



A Community Health Needs Assessment



Commissioned by the Caring4Carlisle Committee

Caring4Carlisle: A Community Health Needs Assessment

Commissioned by the Caring4Carlisle Committee*

2016-2017

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Executive Summary

Caring4Carlisle (C4C) is a community initiative aimed at addressing the social, emotional, spiritual and physical health of Carlisle residents. Community Health Network Areas (CHNAs) were created by the Massachusetts Department of Public Health in 1992. There are 27 CHNAs in the Commonwealth, and Carlisle belongs to CHNA 15. In July of 2016, Carlisle was awarded a planning grant (\$20,000) from CHNA 15 to engage in a community needs assessment process with the intention of identifying priority community health needs to be addressed in Carlisle.

The Carlisle Board of Health served as the lead Town Department with the Gleason Public Library, the Council on Aging, and the Planning Board named as essential partners. In addition, a C4C Steering Committee was assembled with the purpose of guiding the public health initiative in Carlisle beyond the initial phase of assessing community health needs towards taking action to address these needs. The C4C Steering Committee includes residents, community stakeholders, and Town staff. The leaders of the C4C project agreed to seek professional consultation for the data collection and analysis aspects of the needs assessment project. The Center for Social & Demographic Research on Aging at the Gerontology Institute of UMass Boston (UMB) was awarded the contract in August 2016.

Residents of Carlisle age 18 or older were invited to participate. From young adulthood to old age—this study informs the promotion of quality of life for all residents of Carlisle by taking this multigenerational approach. Three methods of data collection were employed by the UMB research team:

- ❖ An analysis of Carlisle’s demographic profile
- ❖ A web-based community survey
- ❖ Three focus groups with community stakeholders and residents

Key Findings in Brief

Summary of Demographic Profile

- ❖ In 2010, about 21% of the Town’s population was age 60 and older; this percentage is expected to increase dramatically in the following years. By 2030, 35% of the population will be over age 60. In fact, the only age group expected to increase in number is the age 60 and over.
- ❖ Nearly 16% of Carlisle’ employees work at home, most of whom are age 45 or older (90%). The average travel time to work for those who do not work at home is 35 minutes, while less than 1% of working residents take public transportation.
- ❖ The percentage of households paying more than 30% of income for shelter is 28% among owners and 51% among renters. The median household income is \$166,111 (in 2015 inflation-adjusted dollars) and \$108, 889 for those headed by a person 65 and over.

Summary of Community Survey

- ❖ Most (98%) of survey respondents (n=451) reported their quality of life to be “good” or “excellent. And over half of respondents find it “very important” to them to remain living in Carlisle.
- ❖ One in five survey respondents age 20-39 reported that most days are “very” or “extremely” stressful.
- ❖ Nearly half (49%) of survey respondents reported having a friend or family member affected by substance abuse, 34% reported having friends or family members affected by suicide and 20% reported knowing someone affected by domestic violence.
- ❖ Over one half (60%) of survey respondents reported providing care to a sick or frail family member in the last year; and among these caregivers, nearly half (49%) reported that their experience was very challenging or somewhat challenging.
- ❖ Nearly one-half of survey respondents do not have a family member living nearby to call on for help.
- ❖ Respondents were asked about their concerns related to children living in Carlisle. Among these concerns, the most frequently reported concerns were children spending too much time in front of a “screen” (e.g., cell phone, pad, computer or television), concerns about pressure related to academic performance and friendships or other social connections among children

Summary of Focus Groups

- ❖ According to focus group participants, people living in the Town of Carlisle are dependent on cars because there is no public transportation in town. Implications of this lack of transportation was discussed for older residents, residents with mobility impairments and children who do not yet drive.
 - Relatedly, the safety of walking and cycling in Carlisle was a concern among focus group residents as they discussed transportation needs of the community.
- ❖ Despite the immense natural beauty and public access to conservation land in Carlisle, a fear of tick-borne illnesses is a real threat to quality of life for residents.
- ❖ Communication about events, services and programs happening in Town is a potential barrier to social engagement. In addition, cohesion and communication among Town leadership, boards and committees could be improved upon.

Summary of Recommendations

Short-Term Recommendations:

- ❖ Recreational Activities, Greenspace & Ticks
 - Host informational sessions about ticks and tick-borne illnesses. Include information about preventing ticks, controlling ticks and the consequences of tick borne illnesses.

- For purposes of encouraging regular walking and cycling for residents of all ages, evaluate the need for connecting pathways.
- ❖ Caregiving
 - Consider piloting a “Caregiver Café” to facilitate the exchange of informal respite among Carlisle residents. Develop programs to connect caregivers to one another and offer a few hours of self-care.
- ❖ Socioemotional health
 - Explore collaborations between local school systems or the Town of Concord to develop stress-reducing programs for youth in the area. For example, offering yoga or meditation during school hours or hosting social events for young people to connect and engage in recreational activities (e.g., daytrips).
 - Identify a liaison from Carlisle to engage in regional and nearby task forces addressing substance abuse. Create a regular spot on CCTV for them to report on the available resources and recent activities to combat this issue affecting Carlisle residents.
- ❖ Social Connectedness
 - Support social activity among residents. For example, sponsor neighborhood/area picnics that bring neighbors together and facilitate a conversation about how to communicate with one another in times of distress or inclement weather and for simple socialization. Emphasize outreach efforts to include multiple generations and ensure inclusivity.
- ❖ Transportation
 - Explore opportunities to fund a pilot study of an intra-town transportation loop.
 - Support existing transportation committees by convening a summit of all interested parties to establish a committee that includes a holistic group of members and work to generate a shared mission. Explore the pooling of resources and funding opportunities.
- ❖ Information & Community Outreach
 - Consider establishing a community calendar where groups in Town can share information about their activities and residents have only one place to look for things to do.
 - Generate an email listserv that can generate notifications on a monthly basis to keep interested residents aware of additions to the calendar.
 - Pilot the “Town Leadership Council” breakfast model to generate more cohesion among Town government and to promote collaboration, information exchange and efficiency of resources.
 - Create a coordinated social media presence for the Town of Carlisle as a mechanism for communicating about resources and services available in Town. This will be particularly useful to better inform young residents.

Long-Term Recommendations

- ❖ Community Planning
 - Consider quality of life in the master planning process. Include partners and resident representatives who can speak to the variety of challenges facing the

social, spiritual, physical and emotional health of the community to ensure that the future of the community continues to be C4C.

- More specifically, plan for substantial growth of the number of older residents. By 2030, residents who are age 60 and older will constitute 35% of the entire population of Carlisle. Recognize that expanding numbers of older residents will impact virtually every aspect of the community, most obvious is the Council on Aging.
 - Consider an application to join the Age-Friendly Communities Network as a mechanism for planning. ¹
- ❖ Housing Options
 - Arrange for opportunities to develop creative solutions to address the shortage of appropriate and affordable housing for younger families and older residents, including reviewing zoning regulations, and exploring the viability of implementing cutting-edge senior housing options (e.g., The Village Model, accessory units, and group living options).
- ❖ Intergenerational gathering space.
 - Consider development of a senior center or community center building. Convene an intergenerational working group to address the need for communal gathering space in Carlisle. Generate a cohesive and consistent message of advocacy for a community center space. Involved parties need to develop a public information campaign in order to be successful in Town Meeting with any proposed changes to existing space or proposals of new construction.
 - Consider elements of this space to include drop-in space for residents to gather. This type of space can benefit all residents of Carlisle and offers opportunities to socialize and potentially relieve stress.

¹ <http://www.aarp.org/livable-communities/network-age-friendly-communities/info-2014/an-introduction.html>

Acknowledgements

The Town of Carlisle’s Community Health Needs Assessment was funded through a Community Health Network Area 15 (CHNA) grant through Lahey Hospital and Medical Center. The project was led by Linda Fantasia, Health Agent, David Klein, Director of the Council on Aging, Christine Schonhart, Director of Gleason Public Library and George Mansfield, Planning Administrator.

The following Carlisle residents, community stakeholders, and Town staff participated on the steering committee:

Elizabeth Demille Barnett
Alan Canova
Jason Chandonnet
Kerry Colburn-Dion
Maxine Crowther
Martha Feeney-Patten
Chief Fisher
Holly Mansfield
Judy Hodges
Kerry Kissinger
Donna Margolies
Jim O’Shea
Bill Risso

In addition, we owe thanks to the many residents of Carlisle who supported our data collection efforts by giving their time graciously to participate in focus groups and/or complete an online survey. Their thoughtful responses to our queries are the foundation of this report.

The author and contributors, Caitlin Coyle, Hannah Curren, Ceara Somerville, and Nidya Valesco from the University of Massachusetts Boston, are responsible for the contents of this report; however, the research could not have been completed without the cooperation and efforts of all those mentioned above.

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Introduction

Background

Caring4Carlisle (C4C) is a community initiative aimed at addressing the social, emotional, spiritual and physical health of Carlisle residents. Community Health Network Areas (CHNAs) were created by the Massachusetts Department of Public Health in 1992. There are 27 CHNAs in the Commonwealth, and Carlisle belongs to CHNA 15. The CHNA identifies health needs of its 12 member communities, of which Carlisle is one, finds ways to address those needs, and improves the health of the community. One mechanism by which CHNA 15 achieves these goals is by funding Healthy Community Planning Grants to individual communities. In July of 2016, Carlisle was awarded one of these planning grants (\$20,000) to engage in a community health needs assessment process with the intention of identifying priority community health needs to be addressed in Carlisle. The Carlisle Board of Health served as the lead Town Department with the Gleason Public Library and the Council on Aging named as essential partners. In addition, a C4C Steering Committee was assembled with the purpose of guiding the public health initiative in Carlisle beyond the initial phase of assessing community health needs towards taking action to address these needs. The C4C Steering Committee is comprised of residents, community stakeholders, and Town staff.

The leaders of the C4C project agreed to seek professional consultation for the data collection and analysis aspects of the needs assessment project. Three potential consultants were interviewed and one was selected. The Center for Social & Demographic Research on Aging at the Gerontology Institute of UMass Boston was awarded the contract in 2016. UMass Boston's efforts were led by Caitlin Coyle, PhD with support of graduate students and the Center's Director, Jan Mutchler, PhD. The Steering Committee participated in development of the survey materials, identifying focus group participants as well as leading community outreach efforts to promote the initiative through media relations and engaging with groups and organizations in Carlisle.

Defining Community Health in Carlisle

Extensive scientific literature has investigated the relative contributions of genetics, health care, and social, environmental, and behavioral factors in promoting health and reducing premature mortality (Marmot, 2005; Lee & Paxman, 1997). These studies uniformly suggest that nonmedical factors play a substantially larger role than do medical factors in health. Thus, addressing these nonmedical factors at the community-level is a logical approach to improving community health.

What determines health?



Adapted from McGinnis et al., 2002

Initial C4C Steering Committee meetings included a discussion of defining community health in Carlisle. As reflected in the C4C logo, community health is broadly defined to include social, emotional, spiritual and physical health. It was determined that the C4C initiative would be aimed at improving “quality of life” in Carlisle through identifying features of the community that promote healthy living as well as those that impede health and wellness.

This study's *target population* was all adults in Carlisle. Meaning, residents of Carlisle age 18 or older were invited to participate. The purpose of targeting the adult population is to assess the broad community health needs of the community across the lifespan. From young adulthood to old age—this study intends to inform the promotion of quality of life for all residents of Carlisle by taking this multigenerational approach.

Methods

Mixed evaluation methods are often used to assess the needs of residents and to aid organizations in planning and prioritizing the programs and services they provide in the community. Collecting data from multiple sources is a good strategy for converging on accurate and multifaceted representations of community needs from the perspective of a diverse set of stakeholders (Royse, Thyer, & Padgett, 2010). For the current project, we compiled data from several sources, including publicly available information obtained through the U.S. Census Bureau and qualitative data collected directly from the Town of Carlisle's residents. All research methods and instruments used in this project were approved by the University's Institutional Review Board, which is charged with protecting the rights and welfare of human subjects who take part in research conducted at UMass Boston.

Our goal early in this study was to draw on the perspective of community stakeholders to define community health for Carlisle and subsequently identify research questions, which when approached systematically, could shed light on the

health and wellness needs of the population, as well as to identify services and Town qualities that are most valued by the residents of the Town of Carlisle.

In general, assessment goals identified at the outset of this study related to how the Town could better facilitate and support health and wellbeing in the community. This goal is consistent with efforts to identify ways in which communities may become more "livable" by supporting the independence and quality of life of people as they age over the course of the lifespan (Nelson & Guengerich, 2009). In the following sections, we describe methods used in this needs assessment, including development of appropriate instruments, selection and recruitment of study participants, and a brief section on data analysis strategies.

Demographic Profile (see pages 5-16)

As an initial step toward understanding characteristics of the Town of Carlisle's population through quantitative data, we generated a demographic profile of the Town using data from the decennial U.S. Census and the American Community Survey (ACS)—a large, annual survey conducted by the U.S. Census Bureau. For purposes of this assessment, we primarily used information drawn from the most current 5-year ACS files (2011-2015), along with U.S. Census data for the Town of Carlisle to summarize demographic characteristics including growth of the older population, shifts in the age distribution, gender, race, and education distributions, householder status, living arrangements, household income, and disability status.

Community Survey (see pages 17-46)

The central component of our data collection effort was an online, 38-question, resident survey developed by the research team at UMass Boston in consultation with the C4C Steering Committee in the Fall of 2016. The survey was piloted with five Carlisle residents who had the opportunity to complete the survey and submit feedback to the consultant. The survey included quantitative and open-ended questions chosen based on their relevance to the planning needs of the initiative and with a particular focus on quality of life and other factors affecting community health, broadly speaking. All non-institutionalized residents of Carlisle age 18 or older were eligible to participate.

The resident survey (see **Appendix A**) was composed of sections relating to the following areas:

- Community & Neighborhood
- Civic Engagement & Communication
- Social Networks & Caregiving
- Health & Well-being

During the data collection period from March 1, 2017 to mid-April 2017, 480 residents completed an online survey. Considering a population of adults (age 18+) in Carlisle of 3,808 (*ACS, 2011-2015, Table B01001, not shown*) an overall response rate of 13% was achieved. A database containing the confidential responses of all

survey participants was compiled, and subsequently analyzed and securely maintained by the research team at UMass Boston.

Focus Groups (see pages 47-54)

Three focus groups were held in June 2017. All participants were selected by the Carlisle Board of Health with input from other C4C partners and the Steering Committee. At the request of the research team, the initial invitation was issued by the Carlisle Board of Health or the Carlisle Council on Aging. Topics of discussion for these focus groups can be found in **Appendix C**.

