential Partners
- Community Health Center of Cape Cod
- Duffy Health Center
- Harbor Community Health Center
- Outer Cape Health Services
- Island Health Care

Objective 1.3: Support initiatives that increase access to care through provider availability, interpreter services, and insurance coverage. (Access 4)

Monitoring/Evaluation Approach
- Annual community benefits reporting for hospital programs
- Annual Community Benefits Grant Outcomes and Summary Reports by grantees

Potential Partners
- Community based physician offices
- Federally Qualified Health Centers
• The Specialty Network for the Uninsured
• Serving the Health Insurance Needs of Everyone (SHINE) program at Barnstable County Human Services
• Cape Cod Hospital and Falmouth Hospital financial counselors

Objective 1.4: Support local and regional initiatives to promote health and wellness across the lifespan. (Prevention and Wellness)

Monitoring/Evaluation Approach
• Annual community benefits reporting for hospital programs
• Annual Community Benefits Grant Outcomes and Summary Reports by grantees

Potential Partners
• Health Imperatives Cape Cod
• National Park Services- Cape Cod National Seashore
• Honoring Choices Massachusetts
### Priority 2: Behavioral Health

<table>
<thead>
<tr>
<th>Goal 2:</th>
<th>CCHC will be a leading partner in providing comprehensive regional health services and community resources for individuals with mental health conditions and substance use disorders.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective 2.1:</td>
<td>Expand hospital-based services and collaborations to assess and address mental health, substance use disorders and co-occurring disorders in various care settings.</td>
</tr>
<tr>
<td>Monitoring/Evaluation Approach</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Annual community benefits reporting for hospital programs</td>
</tr>
<tr>
<td></td>
<td>• Annual Community Benefits Grant Outcomes and Summary Reports by grantees</td>
</tr>
</tbody>
</table>

#### Potential Partners

- National Alliance for Mental Illness (NAMI) Cape Cod  
- Various community based program providing adolescent, adult and geriatric psychiatric care  
- Various peer-based community programs  
- Gosnold on Cape Cod  
- Federally Qualified Health Centers  
- Various treatment facilities in MA  
- Community based recovery support programs  
- Cape & Islands Police and Fire Departments

| Objective 2.2: | Strengthen the regional network of care for individuals with mental health and substance use disorders. |
| Monitoring/Evaluation Approach |  |
|  | • Annual community benefits reporting for hospital programs  |
|  | • Annual Community Benefits Grant Outcomes and Summary Reports by grantees  |
|  | • Zero suicide program outcome reports  |
|  | • Event evaluation forms from trainings and the Behavioral Health Coalition Summit event  |

#### Potential Partners

- Behavioral Health Provider Coalition of Cape Cod & the Islands  
- Barnstable County Human Services Department  
- MA Department of Mental Health (DMH)  
- MA Department of Public Health (DPH)  
- Samaritans on Cape Cod and the Islands  
- Duffy Health Center  
- Bay Cove  
- Veterans Administration

| Objective 2.3: | Support efforts to build a recovery-friendly community. |
| Monitoring/Evaluation Approach |  |
|  | • Annual community benefits reporting for hospital programs  |
|  | • Annual Community Benefits Grant Outcomes and Summary Reports by grantees  |

#### Potential Partners

- Barnstable County Regional Substance Use Council  
- WellStrong  
- Gosnold, Inc.  
- PIER Recovery Center – Gandara Center  
- Duffy Health Center  
- Cape Cod Children’s Place, Vinfen
Priority 3: Transportation

Goal 3: Regional transportation systems support increased access to health care services in Barnstable County.
(Cross-cutting: elderly, lower income, mom’s with kids)

Objective 3.1: Increase transportation options to primary care, specialty care, urgent care, the hospital system, and allied health services in our region.

Monitoring/Evaluation Approach
- Transportation utilization data from partner organizations
- Annual Community Benefits Grant Outcomes and Summary Reports by grantees
- Calculation of employee hours committed to participation in partnership engagement

Potential Partners
- Cape Cod Regional Transportation Authority
- Council’s on Aging
- Federally Qualified Health Centers
- Cape Cod Commission
- Spaulding Rehabilitation Hospital Cape Cod

Objective 3.2: Increase transportation options to access services in the community that support health (e.g., food pantries, open spaces).

Monitoring/Evaluation Approach
- Annual Community Benefits reporting for hospital programs
- Annual Community Benefits grant outcomes and summary reports by grantees
- Assess the impact of environmental changes, emerging factors

Potential Partners
- Cape Cod Regional Transportation Authority
- Town recreational departments
- National Park Service
- Food pantries across region
- CCHC Retail Pharmacies
- Cape Cod Commission
- Chambers of Commerce
Priority 4: Housing