One group included community stakeholders from Carlisle. The group of 14 individuals included: a member of the Land Stewardship Committee, member of Board of Selectmen the First Religious Society, the Carlisle Planning Board, the Board of Health, two individuals from the Master Planning Steering Committee, the Council on Aging, the Carlisle Public Schools, the Finance Director, the Housing Authority, two individuals from the Carlisle School Committee, and representatives from the Police and Fire Departments in Carlisle.

A second group included residents of Carlisle who are knowledgeable about the community and who are diverse in terms of their length of residency in Carlisle and involvement in broader community action. Ten individuals participated, including a local mother who is also involved in the Parent Teacher Organization (PTO), a grandparent, a new resident of Carlisle, a grandparent with grandchildren living in Carlisle, residents with college and high school age children as well as adults living in Carlisle without children.

A third group included eight Carlisle residents who are knowledgeable about the community and represent groups of residents with particular interests. This group included a resident farmer, a member of the League of Women Voters, a small business owner, and members of the Trails Committee, the Energy Task Force, the Cultural Council and Carlisle Artisans as well as a member of the Transportation Committee. Discussion in all three groups focused on defining a healthy community in Carlisle. These discussions included naming the attributes of the community that promote quality of life, and those that impede it. Suggestions were made for ways in which organizations in town could work more effectively together around making Carlisle an even better place to live, age and play.

Data Analysis

Data collected for the surveys were analyzed using simple descriptive statistics, including frequencies and crosstabs, and are reported in full in tables contained in **Appendix B** and throughout the results section of this report. Some responses elicited through open-ended questions were extracted and cited verbatim within this report. Notes taken during the study's qualitative components (e.g., focus group, open ended survey questions) were reviewed by project staff and used to characterize and categorize salient ways in which aspects of the community are affecting residents of

Carlisle and those who are considered community stakeholders because of their public or professional role in the community. Emergent themes from these qualitative aspects of the project are illustrated using quotes from residents in the results section of this report. We used information from all sources of data to develop recommendations reported in the final section of this report².

Results

Demographic Profile of Carlisle

Age and Gender Distribution

According to the American Community Survey, there were 5,074 residents living in the Town of Carlisle in 2015, 51% female and 49% men. About a third of these (1,405 individuals—28% of the population) were under age 20 (See **Table 1**). Residents who were age 20 to 49 (1,180 individuals) made up 23% of the population; residents age 50 to 59 (1,173 individuals) comprised 23%, residents age 60 to 79 (1,129 individuals) covered 22%, and another 187 (4%) residents were age 80 and older.

Table 1. Number and percentage distribution of Carlisle’s population by age category, 2015

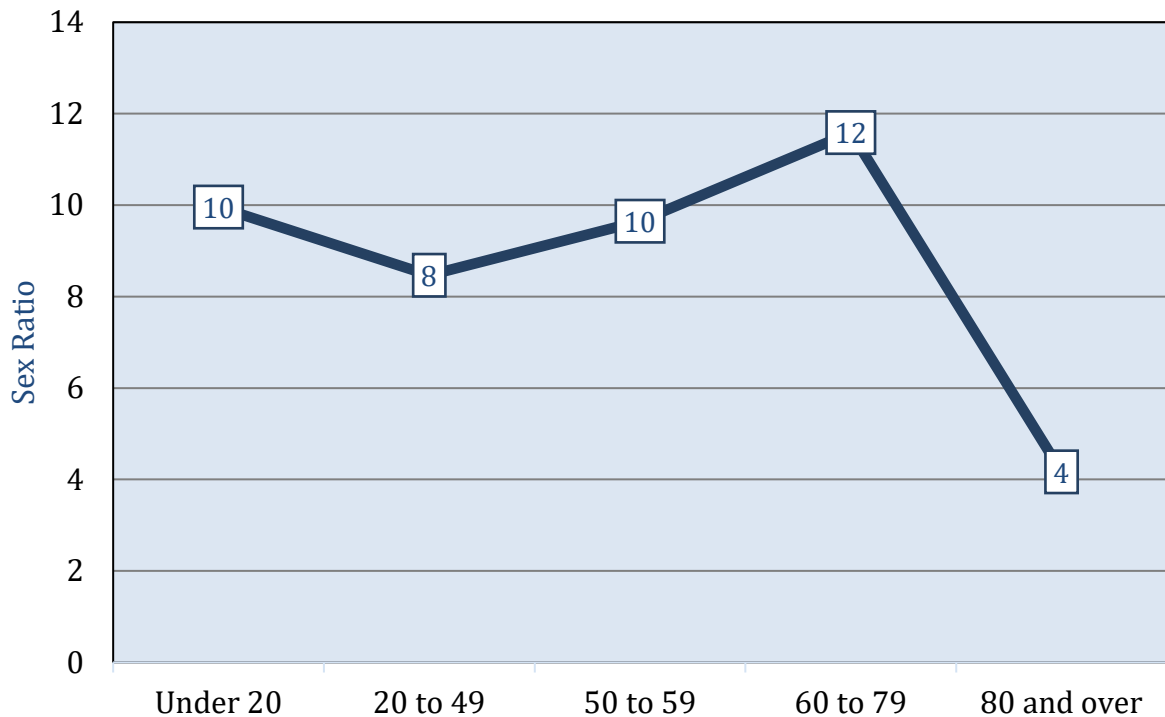
Age Category	Number	Percentage
Under age 20	1,405	28%
Age 20 to 49	1,180	23%
Age 50 to 59	1,173	23%
Age 60 to 79	1,129	22%
Age 80 and older	187	4%
Total	5,074	100%

Source: American Community Survey 2011-2015 ---5 Year Estimates, Table B01001.

² Analysis was conducted in July and August of 2017, and all tables and figures were generated during this time.

The gender distribution in Carlisle is, on average, ten men for each ten women. However, it has slight variations when exploring different groups of age (**Figure 1**). The higher sex ratio is observed in the age group 60 to 79 with 12 men for each 10 women, whereas the lowest sex ratio occurs in the age group 80 and over, with 4 men for each 10 women. The greater number of older women is due in large part to longer life expectancies of women compared to men—a demographic disparity that is widely observed in older populations globally.

Figure 1. Sex ratio by group of age, Carlisle 2015



Source: American Community Survey 2011-2015 ---5 Year Estimates, Table B01001.

Population Growth

According to the Carlisle Board of Health, Carlisle will not only have a strong senior constituency among its resident base but will benefit from other demographic shifts. The Board of Health notes several multi-family, residential housing properties³ have cropped up in Town, and it is expected this trend will continue. Anecdotally an increase in Carlisle School⁴ enrollment and the number of new babies in town⁵, could be interpreted as indicative of new growth in younger families which has not yet been acquired by the census gathering data. More information will be needed to determine if this trend lasts.

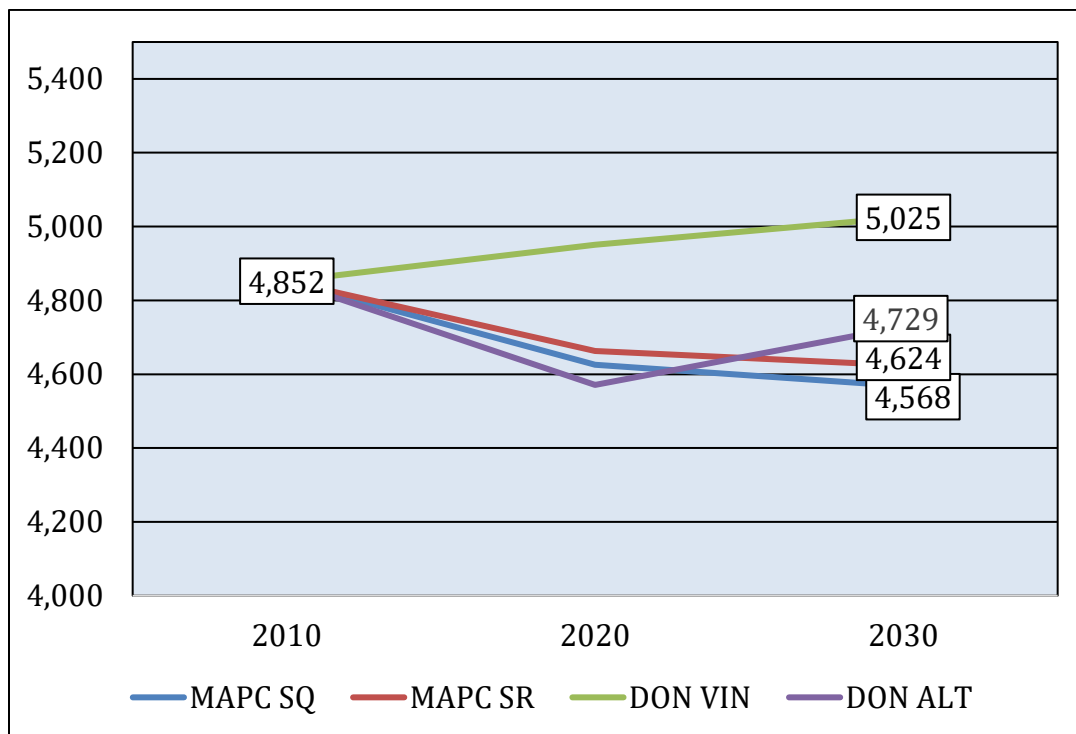
³ Malcolm Meadows, Laurel Hollow, Garrison Place, Benfield Farms, Woodward Land Purchase (2017),

⁴ Carlisle Mosquito, Friday, September 22, 2017

⁵ Carlisle Mosquito Friday, September 29, 2017

Figure 2 shows the total number of Carlisle residents in 2010 and population projections for 2020 and 2030 considering three sets of projections. Two are generated by the Donahue Institute at the University of Massachusetts⁶, and two by the Metropolitan Area Planning Council (MAPC): status-quo and stronger regional scenario⁷. Three of the four sets of projections suggest Carlisle’s overall population will slightly decline in total population size to 2020. The alternative Donahue projections indicate some recovery to 2030, but the other two do not. The fourth set of projections displayed in Figure 2 also come from the Donahue Institute and suggest a slight increase the in the population of Carlisle over this 20 year period.

Figure 2. Alternative projections for Carlisle population size to 2030



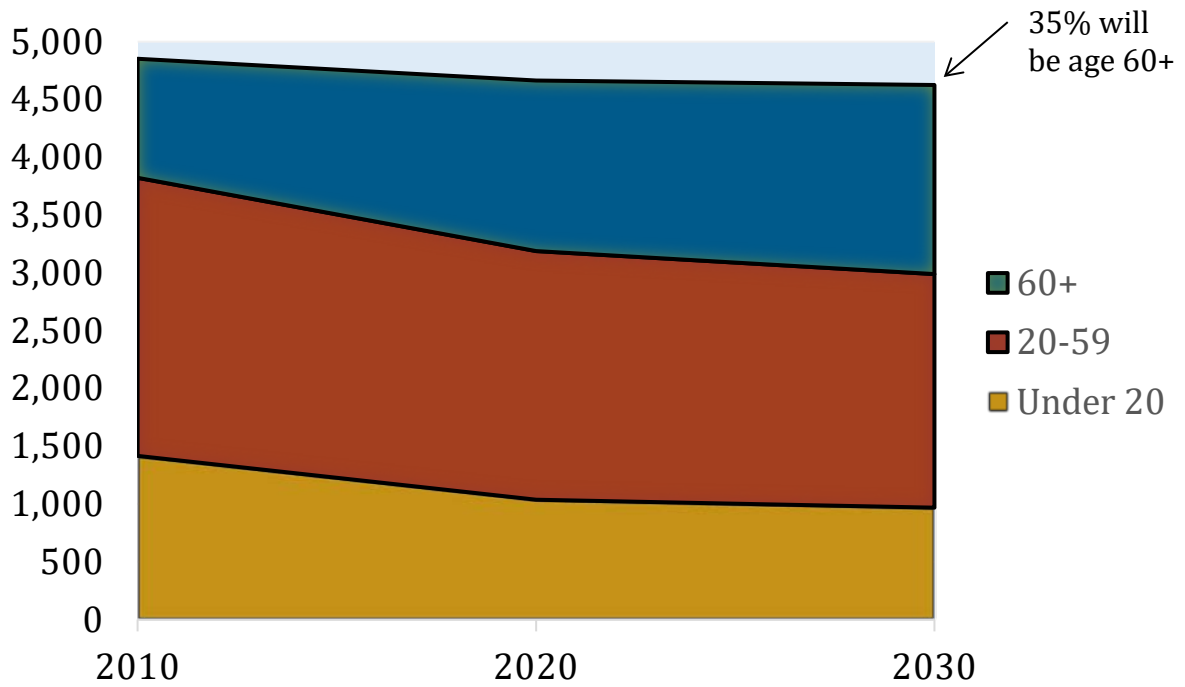
⁶ Population projections are shaped by assumptions about birth rates and death rates, as well as domestic and international in-migration and out-migration. The Donahue Institute projections used here also account for population change associated with aging of the population, which is a strong predictor of future growth and decline of population levels. For more information on the methods used to create Donahue Institute projections, see Renski, Koshgarian, & Strate (November 2013).

⁷ The “Status Quo” scenario is based on the continuation of existing rates of births, deaths, migration, and housing occupancy. Alternatively, the “Stronger Region” scenario explores how changing trends could result in higher population growth, greater housing demand, and a substantially larger workforce. Specifically, the Stronger Region scenario assumes that in the coming years: the region will attract and retain more people, especially young adults, than it does today; younger householders (born after 1980) will be more inclined toward urban living than were their predecessors, and less likely to seek out single family homes; and an increasing share of senior-headed households will choose to downsize from single family homes to apartments or condominiums.

Source: 2010 from U.S. Census Bureau, 2020 and 2030 projections from the Metropolitan Area Planning Council (stronger regional scenarios) and Donahue Institute.

Figure 3 shows the age distribution of Carlisle’s population from 2010, and population projections for 2020 and 2030. In 2010, about 21% of the Town’s population was age 60 and older; this percentage is expected to increase dramatically in the following years. According to the projections created by the Metropolitan Area Planning Council under the strong regional scenario, by 2020, about 31% of Carlisle residents will be age 60 and older. By 2030, 35% of the population will be over age 60. In fact, the only age group expected to increase in number is the age 60 and over.

Figure 3. Carlisle projected population change 2010 to 2030 from the Metropolitan Area Planning Council (stronger regional projections)



Source: 2010 from U.S. Census Bureau, 2020 and 2030 projections from the Metropolitan Area Planning Council (stronger regional scenarios).

Sociodemographic and Socioeconomic Characteristics

Carlisle is slightly less diverse than the state on race. About 80% of Massachusetts residents report their race as Non-Hispanic White (ACS, 2011-2015, Table DP05).

Table 2 displays the race and ethnicity of Carlisle’s residents. The large majority are White (87%). A small portion (9%) report Asian race or Black (<1%). The remaining 3% report “Other” race, which includes those who reported multiple racial identities. Only one percent of Carlisle residents report Hispanic or Latino ethnicity.

Table 2. Race distribution of residents in Carlisle, 2015

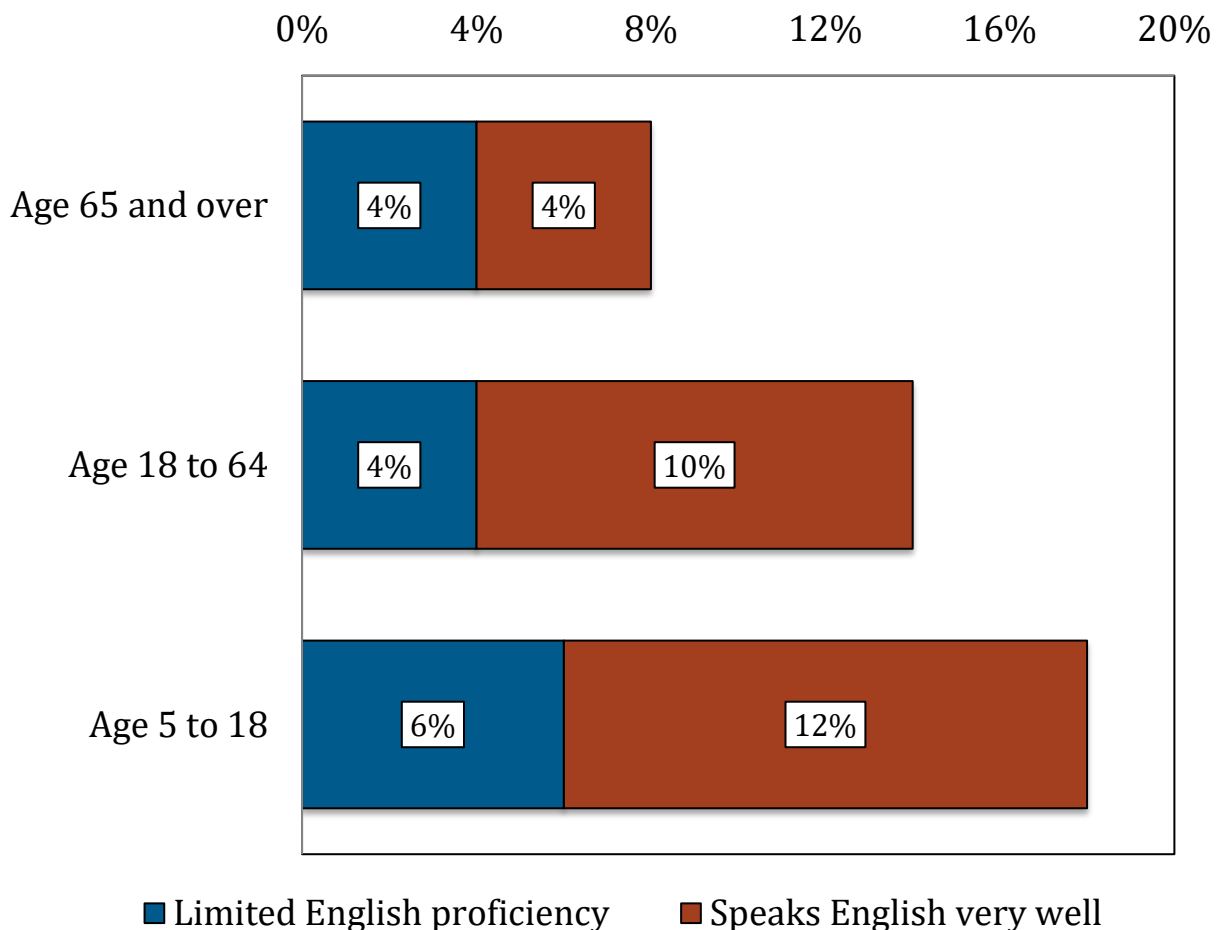
Race	Number	Percent
White	4,398	87%
Asian	453	9%
Black	37	<1%
Other	177	3%
Total	5,074	100%
Hispanic	72	1%

Source: American Community Survey, 2011-2015 ---5 Year Estimates, Tables B02001.

A small number of Carlisle’s inhabitants are foreign-born (13%; ACS, 2011-2015, Table B06001). Among them 5% are younger than 18, 66% age 18 to 64, and 29% age 65 and older.

Figure 4 shows language use and language ability by age group. Nearly one out of seven residents speak a language other than English at home. The second most common language spoken at home is Chinese (4%; ACS, 2011– 2015, Table B16001). Among Carlisle residents younger than 18 who speak another language report speaking limited English and an additional 4% speaking it very well. Nearly 4% of those age 18 to 64 have limited English proficiency, and 11% speak English very well. Among residents age 65 and older, 6% have limited English proficiency and an additional 12% report speaking English very well.

Figure 4. Language use and English ability, Carlisle 2015



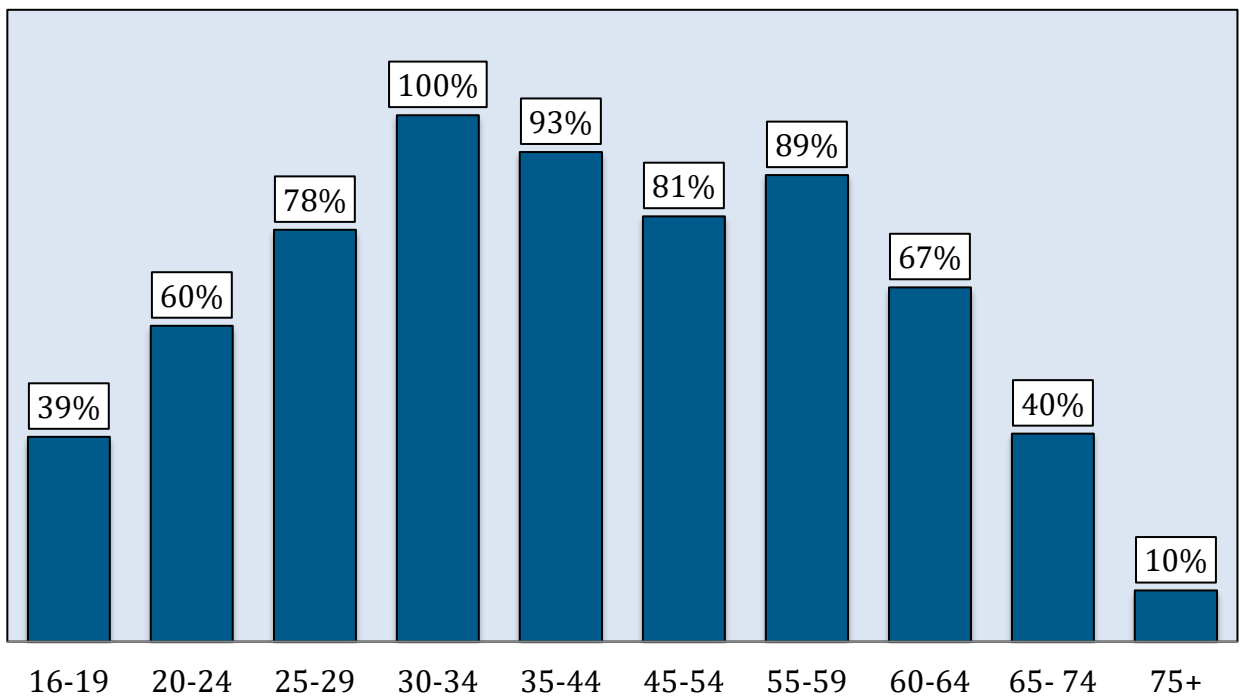
Source: American Community Survey, 2011-2015 ---5 Year Estimates, Table B16004.

American Community Survey estimates on education suggest that Carlisle residents are well educated on average. About 96% of individuals age 25 to 44, 86% of residents 45 to 64, and around 68% of those 65 and older have either a bachelor’s degree or a graduate/professional degree (ACS, 2011– 2015, Table S1501, not shown). The school enrollment rate in Carlisle is also high. All residents younger than 18 and almost 80%

of those 18 to 24 years of age are enrolled in school (*ACS, 2011–2015, Table B14003, no shown*). This educational profile of the contributes to the vitality and character of the community, which also depends on older adults who value opportunities to be involved in volunteer and civic engagement activities, as well as late-life learning opportunities— activities that are often present in highly educated communities (Fitzgerald & Caro, 2014).

Figure 5 shows the labor force participation rates by age among the 3,993 Carlisle residents age 16 and over. Almost two-thirds of them are in the labor force. The work participation rate is high for all young and middle-age residents and reaches its peak in the age group 30 to 34. Similar to older adults living in communities throughout the U.S., a large proportion (40%) of Carlisle residents aged 65 to 74 remain in the workforce. The proportion of those Carlisle residents age 75 and older who are also in the workforce (10%) is higher than the state as a whole (7%).

Figure 5. Labor force participation rates by age, Carlisle 2015

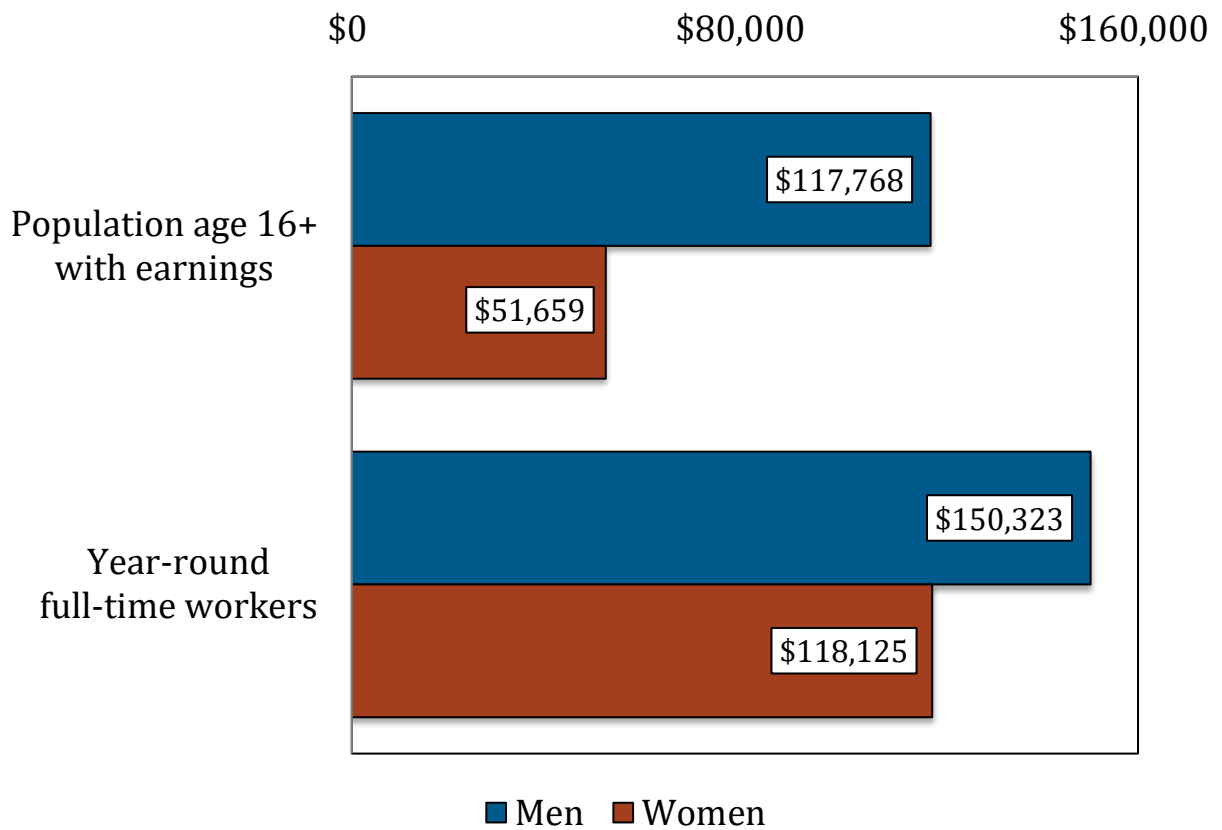


Source: American Community Survey, 2011-2015 ---5 Year Estimates, Table S2301.

Approximately one-fifth of 2,480 civilian employed residents in Carlisle are self-employed (*ACS, 2011–2015, Table S2406*). Nearly 16% of Carlisle’s employees work at home, most of whom are age 45 or older (90%; *ACS, 2011–2015, Table B08101*). The average travel time to work for those who do not work at home is 35 minutes, while less than 1% of working residents take public transportation (*ACS, 2011–2015, Table S0801*).

Among Carlisle’s population age 16 and over with earnings, there is some comparative disadvantage in median earnings for women (**Figure 6**). Median earnings for women (\$51,659) are less than half as for men (\$117,768). Although the earning’s gap between men and women in Carlisle is less dramatic when considering year-round full-time workers, the annual earnings for women are almost \$30,000 less than for men.