<table>
<thead>
<tr>
<th>Goal 4: Vulnerable populations in our community show improved health indicators through access to stable and quality housing. (Cross-cutting: Aging, HC Access, primary/secondary/tertiary prevention)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective 4.1: Develop partnerships with regional organizations that address issues of housing and homelessness.</td>
</tr>
<tr>
<td>Monitoring/Evaluation Approach</td>
</tr>
<tr>
<td>• Annual AG self-assessment</td>
</tr>
<tr>
<td>• Calculation of employee hours committed to participation in partnership engagement</td>
</tr>
<tr>
<td>• Assess the impact of environmental changes, emerging factors</td>
</tr>
<tr>
<td>Potential Partners</td>
</tr>
<tr>
<td>• Housing Assistance Corporation on Cape Cod</td>
</tr>
<tr>
<td>• Community Development Partnership</td>
</tr>
<tr>
<td>• Town Housing Authorities</td>
</tr>
<tr>
<td>• Barnstable County Regional Network on Homelessness</td>
</tr>
<tr>
<td>Objective 4.2: Improve regional capacity to support transitions between health care settings and home.</td>
</tr>
<tr>
<td>Monitoring/Evaluation Approach</td>
</tr>
<tr>
<td>• Annual community benefits reporting for housing-related hospital programs</td>
</tr>
<tr>
<td>• Annual Community Benefits Grant Outcomes and Summary Reports by grantees</td>
</tr>
<tr>
<td>• Calculation of employee hours committed to participation in partnership engagement</td>
</tr>
<tr>
<td>• Assessment of the impact of environmental changes, emerging factors</td>
</tr>
<tr>
<td>Potential Partners</td>
</tr>
<tr>
<td>• Cape Cod Chamber of Commerce</td>
</tr>
<tr>
<td>• Cape Cod Commission</td>
</tr>
<tr>
<td>• Cape Cod Health News</td>
</tr>
<tr>
<td>• Cape Cod Cooperative Extension</td>
</tr>
<tr>
<td>• Visiting Nurse Association of Cape Cod</td>
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<tr>
<td>• Barnstable County Department of Health and Environment</td>
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<tr>
<td>• Cape Cod Hoarding Task Force</td>
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<tr>
<td>• Housing Assistance Corporation on Cape Cod</td>
</tr>
<tr>
<td>• Community Development Partnership</td>
</tr>
<tr>
<td>• Town Housing Authorities</td>
</tr>
</tbody>
</table>
### Priority 5: Workforce Development

**Goal 5:** Our community is served by a strong, adequate health care workforce.  
*(cross-cutting: Aging, HC Access, primary/secondary/tertiary prevention)*

**Objective 5.1:** Foster existing and new partnerships with educational institutions and academic medical centers.

**Monitoring/Evaluation Approach**
- Annual community benefits reporting for workforce development hospital programs
- Calculation of employee hours committed to participation in partnership engagement
- Annual Community Benefits Grant Outcomes and Summary Reports by grantees

**Potential Partners**
- University of Massachusetts
- Cape Cod Community College
- Bridgewater State
- Community Colleges
- Local vocational and technical schools
- Local public school systems
- Riverview School

**Objective 5.2:** Invest in recruitment and retention of health care providers in the community to meet growth demands for health care services.

**Monitoring/Evaluation Approach**
- Annual community benefits reporting for physician recruitment, loan forgiveness, and tuition reimbursement activities
- Annual provider recruitment goals and objectives

**Potential Partners**
- Chambers of Commerce
- Cape Cod Community College
- Cape and Islands Workforce Investment Board
- Federally Qualified Health Centers
## APPENDIX A: List of Participating Organizations

<table>
<thead>
<tr>
<th>Organization</th>
<th>Type of Organization</th>
<th>Populations Served/Represented by Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Seniors</td>
</tr>
<tr>
<td>AIDS Support Group of Cape Cod and the Islands</td>
<td>Health</td>
<td>•</td>
</tr>
<tr>
<td>Alzheimer’s Family Support Center</td>
<td>Human Services</td>
<td>•</td>
</tr>
<tr>
<td>Barnstable Council on Aging</td>
<td>Municipal</td>
<td>•</td>
</tr>
<tr>
<td>Barnstable County Department of Health and Environment</td>
<td>County Public Health</td>
<td>•</td>
</tr>
<tr>
<td>Barnstable County Department of Health and Environment Public Nurse</td>
<td>County Public Health</td>
<td>•</td>
</tr>
<tr>
<td>Barnstable County Department of Human Services</td>
<td>Human Services</td>
<td>•</td>
</tr>
<tr>
<td>Bourne Council on Aging</td>
<td>Municipal</td>
<td>•</td>
</tr>
<tr>
<td>Bourne Human Services Committee</td>
<td>Municipal</td>
<td>•</td>
</tr>
<tr>
<td>Cape and Islands Emergency Medical Services System</td>
<td>Health</td>
<td>•</td>
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<tr>
<td>Cape Abilities</td>
<td>Human Services</td>
<td>•</td>
</tr>
<tr>
<td>Cape Cod Children’s Place</td>
<td>Human Services</td>
<td>•</td>
</tr>
<tr>
<td>Cape Cod Healthcare Accountable Care Organization</td>
<td>Health</td>
<td>•</td>
</tr>
<tr>
<td>Cape Organization for the Rights of the Disabled</td>
<td>Human Services</td>
<td>•</td>
</tr>
<tr>
<td>Community Action Committee of Cape Cod and Islands, Inc.</td>
<td>Community Action Agency</td>
<td>•</td>
</tr>
<tr>
<td>Council of Churches</td>
<td>Faith Based</td>
<td>•</td>
</tr>
<tr>
<td>Duffy Health Center</td>
<td>Federally Qualified Health Center</td>
<td>•</td>
</tr>
<tr>
<td>Elder Services of Cape Cod and the Islands</td>
<td>Area Agency on Aging (AAA)</td>
<td>•</td>
</tr>
<tr>
<td>Organization</td>
<td>Type of Organization</td>
<td>Populations Served/Represented by Organization</td>
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<tr>
<td>--------------------------------------------------</td>
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<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Falmouth Service Center</td>
<td>Human Services</td>
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<tr>
<td>Health Imperatives Cape Cod</td>
<td>Health</td>
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<tr>
<td>Healthy Aging Project Cape Cod</td>
<td>Regional coalition</td>
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<tr>
<td>Mashpee Council on Aging</td>
<td>Municipal</td>
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<td>Mashpee Human Services</td>
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<tr>
<td>Mashpee Wampanoag Tribe</td>
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<tr>
<td>Orleans Council on Aging</td>
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<tr>
<td>Outer Cape Health Services</td>
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<tr>
<td>Health Imperatives Cape Cod</td>
<td>Health</td>
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<tr>
<td>Visiting Nurse Association of Cape Cod</td>
<td>Health</td>
<td>• • • •</td>
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<tr>
<td>Town of Yarmouth Health Department</td>
<td>Local Health Agent/Municipal</td>
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<tr>
<td>The Family Pantry of Cape Cod</td>
<td>Human Services</td>
<td>• • • •</td>
</tr>
<tr>
<td>YMCA Cape Cod</td>
<td>Human Services</td>
<td>• • • •</td>
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</tbody>
</table>

*Per IRS Definition: Medically underserved populations include populations experiencing health disparities or that are at risk of not receiving adequate medical care because of being uninsured or underinsured, due to geographic, language, financial, or other barriers, or those living within a hospital facility’s service area but not receiving adequate medical care from the facility because of cost, transportation difficulties, stigma, or other barriers.*
# APPENDIX B: Timeline for CHNA Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collected and analyzed local, state, and national health indicator data</td>
<td>October 2018 – January 2019</td>
</tr>
<tr>
<td>Interviewed public health experts and organizations serving low-income,</td>
<td>October 31, 2018 – January 4, 2019</td>
</tr>
<tr>
<td>vulnerable, disadvantaged, and medically underserved residents (Key</td>
<td></td>
</tr>
<tr>
<td>Informant Interviews)</td>
<td></td>
</tr>
<tr>
<td>Launched/distributed/conducted Community Health Survey</td>
<td>November 12, 2018 – December 31, 2018</td>
</tr>
<tr>
<td>Conducted Community Focus Groups</td>
<td>December 2018 – January 2019</td>
</tr>
<tr>
<td>Conducted Cape-wide Health and Human Services Provider Forums (Stakeholder Dialogues)</td>
<td>October 2019 – November 2019</td>
</tr>
<tr>
<td>Analyzed data and community input</td>
<td>January – February 2019</td>
</tr>
<tr>
<td>Cataloged health care facilities and resources within the community</td>
<td>February 2019</td>
</tr>
<tr>
<td>Developed health priorities and implementation strategies</td>
<td>February 8, 2019 – March 25, 2019</td>
</tr>
<tr>
<td>CCHC Board of Trustees approved report findings and implementation</td>
<td>June 11, 2019 – June 30, 2019</td>
</tr>
<tr>
<td>strategies</td>
<td></td>
</tr>
<tr>
<td>Finalized publication of CHNA report and implementation plan</td>
<td>September 1, 2019</td>
</tr>
<tr>
<td>Publicly distributed CHNA report and implementation plan</td>
<td>September 2019</td>
</tr>
</tbody>
</table>
APPENDIX C: Data Sources and Methodologies

Several strategies were employed to engage and gain perspectives from different population groups during data collection. CCHC considered gender, sexual orientation, age, disability status, socioeconomic status, and geographic location in addition to race and ethnicity when soliciting participation in focus groups and the community survey. Deliberate outreach to members of medically underserved and low-income and minority populations was conducted, and participants were represented in the stakeholder dialogues and key informant interviews. Organizations were chosen to represent those that serve a variety of residents and addressing various needs, including public health, housing and homelessness, public safety, and other human services. A complete list of participating organizations is provided in Appendix A.

The specific data sources and methodologies utilized in the CHNA process include:

**Secondary Data Review.** A comprehensive review of existing data drawn from national, state, and local sources was conducted. Data sources included, but were not limited to, the U.S. Census Bureau, the Centers for Disease Control and Prevention, the Massachusetts Department of Public Health, among others. Types of data included demographics, vital statistics, public health surveillance, as well as self-report of select health behaviors from large, population-based surveys such as the Massachusetts Behavioral Risk Factor Surveillance Survey (BRFSS). The selection of secondary data points was generally based on the prior CHNAs to allow for examination of trends over time. However, additional secondary data sources were explored when major themes or issues arose from qualitative data collection. When available, data were stratified by age group or by income/poverty level to identify areas of disparity. A complete list of secondary data sources is provided in Appendix D.