Figure 6. Median earnings by sex, Carlisle 2015

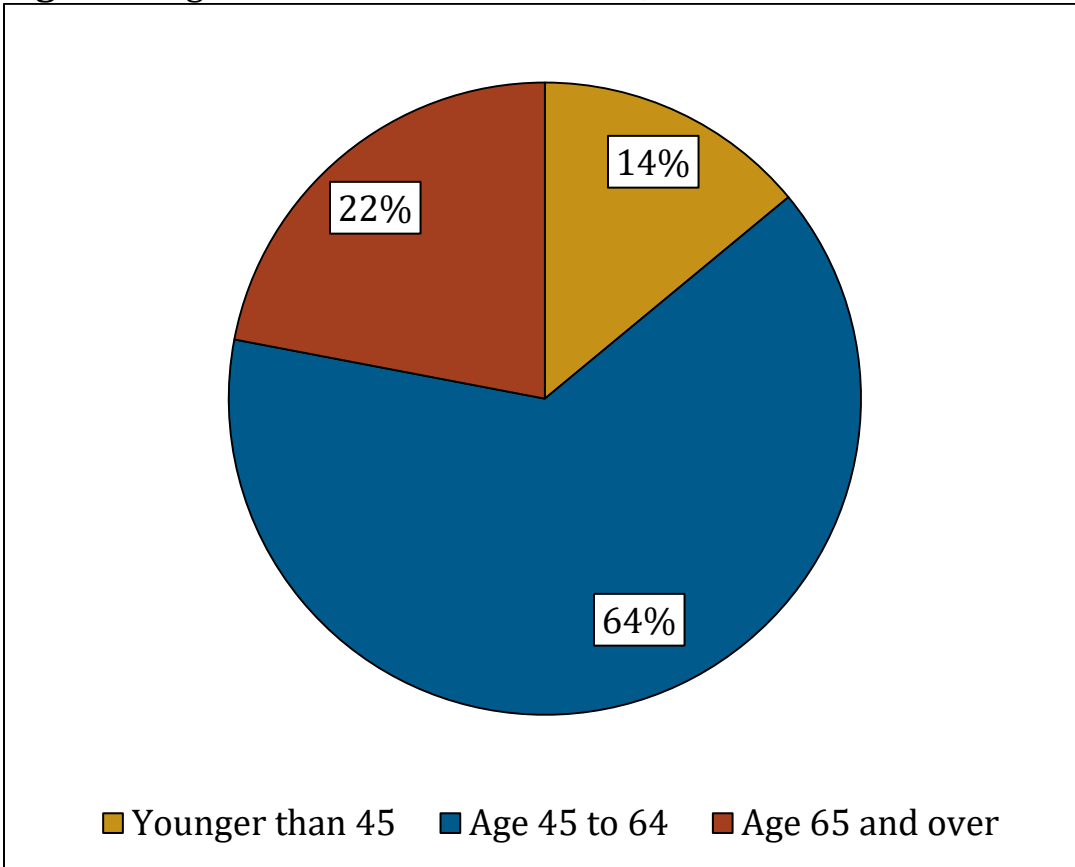


Source: American Community Survey, 2011-2015 ---5 Year Estimates, Table B20017.

Homeownership and Household Affordability

The majority of Carlisle’s 1,762 households have householders who are middle-aged or older. According to the U.S. Census Bureau, a “householder” is the person reported as the head of household, typically the person in whose name the home is owned or rented. Residents age 45 and older are householders of 84% of all households in Carlisle⁸ (Figure 7).

Figure 7. Age structure of householders, Carlisle



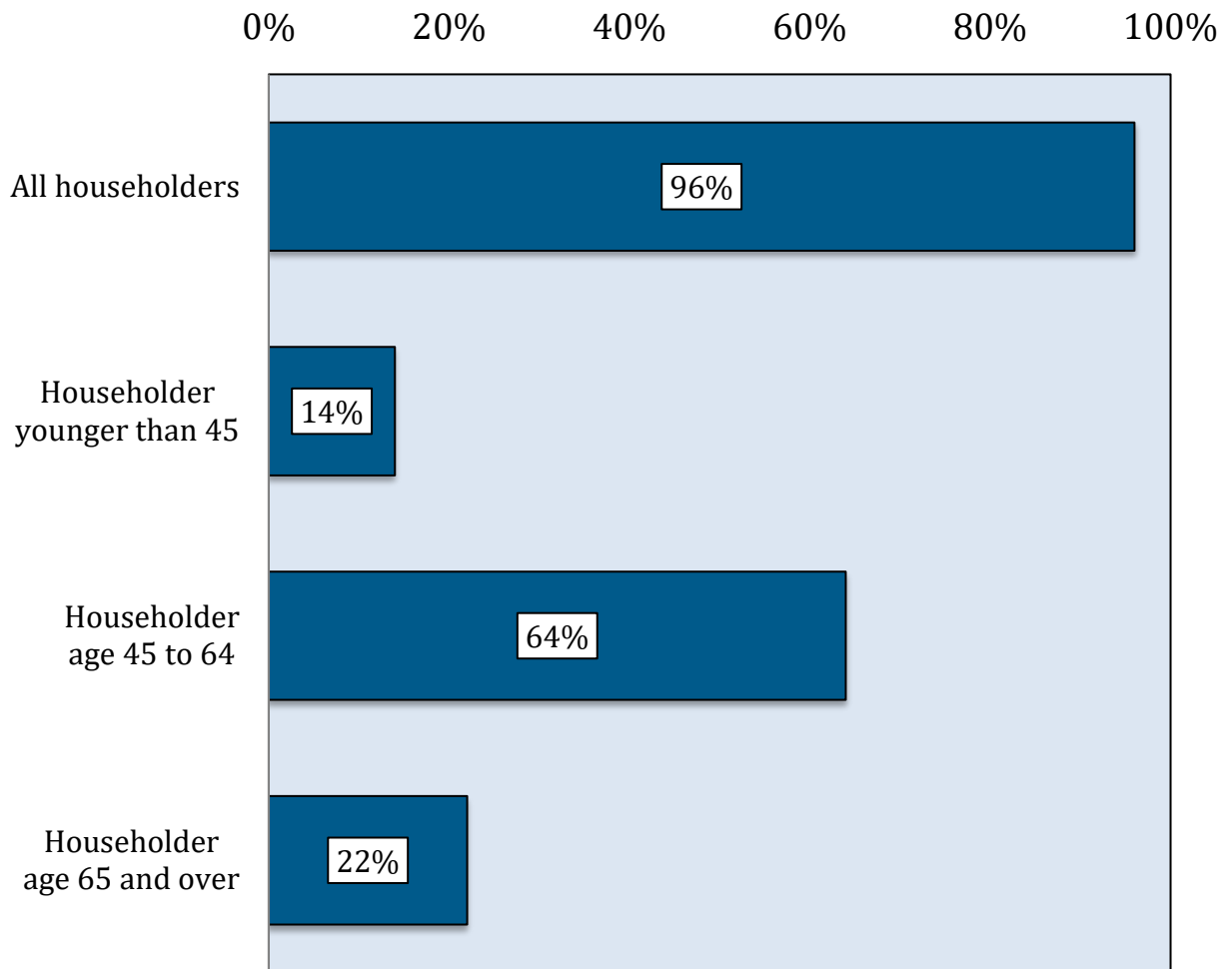
Source: American Community Survey, 2011-2015 ---5 Year Estimates, Table B25007.

⁸ Many available Census data are based on ages 45 and 65 as reference points rather than ages 50 and 60, as are used elsewhere in this report.

Additionally, most households in Carlisle are owner occupied (96%; **Figure 8**). Among middle-aged residents (age 45-64), 64% live in homes that they own compared to 14% of householders under age 45 and 22% over age 65. Carlisle's residents median annual housing cost is \$33,168 (in 2015 inflation-adjusted dollars; *ACS, 2011- 2015, Table S2503*). The estimated costs are higher among owner-occupied households (\$34,644) in comparison with renter-occupied (\$25,308).

Among the 1,827 housing structures in Carlisle, nearly 97% are single unit structures (*ACS 2011-2015, Table B25024, not shown*).

Figure 8. Percent of Carlisle householders who live in owner-occupied housing by age category, 2015



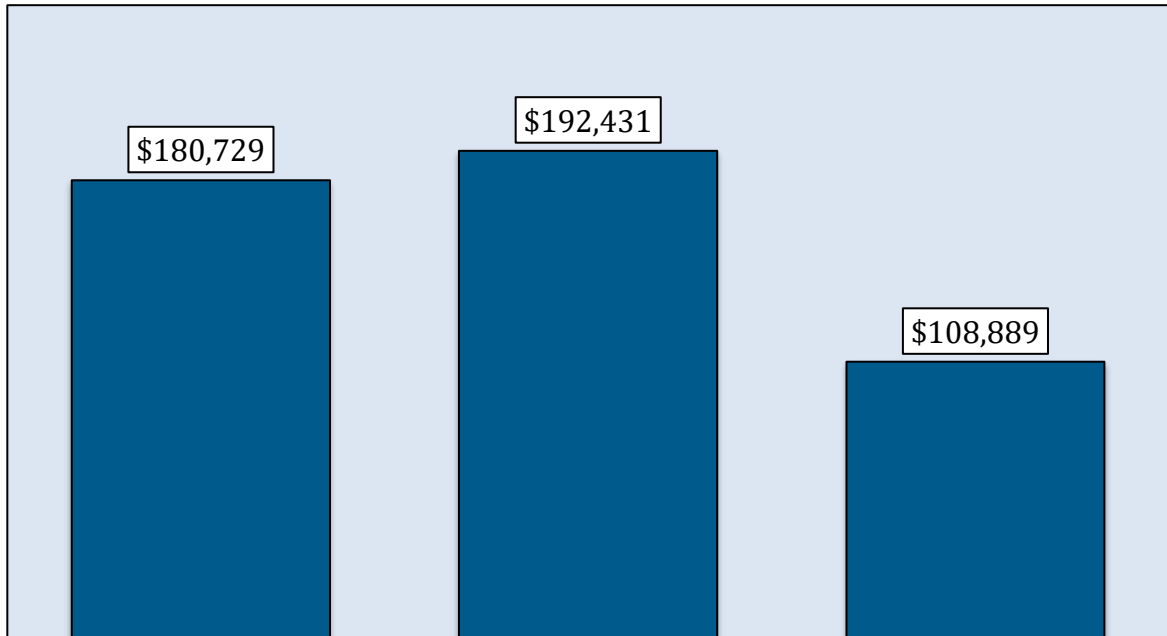
Source: American Community Survey, 2011-2015 ---5 Year Estimates, Table B25007.

The median household income is \$166,111 (in 2015 inflation-adjusted dollars; *ACS, 2011- 2015, Table B19049*). Estimations suggest that the median household income in a household headed by a person age 25 to 44 is \$180,729, \$192, 431 among

householders age 45 to 64 and \$108, 889 for those headed by a person 65 and over (**Figure 9**). This suggests some comparative disadvantage of some older residents in Carlisle who have a considerable lower median household income.

The percentage of households paying more than 30% of income for shelter is 28% among owners and 51% among renters (*ACS, 2011- 2015, Table S2503*).

Figure 9. Median household income by householder’s age, Carlisle 2015



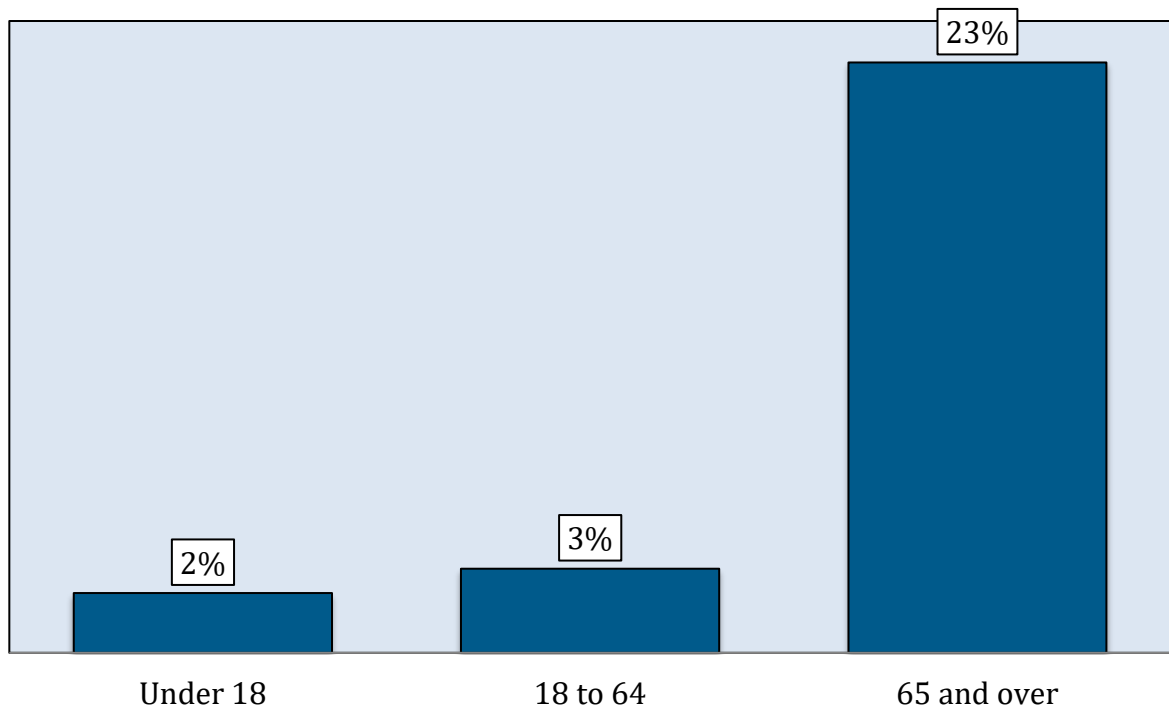
Householder age 25 to 44 Householder age 45 to 64 Householder age 65+

Source: American Community Survey, 2011-2015 ---5 Year Estimates, Table B19049.

Disability Status

The increased likelihood of acquiring disability with age is evident. Many Carlisle residents age 65 and older experience some level of disability that could impact their ability to function independently in the community. Nearly one fourth of residents age 65 and older have one disability (**Figure 10**). Among the different types of disability that are assessed in ACS, the most commonly cited by older Carlisle residents 65 and older were ambulatory difficulties--difficulty walking or climbing stairs—reported by 13% (*ACS 2011-2015, Table S1810*). Other disabilities experienced by older Carlisle residents included cognitive difficulty (6%), hearing problems (10%), and independent living limitations (10%) (difficulty doing errands alone, such as visiting a doctor’s office or shopping). Individuals who have disabilities may have greater difficulty accessing transportation; thus, limiting their ability to participate fully in the community.