**Community Stakeholder Dialogues.** Two “stakeholder dialogues” were held with staff from a broad array of agencies and organizations actively working in the health and human services sectors of Barnstable County. These facilitated small- and large-group discussions focused on health in the community and services in the community. A total of approximately 70 individuals attended these sessions.

**Key Informant Interviews.** Key informant interviews were conducted via phone with 25 community leaders from organizations across all of Barnstable County, representing health centers, public safety organizations, housing organizations, and other human service groups. Key informants were identified for participation based on their in-depth knowledge of the health needs and resources of the region. Discussions focused on health strengths and needs in the community and opportunities and challenges to addressing community needs. They were also asked to describe organizational partnerships within Barnstable County, perceptions of community services, and perceptions of CCHC.

**Focus Groups.** Two focus groups, one conducted in Spanish and one in Portuguese, were held with residents to gather information about the community, health challenges and needs, existing services, and suggestions for the future. One focus group of Portuguese-speaking residents was conducted at IPR Cape Cod Church and involved 14 participants. The other involved six Spanish-speaking participants and was held at the Immigration Resource Center at Community Action Committee of Cape Cod.
**Community Survey.** A community survey was made available to all residents of Barnstable County. Respondents were able to access the survey either on-line (via Survey Monkey) or as a hard copy, and both formats were available in English, Spanish, and Portuguese. The survey included questions that focused on residents’ perceptions of their own health, the health of their community, health care utilization, and social needs in the community. The survey was completed by 2,011 Barnstable County residents. The demographic characteristics of the survey respondents are detailed in Appendix E.

As with all data collection efforts, there are several limitations that should be acknowledged. A number of secondary data sources were drawn upon in creating this report. Although all are considered highly credible, each source may use different methods and assumptions when tabulating data. Due to the collection of data from multiple sources, the data presented in this report may cover multiple time periods and indicators may not be directly comparable to one another. Additionally, secondary data pertaining to health indicators are obtained from the MA DPH via its mandated health reporting programs. However, for many indicators MA DPH data are simply not available for recent years or not available at the local level.

For the Community Health Survey convenience sampling was used, and data were collected from those who were readily available and willing to participate. Thus, findings may not be generalizable to the larger population or to specific sub-populations of Barnstable County. Additionally, the survey relies on self-reported information; respondents may have over- or under-reported perceptions based on biases or misunderstanding of the question asked. Furthermore, this survey may be prone to selection bias – individuals who had more positive or negative experiences or perceptions may have been more likely than other individuals to complete the survey.

Finally, key informant interviews, stakeholder dialogues, and focus groups were conducted for this study. While these provide valuable insights, results are not statistically representative of a larger population due to non-random recruiting techniques and a small sample size. Recruitment for interviews, dialogues, and focus groups was conducted by the CCHC Community Benefits Department and collaborating agencies and organizations. Because of this, it is possible that the responses received only provide one perspective of the issues discussed. It is also important to note that these data were collected at one point in time, so findings, while directional and descriptive, should not be interpreted as definitive.
# APPENDIX D: List of Secondary Data Sources

<table>
<thead>
<tr>
<th>Source</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Census Bureau, American Community Survey 5-Year Estimates, 2011-2015</td>
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<tr>
<td>U.S. Census Bureau, American Community Survey 5-Year Estimates, 2012-2016</td>
<td></td>
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<tr>
<td>U.S. Census Bureau, American Community Survey 5-Year Estimates, 2007-2011 and 2012-2016</td>
<td></td>
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<tr>
<td>Massachusetts Department of Elementary and Secondary Education, School/District Profiles, 2017</td>
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<tr>
<td>Feeding America, Map the Meal Gap, Food Insecurity Estimates at the County Level, 2016</td>
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<tr>
<td>U.S. Department of Agriculture Food Environment Atlas, 2015</td>
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<tr>
<td>Business Analyst, Delorme map data, ESRI, &amp; U.S. Census Tigerline Files, as reported by County Health Rankings, 2016; Centers for Disease Control and Prevention, Diabetes Interactive Atlas, as reported by County Health Rankings, 2014</td>
<td></td>
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<tr>
<td>Cape and Islands Regional Network on Homelessness, Annual Point in Time Count for Barnstable, Dukes, and Nantucket Counties, 2016, 2017, 2018</td>
<td></td>
</tr>
<tr>
<td>Health Resources &amp; Services Administration, Health Center Program Grantee Data, Uniform Data System, 2017</td>
<td></td>
</tr>
<tr>
<td>Massachusetts Behavioral Risk Factor Surveillance System, 2016; as cited by County Health Rankings</td>
<td></td>
</tr>
<tr>
<td>Massachusetts Department of Public Health, Registry of Vital Records and Statistics, 2015</td>
<td></td>
</tr>
<tr>
<td>Massachusetts Department of Public Health, Registry of Vital Records and Statistics, 2016</td>
<td></td>
</tr>
<tr>
<td>Center for Disease Control and Prevention, 2015</td>
<td></td>
</tr>
<tr>
<td>Fiscal Year 2017 Massachusetts Health Data Consortium Inpatient Discharge Rate; Based on Cape Cod hospital discharge data and using state weights for age adjustment</td>
<td></td>
</tr>
<tr>
<td>FY 2015 Massachusetts Health Data Consortium</td>
<td></td>
</tr>
<tr>
<td>Massachusetts Cancer Registry, 5-year Profile 2011-2015</td>
<td></td>
</tr>
<tr>
<td>Massachusetts Department of Public Health, Bureau of Environmental Health, 2016-2017</td>
<td></td>
</tr>
<tr>
<td>Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, as reported by County Health Rankings, 2016</td>
<td></td>
</tr>
<tr>
<td>Youth Health Survey, Massachusetts Department of Health (2017), Monomoy Regional High School (2016), and Nauset Regional High School (2017); NOTE: Rates shown reflect students in grades 9-12</td>
<td></td>
</tr>
<tr>
<td>2016 Depression Diagnosis Rates by MSA, Blue Cross Blue Shield Foundation Report: Major Depression – The Impact on Overall Health, 2018</td>
<td></td>
</tr>
<tr>
<td>Massachusetts Department of Public Health, Bureau of Substance Abuse Services, Office of Statistics and Evaluation, Fiscal Year 2018</td>
<td></td>
</tr>
<tr>
<td>Federal Bureau of Investigation, Criminal Justice Information Services, Uniform Crime Reporting, Offenses Known to Law Enforcement, by State and by City, 2017</td>
<td></td>
</tr>
<tr>
<td>Massachusetts Department of Public Health, Bureau of Infectious Disease and Laboratory Sciences, Office of Integrated Surveillance and Informatics Services, 2017</td>
<td></td>
</tr>
<tr>
<td>National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention as reported by County Health Rankings, 2015</td>
<td></td>
</tr>
<tr>
<td>Massachusetts Department of Public Health, 2014 (Lyme), 2015 (HGA), and 2016 (Babesiosis)</td>
<td></td>
</tr>
<tr>
<td>National Provider Identification file, Centers for Medicare and Medicaid Services, Area Health Resource File, as reported by County Health Rankings, 2016</td>
<td></td>
</tr>
</tbody>
</table>

Massachusetts Attorney General Guidelines for Non-Profit Hospitals:

A comprehensive description of the Massachusetts Department of Public Health social determinant of health priorities is available on their website:

APPENDIX E: Community Survey Respondent Characteristics

A total of 2,011 Barnstable County residents completed the survey. Of this total, 1,979 respondents completed the survey on-line (98.4%) and 32 respondents completed hard copy surveys (1.6%). Additionally, the survey was distributed in three languages: 1,971 respondents completed the survey in English (98.0%), 31 in Portuguese (1.5%), and 9 in Spanish (0.4%).