Figure 10. Percentage of Carlisle residents reporting at least one disability, 2015



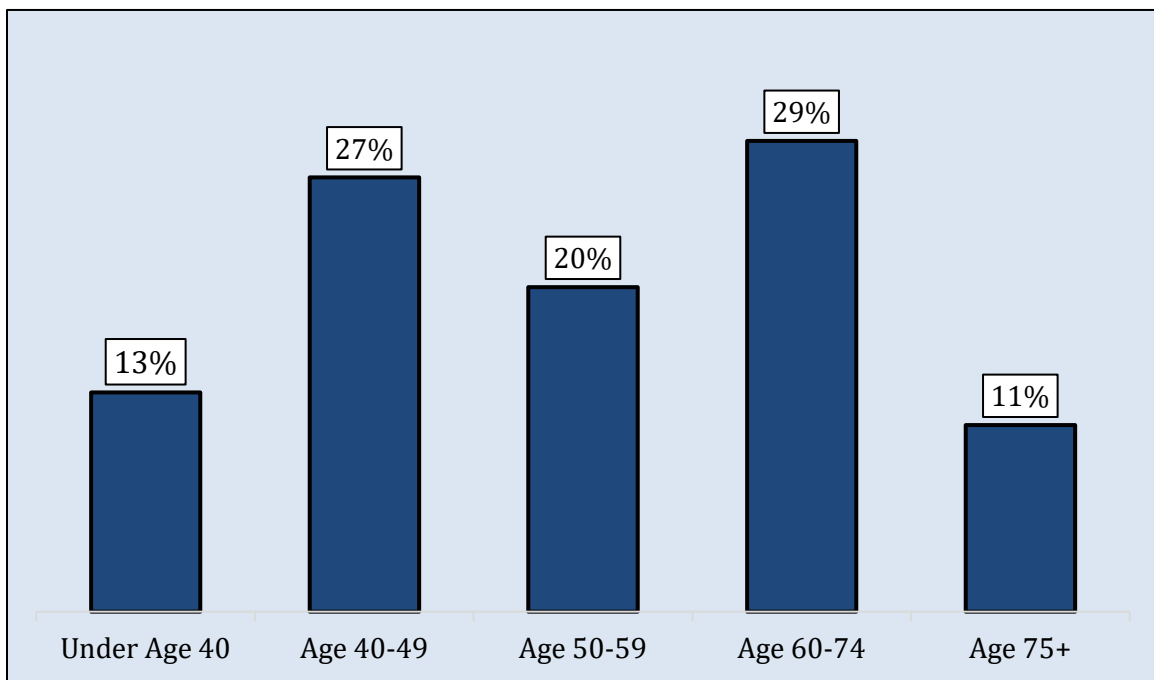
Source: American Community Survey, 2011-2015 ---5 Year Estimates, Table B18101.

Community Survey

Sample Demographics

Of the 3,808 residents of Carlisle age 18 and over (ACS, 2011-2015, Table DP05, not shown), 480 residents responded to the online survey. This represents a response rate of 13%. **Figure 11** illustrates that a large share of respondents (40%) included senior residents of Carlisle (age 60+). To account for uneven response rates in the survey data, we present selected results separately by age category (i.e., age 20-39; age 40-59, age 60-74, and age 75 or older). Complete survey results are presented in tables in **Appendix B**.

Figure 11. Age distribution of survey respondents



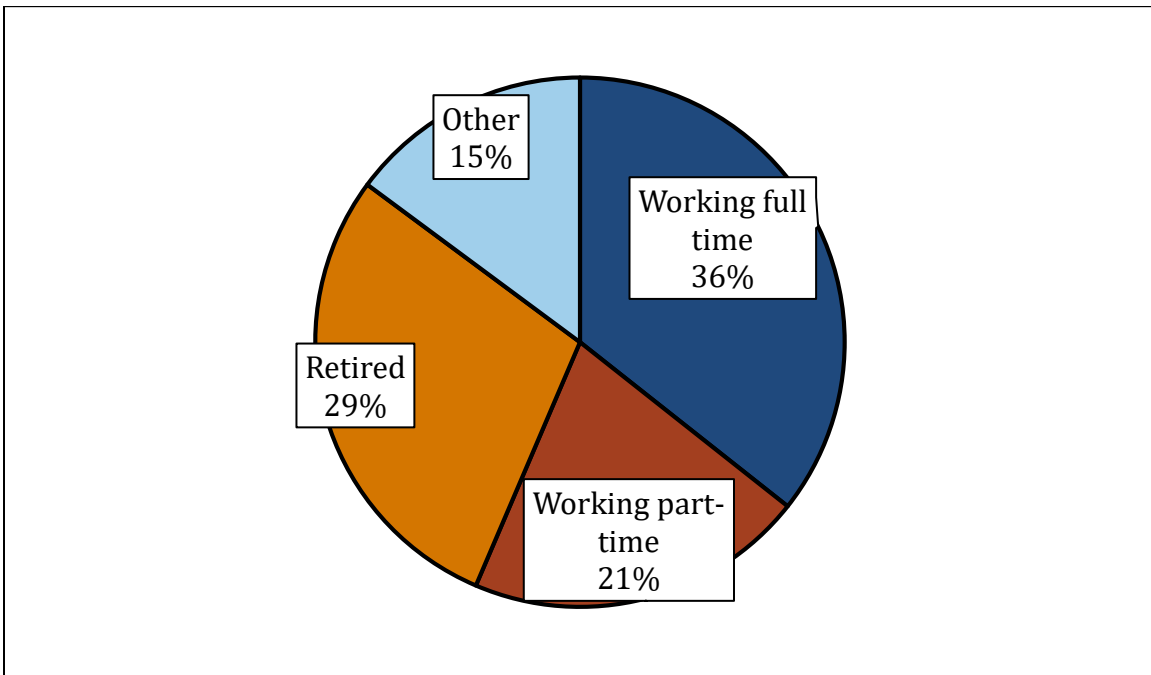
The majority of respondents (65%) to the resident survey were women. Specifically, 69% of respondents age 20-39 were women, 75% of respondents age 40-49, 69% of respondents age 50-59 were female and over 50% of respondents age 60+ were women (see **Appendix B**, Q33). By comparison, data from the American Community Survey (2011-2015) indicate that just 50% of residents under age 20-39 are women, 56% are age 40-49, 51% are age 50-59 and 50% of residents age 60+ female. Most survey respondents live with a spouse/partner (88%). Only 7% of survey respondents reported living alone. This can be compared to the American Community Survey that reports 13% of Carlisle residents living alone (ACS 2011-2015, Table S1101, not shown). In addition, 12% report living with an adult child. **These results**

suggest that survey respondents have greater representation of women and older residents than the population as a whole. Readers are urged to bear these discrepancies in mind as they read and interpret the remaining results.

The vast majority (87%) of respondents to the resident survey indicated that their race was White; 5% was Asian; 2% Hispanic; and 1% of respondents indicated that their race was Black (see **Appendix B**, Q34). Six percent reported that they “do not care to respond” to the question of identifying a race or ethnicity. Overall, this distribution of race/ethnicity aligns well with data from the U.S. Census Bureau that also indicates that 87% of all Carlisle resident are White and 1% are Black. Asian residents of Carlisle are slightly underrepresented among survey respondents as 9% of the population is Asian.

Over one-third (36%) of survey respondents reported working full-time and 21% reported working part-time. Over one-quarter (28%) of respondents reported being retired (see **Figure 12**).

Figure 12. Employment status of survey respondents



For many adults in Massachusetts, working either a part time or full time job is necessary or desired even after reaching traditional retirement age. About 15% of respondents indicated “other” as their employment status—this response included participants who were engaged in volunteer work, working as homemakers, individuals who are working as caregivers, individuals who are currently looking for work or those who are self-employed and work a variant schedule.

Not surprising, given the median household income for Carlisle residents, 82% of survey respondents reported that there was **not** a time in the last 12 months when they did not have money for necessary expenses like food or utility bills. Despite this large proportion of economically secure residents, this particular result also suggests that 18% of survey respondents are facing insecure economic times (see **Appendix B**, Q36 for details). In addition to the small sample of respondents reporting difficulty paying for things like utility bills or home repairs—there was a portion of survey respondents who reported that they lacked money for “other” expenses. These respondents primarily described economic limitations to things like travel, enjoying meals out with friends or family and other recreational or entertainment activities. This suggests that a faction of Carlisle residents are living just barely within their means and perhaps are forgoing activities that would improve their quality of life due to costs.

Aspects of Carlisle that Positively Impact Quality of Life

To capture features of living in Carlisle that impact quality of life for residents—the first two questions of the survey were open-ended. Respondents were invited to write freely about the strengths of Carlisle as a healthy place to live as well as to identify aspects of the community that would benefit from further attention, planning or

“Being surrounded by nature. It is quiet and peaceful, home feels like a retreat from the noisy world.”

thought. Several themes emerged from the open-ended questions on the survey that reflects an overall consensus among community members in regards to the quality of life in Carlisle.

The aspect of life in Carlisle that was most often named as positively impacting quality of life was the **natural amenities** of the area.



Most of the respondents mention it explicitly by reporting their enjoyment of conservation land and use of the walking trails. Some attributed the big, open spaces and quality of rural land to ensuring the serenity of small town, rural living.

Comments made by survey participants illustrate an understanding that privacy and safety go hand in hand. In fact, many Carlisle residents indicate that **privacy** is something they value about living in Carlisle, as they live with acres of land between them and their neighbors. Although Carlisle is a rural community, respondents also comment that they are within close driving proximity of services, social and recreational activities and public spaces. They describe this feature as a way of having both the rural and private qualities of Carlisle with access to necessary resources in neighboring communities, just a short drive away. In addition, respondents describe a sense of security about living in Carlisle, and they cite the **safety of the community** among one of the attributes of Carlisle that promote their quality of life.

Qualitatively, survey respondents mention the **Gleason Public Library as a valuable community space** and the **Council on Aging as a key resource**. They reported that events, happening almost daily, serve all ages. Community members also value the library as a rich resource for research, its volunteer opportunities, and for its regular programming. Similarly, respondents often mentioned the **high quality school system** in Carlisle that makes it a great place to live, especially for families with children.

“The fact that it's peaceful and quiet, and despite the fact that I do not know that many people there's a sense of community. People genuinely seem to care about this town and maintaining the quality of life here. The library is a wonderful resource.”

See **Table 3** for a list of common themes and illustrative quotes from survey respondents.

Table 3. Aspects of Carlisle that promote quality of life

Privacy and rural characteristics

- *“The rural nature of the town which has been preserved through careful growth management.”*
- *“The 2-acre zoning, the privacy, the natural environment (lots of trees and open spaces), the minimal commercial area.”*

Greenspace and Natural Amenities

- *“Living in a town that strongly believes in the conservation of land is one of the most positive qualities of the town. There are so many great hiking trails at every corner. One does not have to venture far to take a nice long walk with family, friends, and pets.”*

Education and Schools

- *“Now being the parent of very young children, the playgrounds and programming of activities for families. We didn't have kids before moving here but now that we do those two items make us appreciate Carlisle in a whole new light.”*
- *“The school is top notch. The children love attending this establishment.”*
- *“Great people; Fantastic school; Parent participation in the school”*

Existing programs

- *“Carlisle is a wonderful place to live...However, The COA is the icing on the cake. Every month I look forward to the upcoming events. All the spectacular people are so nice and helpful with everything, from fuel assistance, to transportation to important appointments, and to fun trips”*
- *“I would say my family enjoys many of the programs at Gleason Public Library and the Swap Shed at the Transfer Station as well as the various town functions like Old Home Day.”*

Sense of community

- *“The friends I have made in my 47 years here. And the new friends I continue to meet”*
- *“Despite the fact that I do not know that many people there's a sense of community. People genuinely seem to care about this town and maintaining the quality of life here.”*

Proximity to Boston and communities with other resources

- *“Nicely situated between cities of Boston and Lowell.”*
- *“It feels like living in the country but is convenient to everything.”*

Safety

- *“Sense of security. We feel safe in our home and enjoy the peacefulness of our community.”*

Ultimately, survey respondents expressed their perception that residents of Carlisle have broadly a shared value system when it comes to education, privacy, appreciation for the outdoors and environment and maintaining a sense of community.

Aspects of Carlisle that Interfere with Quality of Life

The second question of the web-based survey invited respondents to write about aspects of living in Carlisle that interfere the most with their quality of life. Perhaps the most commonly reported concern is the **cost of living** in Carlisle, namely the rising tax rate. Beyond the cost of living being a barrier to entering and remaining in Carlisle for residents with limited or fixed incomes like young families or older adults, many respondents also correlated a high tax rate to the lack of municipal services like sewer, trash pickup, or local water and expressed that this financial burden did interfere with quality of life in Carlisle.

Housing is another aspect of living in Carlisle that emerged as impacting the quality of life for Carlisle residents. Respondents articulate that young families and seniors may be particularly vulnerable to the limited housing options in Carlisle that are considered affordable. Few respondents suggested that increasing affordable housing options will bring down the local economy while others feel that developing housing that is affordable to young families, working adults and retirees will provide opportunities to enrich quality of life in Carlisle.

“...less and less sense of community, high cost of housing that limits diversity and ability of seniors to stay in town, no community gathering place.”

Transportation challenges were also discussed as being important to the quality of life in Carlisle. Carlisle is a car-dependent community. Survey respondents mention that getting out can be extremely difficult for those who do not drive, including some seniors. There are not many sidewalks in Carlisle, therefore the town is **not pedestrian-friendly**, separating neighborhoods and further isolating residents. The **lack of public transportation** adds to this concern.

These aspects of living in Carlisle both interfere with quality of life among current residents; but they can also be considered features of the community that limit the diversity of the community. For example, things like smaller housing options for downsizing, lack of transportation options and high costs of living may cause older residents remaining in Carlisle as they get older and/or for young families to join the community connects to another important apprehension among respondents: the lack of racial and economic diversity in Carlisle. Survey respondents did highlight the **homogeneity of Carlisle** among the aspects of the Town that interfere with quality of life.

See **Table 4** for a list of all themes and examples of illustrative quotes from survey respondents.