### Demographic Characteristics of Survey Respondents

<table>
<thead>
<tr>
<th>Town of Residence (N=2,011)</th>
<th>Count</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barnstable</td>
<td>399</td>
<td>19.8%</td>
</tr>
<tr>
<td>Bourne</td>
<td>72</td>
<td>3.6%</td>
</tr>
<tr>
<td>Brewster</td>
<td>105</td>
<td>5.2%</td>
</tr>
<tr>
<td>Chatham</td>
<td>70</td>
<td>3.5%</td>
</tr>
<tr>
<td>Dennis</td>
<td>132</td>
<td>6.6%</td>
</tr>
<tr>
<td>Eastham</td>
<td>48</td>
<td>2.4%</td>
</tr>
<tr>
<td>Falmouth</td>
<td>253</td>
<td>12.6%</td>
</tr>
<tr>
<td>Harwich</td>
<td>138</td>
<td>6.9%</td>
</tr>
<tr>
<td>Mashpee</td>
<td>124</td>
<td>6.2%</td>
</tr>
<tr>
<td>Orleans</td>
<td>51</td>
<td>2.5%</td>
</tr>
<tr>
<td>Provincetown</td>
<td>53</td>
<td>2.6%</td>
</tr>
<tr>
<td>Sandwich</td>
<td>144</td>
<td>7.2%</td>
</tr>
<tr>
<td>Truro</td>
<td>25</td>
<td>1.2%</td>
</tr>
<tr>
<td>Wellfleet</td>
<td>23</td>
<td>1.1%</td>
</tr>
<tr>
<td>Yarmouth</td>
<td>374</td>
<td>18.6%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age (N=1,530)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 18 years old</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>18-24 years old</td>
<td>14</td>
<td>0.9%</td>
</tr>
<tr>
<td>25-34 years old</td>
<td>75</td>
<td>4.9%</td>
</tr>
<tr>
<td>35-44 years old</td>
<td>136</td>
<td>8.9%</td>
</tr>
<tr>
<td>45-54 years old</td>
<td>184</td>
<td>12.0%</td>
</tr>
<tr>
<td>55-64 years old</td>
<td>321</td>
<td>21.0%</td>
</tr>
<tr>
<td>65-74 years old</td>
<td>477</td>
<td>31.2%</td>
</tr>
<tr>
<td>75-84 years old</td>
<td>253</td>
<td>16.5%</td>
</tr>
<tr>
<td>85+ years old</td>
<td>50</td>
<td>3.3%</td>
</tr>
<tr>
<td>Prefer not to say</td>
<td>20</td>
<td>1.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender (N=1,525)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>358</td>
<td>23.5%</td>
</tr>
<tr>
<td>Female</td>
<td>1,129</td>
<td>74.0%</td>
</tr>
<tr>
<td>Non-binary</td>
<td>4</td>
<td>0.3%</td>
</tr>
<tr>
<td>Prefer not to say</td>
<td>34</td>
<td>2.2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race/Ethnicity (N=1,502)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian or Alaskan Native, non-Hispanic</td>
<td>3</td>
<td>0.2%</td>
</tr>
<tr>
<td>Asian, non-Hispanic</td>
<td>3</td>
<td>0.2%</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>Count</td>
<td>Percentage</td>
</tr>
<tr>
<td>-------------------------------------------------------------</td>
<td>-------</td>
<td>------------</td>
</tr>
<tr>
<td>Black or African American, non-Hispanic</td>
<td>4</td>
<td>0.3%</td>
</tr>
<tr>
<td>Hispanic/Latino(a), any race</td>
<td>28</td>
<td>1.8%</td>
</tr>
<tr>
<td>Middle Eastern or North African, non-Hispanic</td>
<td>1</td>
<td>0.1%</td>
</tr>
<tr>
<td>Native Hawaiian or Other Pacific Islander, non-Hispanic</td>
<td>1</td>
<td>0.1%</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>1,385</td>
<td>91.1%</td>
</tr>
<tr>
<td>Multiple races</td>
<td>21</td>
<td>1.4%</td>
</tr>
<tr>
<td>Some other race, ethnicity or origin</td>
<td>19</td>
<td>1.3%</td>
</tr>
<tr>
<td>Prefer not to say</td>
<td>55</td>
<td>3.6%</td>
</tr>
</tbody>
</table>

**Educational Attainment (N=1,529)**

<table>
<thead>
<tr>
<th>Attainment</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than high school</td>
<td>7</td>
<td>0.5%</td>
</tr>
<tr>
<td>High school graduate or GED</td>
<td>56</td>
<td>3.7%</td>
</tr>
<tr>
<td>Vocational or trade school</td>
<td>27</td>
<td>1.8%</td>
</tr>
<tr>
<td>Some college</td>
<td>205</td>
<td>13.4%</td>
</tr>
<tr>
<td>Associate or technical degree/certification</td>
<td>159</td>
<td>10.4%</td>
</tr>
<tr>
<td>College graduate</td>
<td>489</td>
<td>32.0%</td>
</tr>
<tr>
<td>Graduate or professional degree</td>
<td>568</td>
<td>37.1%</td>
</tr>
<tr>
<td>Prefer not to say</td>
<td>18</td>
<td>1.2%</td>
</tr>
</tbody>
</table>

**Annual Household Income (N=1,524)**

<table>
<thead>
<tr>
<th>Income Range</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $25,000</td>
<td>66</td>
<td>4.3%</td>
</tr>
<tr>
<td>$25,000 to $34,999</td>
<td>117</td>
<td>7.7%</td>
</tr>
<tr>
<td>$35,000 to $49,999</td>
<td>124</td>
<td>8.1%</td>
</tr>
<tr>
<td>$50,000 to $74,999</td>
<td>236</td>
<td>15.5%</td>
</tr>
<tr>
<td>$75,000 to $99,999</td>
<td>223</td>
<td>14.6%</td>
</tr>
<tr>
<td>$100,000 to $150,999</td>
<td>253</td>
<td>16.6%</td>
</tr>
<tr>
<td>$151,000 to $199,999</td>
<td>102</td>
<td>6.7%</td>
</tr>
<tr>
<td>$200,000 or more</td>
<td>88</td>
<td>5.8%</td>
</tr>
<tr>
<td>I don’t know or don’t want to say</td>
<td>315</td>
<td>20.7%</td>
</tr>
</tbody>
</table>

**Language Spoken Most Often at Home (N=1,526)**

<table>
<thead>
<tr>
<th>Language</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>1,483</td>
<td>97.2%</td>
</tr>
<tr>
<td>Portuguese</td>
<td>28</td>
<td>1.8%</td>
</tr>
<tr>
<td>Spanish</td>
<td>8</td>
<td>0.5%</td>
</tr>
<tr>
<td>Mandarin</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>French</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Haitian Creole</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>0.5%</td>
</tr>
</tbody>
</table>

**Current Living Situation (N=1,999)**

<table>
<thead>
<tr>
<th>Situation</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Live in an apartment/condo/house that I own</td>
<td>1,654</td>
<td>82.7%</td>
</tr>
<tr>
<td>Live in an apartment/condo/house that I rent</td>
<td>210</td>
<td>10.5%</td>
</tr>
<tr>
<td>Live in a seasonal rental</td>
<td>5</td>
<td>0.3%</td>
</tr>
<tr>
<td>Live in a family member’s home</td>
<td>109</td>
<td>5.5%</td>
</tr>
<tr>
<td>Live in a shelter</td>
<td>1</td>
<td>0.1%</td>
</tr>
<tr>
<td>Homeless</td>
<td>1</td>
<td>0.1%</td>
</tr>
<tr>
<td>Other</td>
<td>19</td>
<td>1.0%</td>
</tr>
<tr>
<td>Current Employment Status* (N=2,005)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------------------</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Employed for wages year-round</td>
<td>818</td>
<td>40.8%</td>
</tr>
<tr>
<td>Self-employed year-round</td>
<td>140</td>
<td>7.0%</td>
</tr>
<tr>
<td>Seasonally employed (not year-round)</td>
<td>53</td>
<td>2.6%</td>
</tr>
<tr>
<td>Unemployed</td>
<td>36</td>
<td>1.8%</td>
</tr>
<tr>
<td>Homemaker/Stay-at-home parent</td>
<td>29</td>
<td>1.4%</td>
</tr>
<tr>
<td>Student</td>
<td>26</td>
<td>1.3%</td>
</tr>
<tr>
<td>Caregiver</td>
<td>32</td>
<td>1.6%</td>
</tr>
<tr>
<td>Retired</td>
<td>911</td>
<td>45.4%</td>
</tr>
<tr>
<td>Unable to work</td>
<td>33</td>
<td>1.6%</td>
</tr>
<tr>
<td>Prefer not to answer</td>
<td>4</td>
<td>0.2%</td>
</tr>
<tr>
<td>Other</td>
<td>66</td>
<td>3.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Caregiver Status of Survey Respondents**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current parent/legal guardian for children under 18 (N=2,002)</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Caregiver for person with physical/cognitive disability (N=1,994)</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Caregiver for person over 50 (N=2,000)</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
</tbody>
</table>

*Respondents were allowed to select more than one response; percentages may not sum up to 100%. ** Caregiver categories are not mutually exclusive
APPENDIX F: Inventory of available resources addressing significant health needs

Priority 1: Physical Health

*Cape Cod Healthcare (CCHC) Services:*
- Bourne Health Center
- Cape Cod Hospital
- Cape Cod Hospital OB/GYN Clinic
- Cape Cod Hospital Pain Center
- CCHC Diabetes Education Services
- CCHC Family Birthplace
- CCHC Financial Counseling
- CCHC Heart and Vascular Institute
- CCHC Infectious Disease Clinical Services
- CCHC Laboratory Services
- CCHC Neurosciences and Pain Services
- CCHC Orthopedic Services
- CCHC Pharmacies in Falmouth, Harwich, Hyannis and Sandwich
- CCHC Regional Cancer Network
- CCHC Rehabilitation Services
- CCHC Urgent Care Centers in Falmouth, Harwich, Hyannis and Sandwich
- CCHC Wound Care Center
- Clark Cancer Center
- Davenport-Mugar Cancer Center
- Emerald Physicians
- Falmouth Hospital
- Falmouth Hospital Imaging at Community Health Center of Cape Cod
- Falmouth Hospital Outpatient Services
- Falmouth Hospital Outpatient Surgery Center
- Fontaine Medical Center
- Heritage at Falmouth
- JML Care Center
- Medical Affiliates of Cape Cod (MACC)
- Oppenheim Medical Building
- Primary Care Internists
- Rogers Outpatient Center
- Stoneman Outpatient Center
- Visiting Nurse Association of Cape Cod
- Wilkens Medical Complex

*Federally Qualified Health Centers:*
- Community Health Center of Cape Cod
- Duffy Health Center
- Harbor Community Health Center-Hyannis
- Outer Cape Health Services

*Community-Based Services:*
- AIDS Support Group of Cape Cod
- Alzheimer's Family Support Center of Cape Cod
- American Cancer Society
- American Heart Association
- American Lung Association
- Barnstable County Department of Health and Environment
- Barnstable County Department of Human Services
- Barnstable County Public Health Nurse
- Cape and Islands Emergency Medical Services System, Inc.
- Cape Abilities
- Cape and Islands Veterans Outreach Center
- Cape Cod Cooperative Extension
- Cape Cod Council of Churches
- Cape Cod Hunger Network
- Cape Cod Medical Reserve Corps
- Cape Cod Regional Tobacco Control Program
- Cape Cod WIC
- Cape Disability Network
- Cape Organization for the Rights of the Disabled
- Cape Wellness Collaborative
- COAST (Council’s on Aging Serving Together)
- Community Action Committee of Cape Cod and Islands
- Elder Services of Cape Cod and the Islands
- Falmouth Human Services
- Falmouth Service Center
- Glenna Kohl Fund for Hope
- Health Imperatives Cape Cod
- Healthy Aging Cape Cod
- Helping Our Women
- Independence House
- Lower Cape Outreach Council
- Lyme Awareness of Cape Cod
- MA Department of Public Health
- MA Department of Veterans Services
- Mashpee Wampanoag Health Service Unit–Indian Health Services
- National Multiple Sclerosis Society
- Outer Cape WIC
- Parish Nurse Ministries of Cape Cod
Priority 2: Behavioral Health