Table 4. Aspects of Carlisle that interfere with quality of life

Cost of living

- *“Maintaining the town and its atmosphere without overtaxing the residents and pricing out young families and older residents”*
- *“will be too old to keep up large property, and property taxes will be too expensive to sustain”*
- *“High taxes; not being able to age in place in our home and being unable to stay here when we get too old too maintain our home”*
- *“I also feel like the playgrounds in Carlisle need to be better maintained - we pay an awful lot in taxes and have no trash pickup, barely plowed roads, etc. - where is this money going?!”*

Lack of social opportunities

- *“How hard it is to get to know your neighbors especially if you don't have young kids. Living on busy streets means many of us don't really have neighborhoods and living on large properties (which was a major draw for us) means a lot fewer interactions with neighbors (for better and worse). It was very hard to connect with people in town before we had kids.”*

Walkability/pedestrian safety

- *“Lack of pedestrian friendly roadways/sidewalks.”*
- *“Lack of sidewalks. I wish my kids could ride bikes or walk to school, but the main roads are too dangerous.”*
- *“I wish it were safer to walk and ride bikes here. I would love to see our lovely footpaths extended to Rutland or farther down East St. and all the way to meet the Concord footpaths. We need to move safely!”*

Housing

- *“I worry that there is not enough moderate priced houses for younger families to move to Carlisle”*
- *“Lack of smaller housing for older residents who want to stay in town but don't need a big home anymore”*
- *“Concerned about the constant pressure of a 40B development that will upset the balance of what is special in Carlisle and also traffic on Carlisle roads trying to avoid the traffic on highways”*

Ticks

- *“Tick transmitted diseases are very prevalent in town. As a mother to young children who like to play outside a lot and as mother of pets, this is a constant worry.”*
- *“Ticks and mosquitoes make it challenging to enjoy the very reason we moved here”*

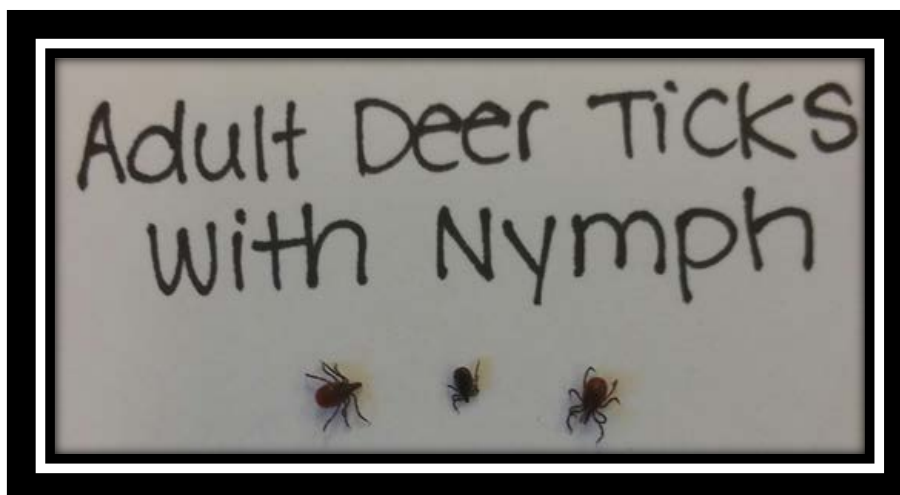
Transportation

- *“We don't have adequate transportation for our children and seniors”*
- *“With school age children participating in sports my wife and I spend a significant amount of time driving to and from Concord... as do many parents - everything is a minimum of a five mile drive and- it can be 30-35+ minutes one way.”*
- *“Transportation can be hard because Carlisle is farther than most convenient places”*

Lack of diversity and cultural opportunities

- *“I wish there was more going on - though I love the space I feel like Carlisle needs more - a restaurant or two being the most obvious missing thing.”*
- *“Lack of ethnic/racial diversity. Extravagant affluence.”*

Many Carlisle residents who enjoy the outdoors reported concern about **ticks and contracting Lyme disease**. They described fear for themselves, their pets and their families when they spend time outdoors and from the perspective of survey respondents, experiences with tick-borne illnesses are a major factor that interfere with their quality of life in Carlisle.



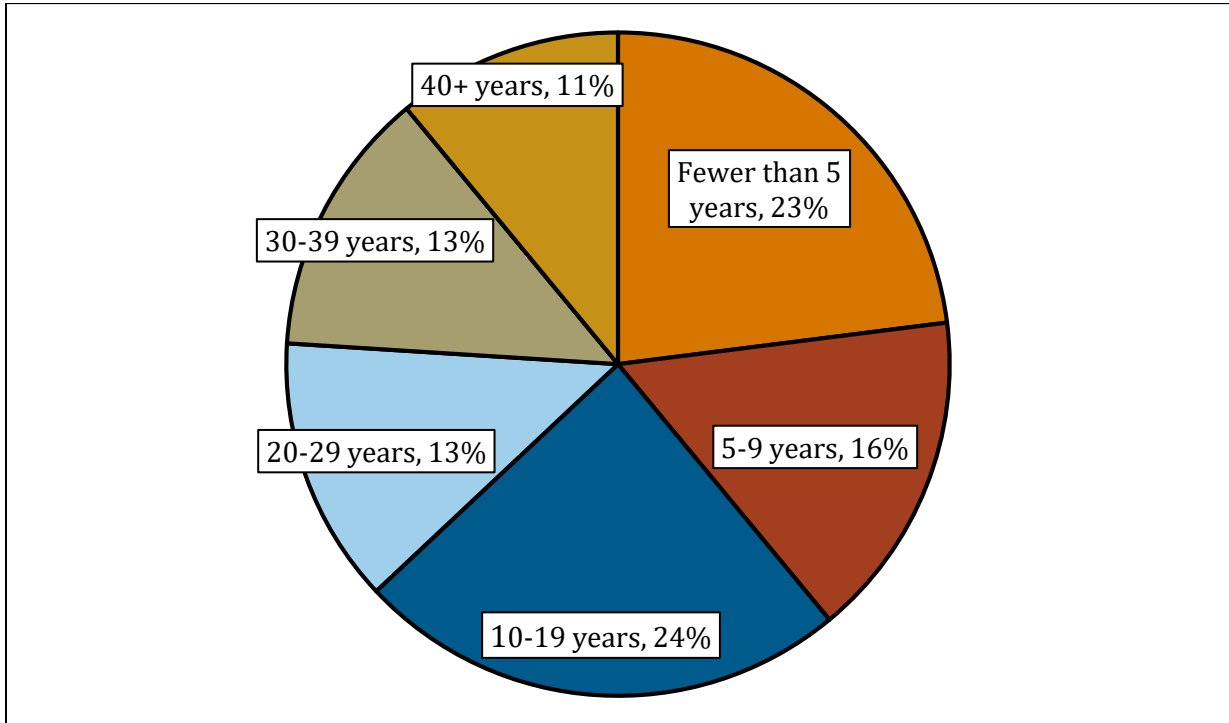
As mentioned before, some Carlisle residents enjoy the privacy of the town and the rural environment—in fact that is the reason that many residents chose to move to Carlisle. However, many respondents feel very isolated and that there are not enough events and public meeting spaces. Respondents voiced this **lack of opportunity to engage socially with their neighbors** and friends in a local setting is something that interferes with their quality of life. Suggestions named by respondents include a community center, more restaurants, and organized meet ups that utilize the conservation land (walking, running, etc.).

Community & Quality of Life

One outcome of communities being highly livable is that once residents are established, they tend to place high priority on staying in their communities. A noteworthy characteristic of survey respondents is the length of time that most have resided in the Town of Carlisle.

Figure 13 shows that 24% of survey respondents (n=432) have lived in Town for 30 or more years. Additionally, 39% of respondents could be considered “newcomers”, indicating that they have lived in Carlisle for less than 10 years. A portion of this “newcomers” group (11%) is aged 60+.

Figure 13. Number of years that survey respondents have lived in Carlisle



Additionally, 74% of respondents age 75+ have lived in Carlisle for more than 30 years, as have 55% of respondents age 60-74 (see **Appendix B**, Q37). These results highlight the observation that the change in the population of Carlisle is likely the result of in-migration of younger adults to Carlisle combined with aging in place of long-term residents.

Given the number of respondents who reported being long-time residents or are residents who just recently made the choice to come to Carlisle, it is not surprising that a large majority (65%) of respondents age 75+ and those age 40-49 (63%) are committed to remaining in Carlisle in the future (**Figure 14**).

Figure 14. “How important is it for you to remain living in Carlisle?”, by age group

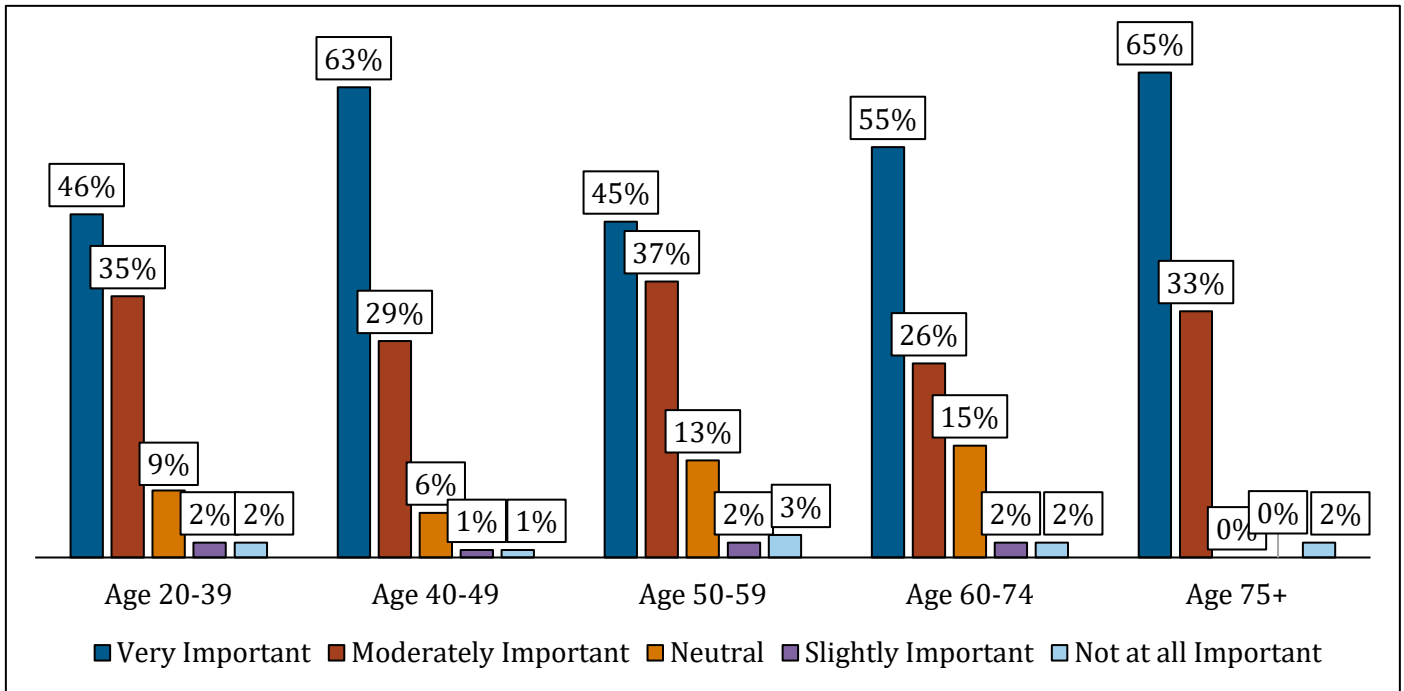


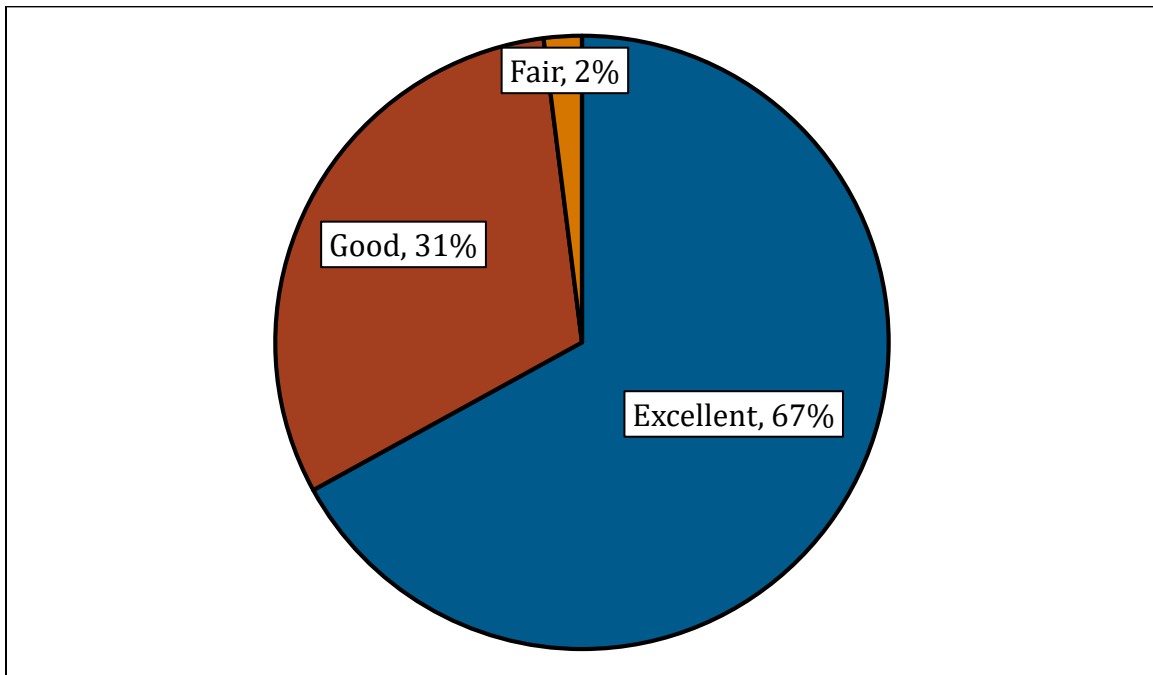
Table **Q4 (Appendix B)** indicates that over half of respondents find it “very important” to them to remain living in Carlisle and just 4% of respondents find it only “slightly” or “not at all” important to them. In 2010, a community survey conducted in Carlisle found that among a sample of 1,755 residents, 96% rated their quality of life to be “good” or “excellent”⁹.

⁹ Please contact the Carlisle Board of Health for copy of this report.

This is similar to results of the present study that found 98% of survey respondents (n=451) reported their quality of life to be “good” or “excellent” (**Figure 15**). Clearly, quality of life in Carlisle is high. This provides a strong basis upon which to advance the C4C initiative as the community continues to formulate ways to maintain this high quality of life.

In addition, 78% of survey respondents feel a sense of belonging in their community (see **Appendix B**, Q5. A portion of respondents (14%) are “neutral” when it comes to a feeling a sense of belonging—perhaps this sense of community does not contribute to their individual quality of life and therefore not a meaningful indicator of wellbeing for some in Town. Taken together, it is clear that most survey respondents are committed to staying in the community and maintaining a high quality of life.

Figure 15. Ratings of quality of life in the Town of Carlisle



Overall, residents who responded to the community survey were satisfied with the available programs and services made available to them in Carlisle. In particular, natural amenities (88%), local schools (68%), community engagement or volunteer opportunities (52%) were rated with the highest levels of satisfaction.

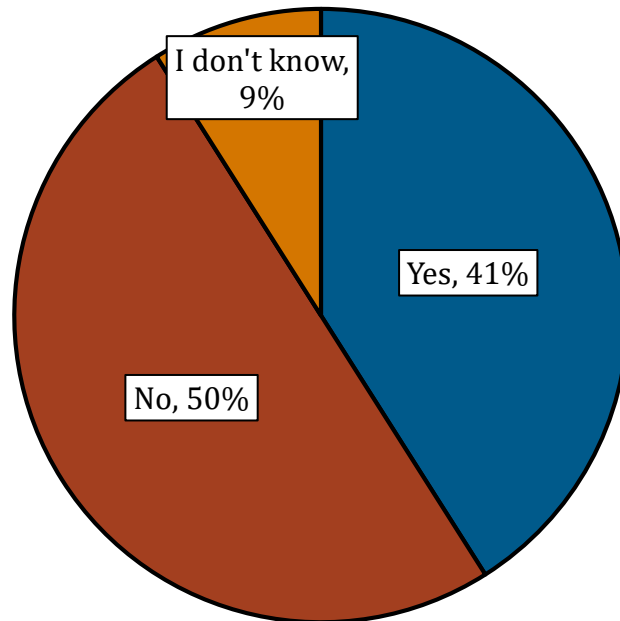
Economic opportunities in Carlisle (31%), the Town government (18%) and opportunities to socially engage with peers, family and friends (16%) received the highest rates of dissatisfaction when it comes to programs and services available in Carlisle (see **Table5**).