**Cape Cod Healthcare (CCHC) Services:**
- CCHC Centers for Behavioral Health Outpatient Counseling and Therapy
- CCHC Inpatient and Partial Hospital Psychiatric Services
- Cape Cod Hospital Emergency Department
- Falmouth Hospital Emergency Department

**Community-Based Services:**
- AIDS Support Group of Cape Cod
- Al-Anon/Alateen
- Barnstable County Regional Substance Use Council
- Baybridge Clubhouse
- Baycove Cape & Islands Crisis Intervention Team
- Behavioral Health Innovators
- Behavioral Health Provider Coalition of Cape Cod & the Islands
- Cape and Islands Suicide Prevention Coalition
- Cape Behavioral Health Center
- Cape Cod Family Resource Center
- Cape Cod Hoarding Task Force
- Child and Family Services
- Children's Cove
- Community Health Center of Cape Cod
- Cove Clubhouse
- Dance in the Rain Peer Center
- Duffy Health Center
- Duffy Health Center – Moms Do Care Program
- Falmouth Prevention Partnership

**Priority 3: Transportation**

**Community-Based Services:**
- Bay to Sound Neighbors
- Cape Cod Ambulance Service
- Cape Cod Collaborative
- Cape Cod Commission
- Cape Cod Regional Transit Authority
- Cape Cod Wheelchair Transit
Cape Organization for Rights of the Disabled (CORD)
Councils on Aging Serving Together (COAST)
Elder Services of Cape Cod and the Islands
Helping Our Women
Massachusetts Department of Transportation
Nauset Neighbors
Neighborhood Falmouth

Priority 4: Housing

*Community-Based Services:*
Barnstable County Department of Human Services
Barnstable County HOME Investment Partnership Program
Barnstable Housing Authority
Bourne Housing Authority
Brewster Housing Authority
Cape and Islands Regional Network to Address Homelessness
Cape Cod Commission
Cape Cod Council of Churches
Cape Cod Village
Cape Organization for Rights of the Disabled (CORD)
Catholic Charities – St. Joseph’s House Shelter
Champ Homes
Chatham Housing Authority
Community Action Committee of Cape Cod and the Islands
Community Development Partnership
Dennis Housing Authority
Eastham Housing Authority
Falmouth Housing Authority
Falmouth Housing Corporation
Falmouth Housing Trust
F.O.R.W.A.R.D Cape Cod
Habitat for Humanity
Harwich Ecumenical Council for Housing

Harwich Housing Authority
Homeless Not Hopeless
Homeless Prevention Council
Housing Assistance Corporation
LIFE Cape Cod
Low Income Home Energy Assistance Program
Lower Cape Outreach Council
MA Department of Housing and Community Development
Mashpee Housing Authority
Mass Housing Partnership
Massachusetts Home Modification Loan Program
Orleans Housing Authority
Provincetown Housing Authority
Salvation Army
Sandwich Housing Authority
Truro Housing Authority
Wellfleet Housing Authority
Yarmouth Housing Authority

Priority 5: Employment

*Community-Based Services:*
ARC of Cape Cod
Cape Abilities
Cape Organization for Rights of the Disabled Community Connections
Department of Transitional Assistance – Employment Services Program
Elder Services of Cape Cod and the Islands
Job Training and Employment Corporation (JTEC)
Mass Division of Unemployment Assistance
MassHire Cape and Islands Career Center
MassHire Cape and Islands Workforce Board
Cape Cod Technology Council
Cape Cod Community College
Cape Cod Chamber of Commerce
Cape Cod Young Professionals (CCYP)
APPENDIX G: CAPE COD HEALTHCARE CHNA AND SIP WORK GROUP

- Theresa Ahern, CCHC Senior Vice President Strategy and Government Affairs
- Lisa Guyon, CCHC Director of Community Benefits
- Tina Shaw, CCHC Director Strategy and Government Affairs
- Brenda Foley, CCHC Senior Manager Strategic Services
- Chaitanya Joshi, CCHC Manager Cost Accounting
- Susan Foley, Project Manager Strategy and Government Affairs
- Beth Albert, Barnstable County Human Services Director
- Vaira Harik, Barnstable County Human Services Deputy Director/Senior Project Manager
- Susan Harrington, CCHC ACO Clinical Director
- Elizabeth Lynch, CCHC Operations Manager Centers for Behavioral Health -- Outpatient
- Valerie Al-Hachem, CCHC Director and Grants Administrator Infectious Disease Clinical Services

The findings shared in this CHNA were used to develop the Strategic Implementation Plan (SIP) to guide CCHC’s work to address the priority community needs in the coming years. This plan will build on the two prior SIPs and is accessible at https://www.capecodhealth.org/about/caring-for-our-community/.