Table 5. Rates of satisfaction with programs or services offered in Carlisle

	Very satisfied	Somewhat satisfied	Somewhat dissatisfied/not at all satisfied	N/A
Health and wellness programs	20%	22%	10%	48%
Community engagement or volunteer opportunities	52%	30%	6%	12%
Opportunities to socially engage with peers, family and friends	43%	37%	16%	3%
Economic Opportunities (e.g., jobs, business opportunities etc.)	6%	12%	31%	51%
Natural amenities (e.g., to hike, fish or garden)	88%	8%	2%	2%
Town government in Carlisle	32%	45%	18%	5%
Veteran Services	2%	6%	3%	88%
Support groups (grief/bereavement, alcoholism or substance abuse, chronic illness)	5%	12%	4%	79%
Council on Aging programs and services	36%	10%	2%	51%
Programs for newcomers	10%	16%	15%	59%
Local Schools	68%	7%	4%	21%
After school programs	30%	17%	6%	47%
Recreational programs	37%	36%	8%	19%
Parenting support (e.g., parenting classes, child wellness, breastfeeding support)	7%	18%	8%	67%

When it comes to opportunities for social activity in Carlisle, results are mixed. For example, 41% of survey respondents agreed that there are sufficient places to go to socialize or for leisure activity in Carlisle while 50% disagreed on this point (see **Figure 16**). This dichotomy suggests that there are, perhaps, ideological differences in the need for public social gathering in Town.

Figure 16. “Are there sufficient places to go to socialize or for leisure activity?”



For example, some suggested a freestanding senior center or community center space. Others suggested additional cafes or restaurants to gather in, and they elaborated that a base of local businesses in the Town would increase both socialization and economic growth. A faction of respondents mention the desire for a swimming pool, health club or recreational facility in Town to serve as a place for physical activity and social engagement. **It is clear that the need for social centers is a major concern for many Carlisle residents.**

Among those 50% of survey respondents who reported that there are not sufficient places for social activity, we implored them to tell us what they would like to see in the community with respect to this particular topic. See **Table 6** for examples of the types of space this group of respondents suggested.

Table 6 “If no: What other places would you like to have made available in Carlisle?”

Suggested Strategies for Community Space

Community Center

- *“I think many of us would like to connect more but lack the space to do so.”*
- *“As has been said many times by others, a community center is long overdue in Carlisle. While it need not necessarily have swimming pools like Concord's Beede Center, a multipurpose center of that sort should be actively pursued.”*
- *“Something is needed so residents feel they can go to a place in town to congregate with other folks from Carlisle.”*

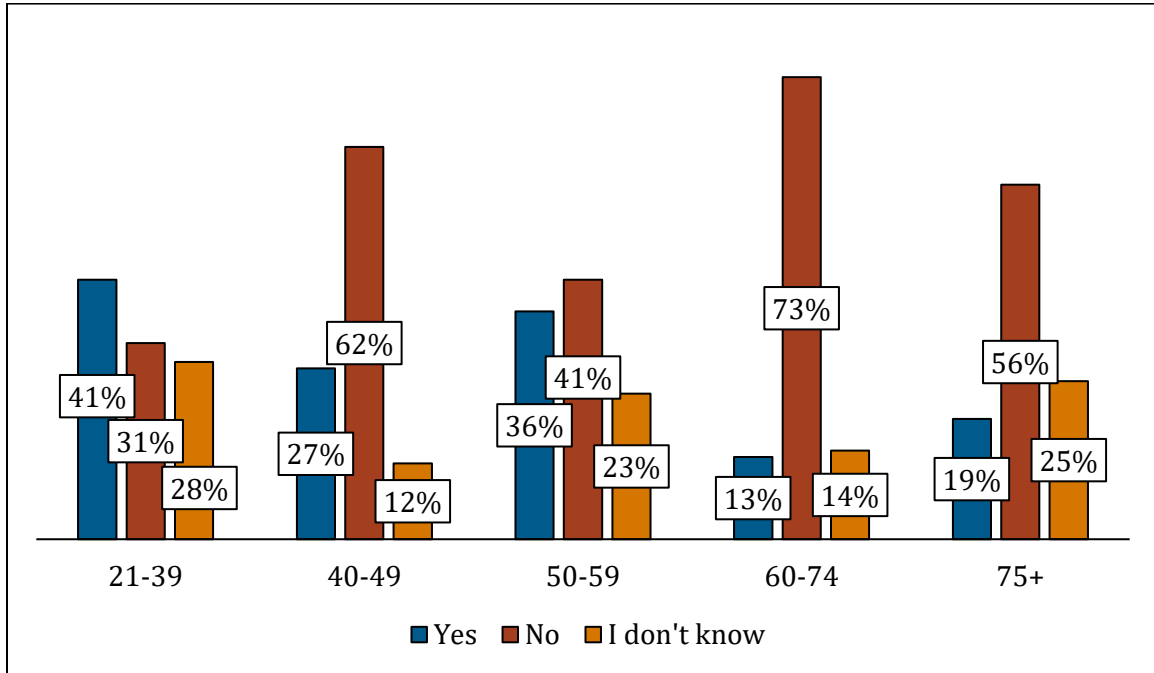
Local Establishments

- *“There is room for Carlisle to grow in the realm of social action and diversifying the town.”*
- *“It would be really great for the community if there was a tavern. It is such a shame that there is no local place to gather with others to have a drink/dinner and listen to music...It really would facilitate meeting others and gaining sense of community.”*
- *“Proper restaurant, proper shops, not just insurance agencies and realtors. More places for activities, or ability to use the school after hours better.”*



Over one half of survey respondents reported that there are not sufficient housing options available in Carlisle (see **Appendix B**, Q9). Further, **Figure 17** highlights that this sentiment is most common among respondents age 60-74.

Figure 17. “Are there sufficient housing options available in Carlisle?”, by age category



Housing costs and expenses associated with housing (e.g., utilities, property taxes etc.) were the most common unmet needs identified by respondents. Their comments further suggest that this high cost of living impedes the ability for certain populations to live there and results in a very homogeneous community. Some are worried about being priced out of Carlisle when they retire and that options for senior housing is insufficient. It is important to note that in October of 2017, Carlisle passed a new “Clustered-Housing Zoning” by-law.

Specific concerns about housing were collected and themes emerging from those comments are displayed in **Table 7**.

Table 7 “If no: What are the unmet housing needs in Carlisle?”

Housing Issues	
Availability and Affordability	
<ul style="list-style-type: none"> • <i>“We need more affordable housing options for aging population, town employees or those that find themselves in a situation where they can no longer afford to live here but want to stay because of life circumstance.”</i> • <i>“Affordable housing of any sort isn't available. Housing is incredibly expensive here.”</i> 	
As a Barrier to Diversification	
<ul style="list-style-type: none"> • <i>“There is room for Carlisle to grow in the realm of social action and diversifying the town.”</i> • <i>“There is no economic diversity in Carlisle because the home prices are inaccessible for most people.”</i> 	

In order to address issues of transportation and walkability, respondents were asked to express their concerns about a number of domains. **Table 8** shows that the aspects of transportation and walkability that residents most commonly reported had to do with safety. Specifically, over half of respondents expressed concerns about cyclists and pedestrian safety and 42% reported concerns with road safety. When asked, respondents communicated that their reasons for this concern are varied.

Table 8. “Do you have concerns about any of the following in Carlisle?”

	Yes	No	Sometimes
Transportation Options	33%	46%	21%
Traffic	18%	65%	18%
Road Safety	42%	38%	20%
Cyclists	54%	25%	21%
Pedestrian Safety	52%	25%	23%

When asked about traffic concerns, respondents brought up a concentration of commuters who cut across Carlisle to get to work in and around Boston. They are worried that cyclists and pedestrians are at risk of getting injured on the narrow, winding roads that drivers often speed on. Many suggestions were made for wider sidewalks and more of them as a way to create safer walking and cycling conditions.

Unlike in many urban centers, Carlisle’s public transportation does not alleviate issues with town accessibility. “We don't have mass transit access and our

transportation program we've designed to compensate for that needs a lot more funding to meet the needs of the elderly, disabled and any other members of the town who may want/need to use it.” Indeed, over half (54%) of survey respondents reported some concern about transportation options in Town. Residents of Carlisle, including some of the most vulnerable segments of the population, could benefit from more flexible and accessible transportation options. Specific concerns about transportation were collected and themes emerging from those comments are displayed in **Table 9**.

Table 9. Reasons for concern about transportation and pedestrians in Carlisle

Transportation Issues	
Pedestrians	<ul style="list-style-type: none"> • <i>“Car traffic on local roads is unsafe for pedestrians. Extending sidewalks on Rt 225 would help with enjoying town life and better access to town center. Cyclist need to be more careful in sharing the road.”</i> • <i>“At crosswalks on 225 it can be very dangerous for pedestrians as drivers are not usually expecting to stop. I have seen several cars get rear-ended at a crosswalk endangering the people in the crosswalk.”</i>
Traffic	<ul style="list-style-type: none"> • <i>“Carlisle is on a commute path for residents of other towns and they frequently speed through neighborhood streets. The lack of sidewalks on the rural roads make it dangerous to walk in some areas (e.g., School St).”</i> • <i>“Concerned too many commuters are using Carlisle roads as their primary commuting route everyday. Street traffic volume and speeds seems to increasing rapidly during morning and evening rush hours.”</i>
Public Transportation	<ul style="list-style-type: none"> • <i>“We recently moved to Carlisle from a town that had a dial-a-ride program. As we age, we would like to have a similar option available in Carlisle.”</i> • <i>“I admit I don't know enough about the Senior bus, but other than the police, I'm not aware of a service that would meet a short-notice need for transportation that is not a medical emergency requiring an ambulance. I don't consider Uber or Lyft to be safe alternatives. I can only rely on my friends and neighbors so many times. The bus is fine if an appointment can be planned ahead, but if a medical trip is needed unexpectedly, there is a gap in options for residents to find service.”</i>

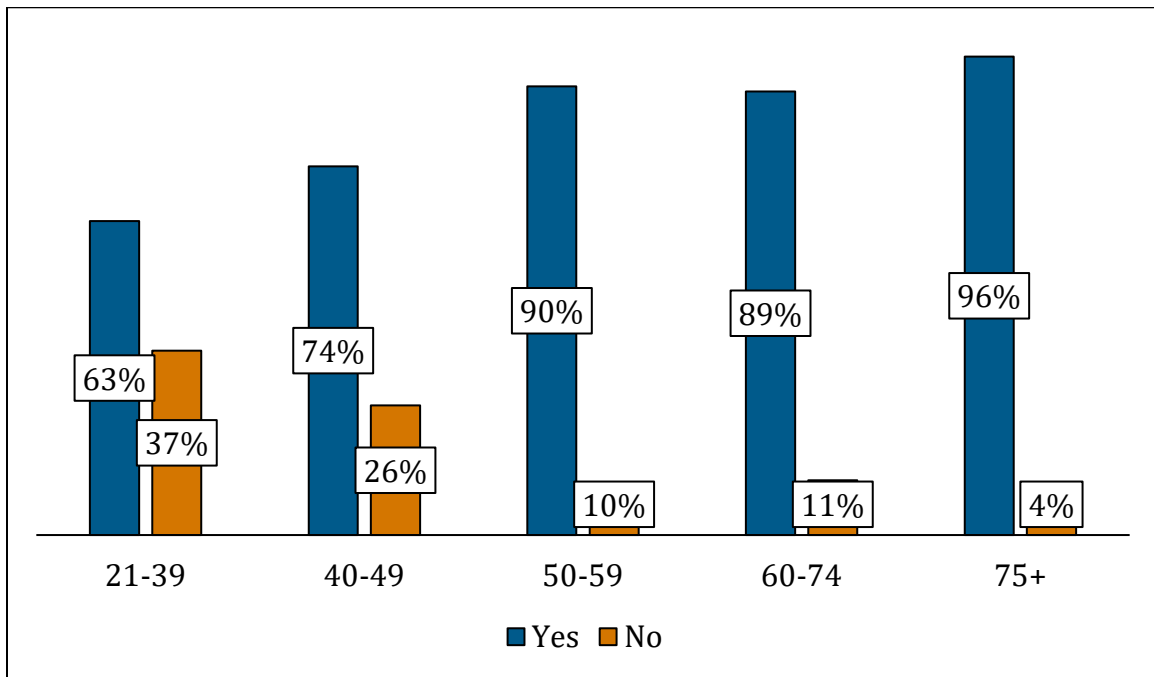
Carlisle is considered a safe community; 87% of respondents reported that they never or rarely feel unsafe. Although 86% of respondents reported never experiencing

discrimination, it is important to acknowledge that 6% reported being discriminated against because of their income (see **Appendix B** for detailed results).

Civic Engagement & Communication

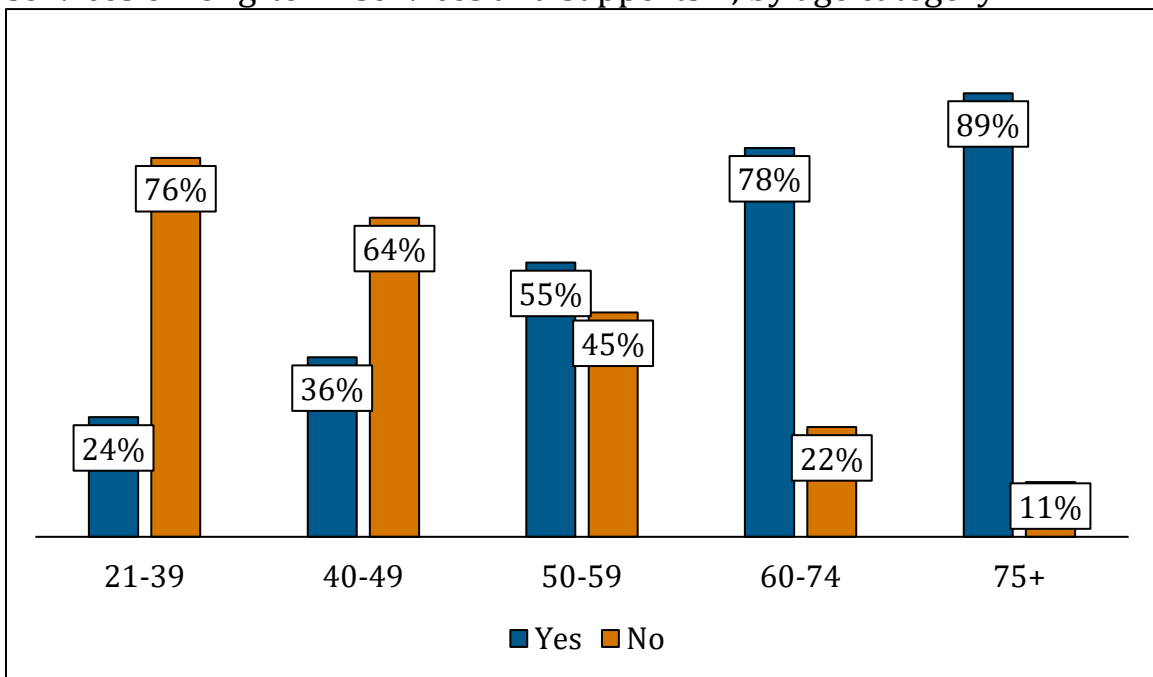
Community resources of any kind (e.g., cultural, historical, natural, social or financial) are only as valuable as they are known. Thus, communication is an important facet of a healthy community. When asked, most respondents reported knowing what to do in the event of a weather or other local emergency (see **Figure 18**). However, significant portions of younger residents reported not feeling informed--37% of residents age 21-39 and 26% of those age 40-49.

Figure 18. “Do you feel informed about what to do in the event of a weather or other local emergency?”, by age category



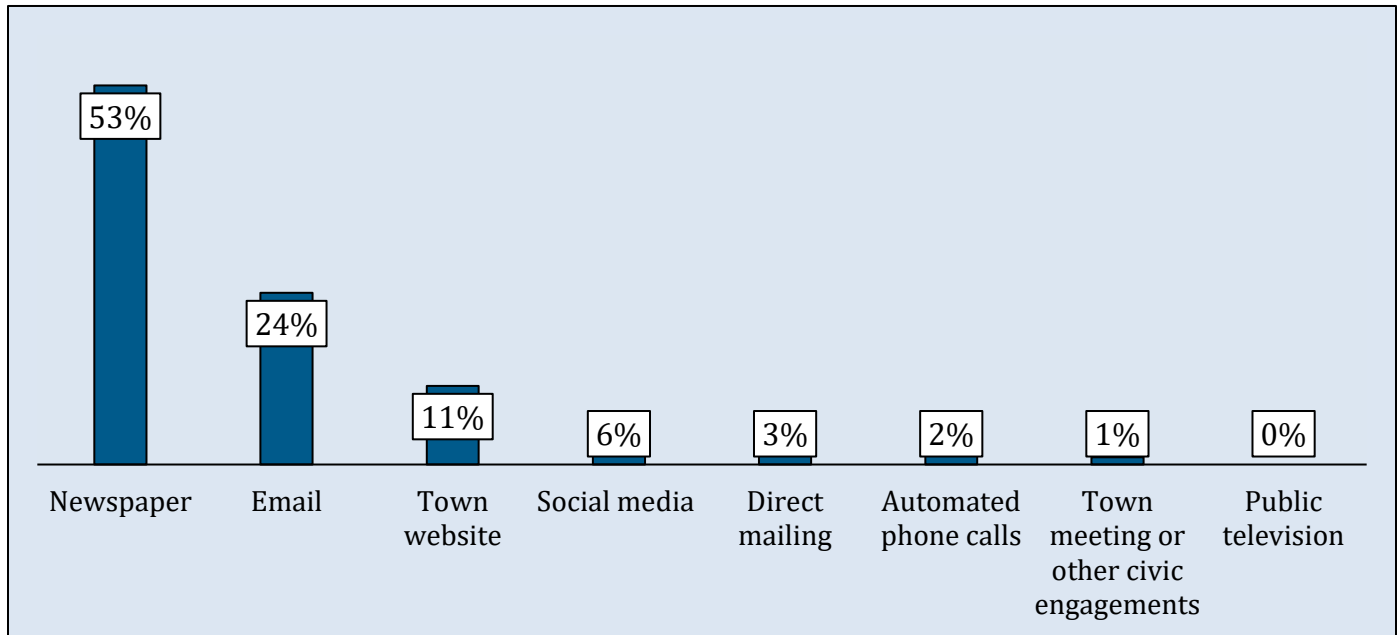
Similarly, respondents were asked if they are familiar with whom they should contact for information about social services. **Figure 19** illustrates that most respondents over age 60 do know who to contact and younger respondents are less familiar with this information. Although older residents may have greater needs for such social services, and thus require being more familiar with these social services, it does point to an unevenness in the community when it comes to information and communication.

Figure 19. “Would you know who to contact in Carlisle should you or someone in your family need help accessing social services, health services or long-term services and supports?”, by age category



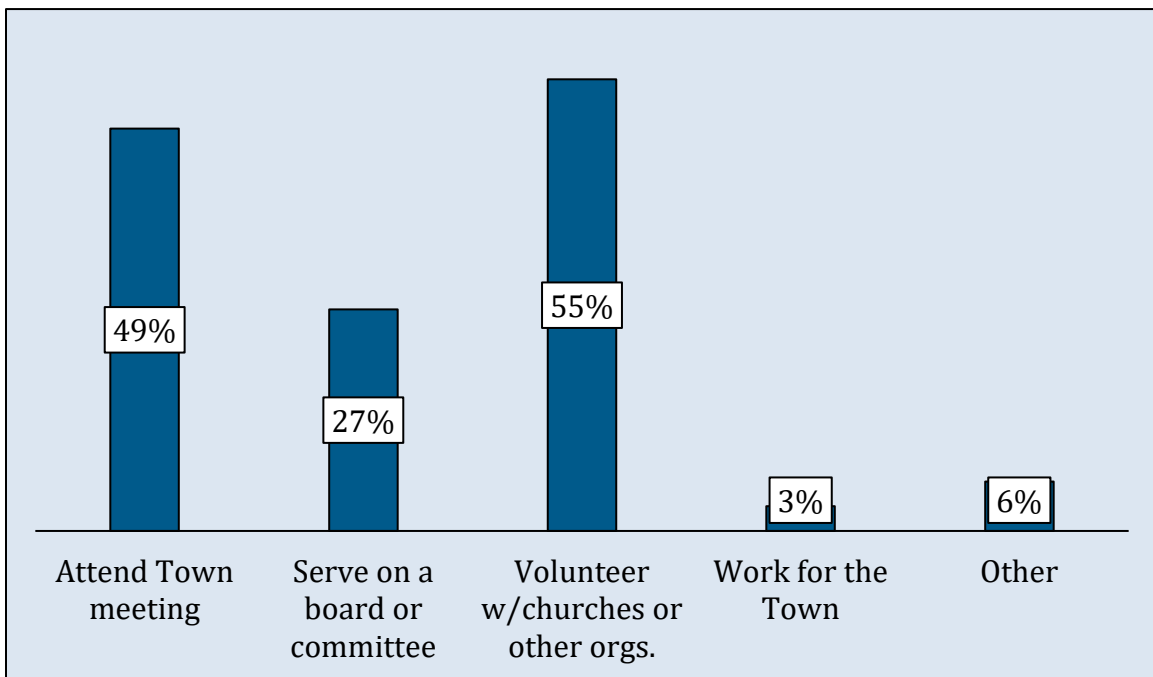
Carlisle is fortunate to have the Carlisle Mosquito, a free local newspaper that is delivered weekly to all households in town. **Figure 20** indicates that this medium, newspaper, is the most (53%) preferred source of information by survey respondents. Nearly one quarter (24%) of respondents prefer to receive information by email.

Figure 20. “Which of the following is your most preferred source of information about the Town of Carlisle?”



At the time of the survey, 26% of respondents were not participating in any civic activities in Carlisle (see **Figure 21**). Among these respondents, 40% reported that the reason they are not involved is because they lack the time and 13% reported not being interested in participating in civic activities. A portion of these respondents who are not currently civically engaged reported that the reason for nonparticipation was for some “other” reason. Cited among these “other” reasons for not participating in civic activities in Carlisle: a lack of information about available opportunities and related time commitment, hesitation about feeling welcome to join, and lack of time or energy to be involved civically due to familial responsibilities.

Figure 21. “Which of the following civic activities are you currently participating in?” (Check all that apply)

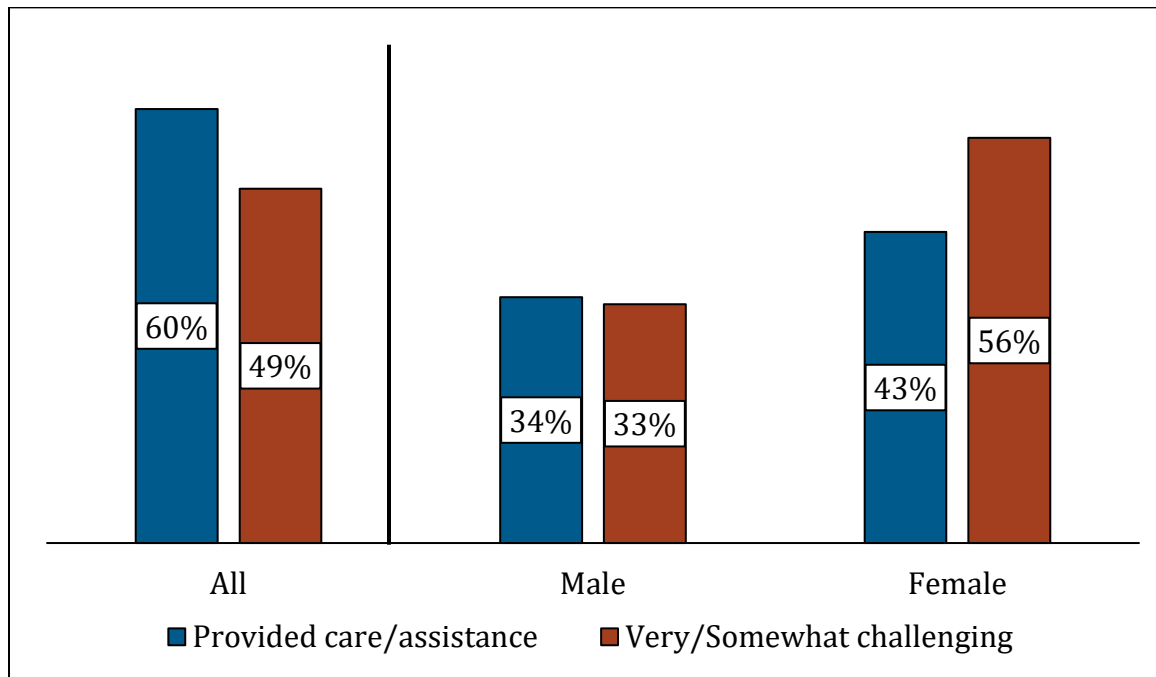


Social Networks & Caregiving

In many cases, older residents in the Town of Carlisle provide informal care and assistance to individuals who are frail or living with a disability or chronic illness while managing other aspects of their lives such as family and work.

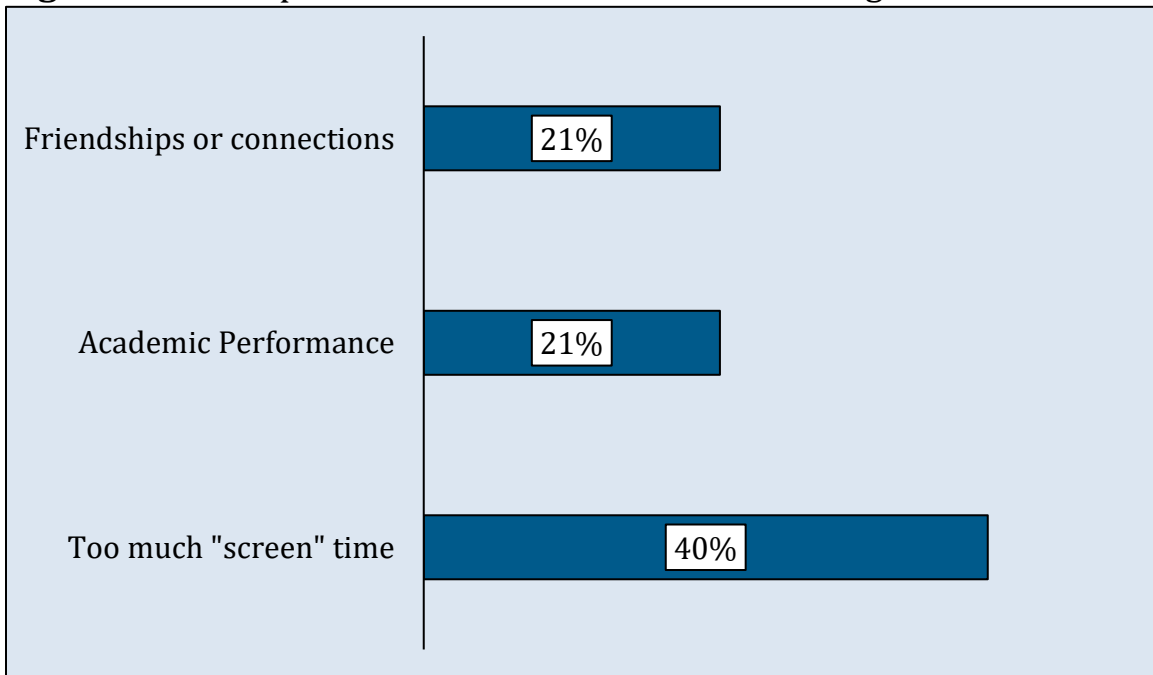
Indeed, over one half (60%) of survey respondents reported providing care to a sick or frail family member; and among these caregivers, nearly half (49%) reported that their experience was very challenging or somewhat challenging (see **Figure 22**). This finding highlights the need for attention to be paid to caregivers in Carlisle as it is a significant aspect of life for many residents.

Figure 22. Caregiving experience in the 12 months and degree of challenge, by gender



Respondents were asked about their concerns related to children living in Carlisle. Among these concerns, the most frequently reported concerns were children spending too much time in front of a “screen” (e.g., cell phone, pad, computer or television), concerns about pressure related to academic performance and friendships or other social connections among children (see **Figure 23**).

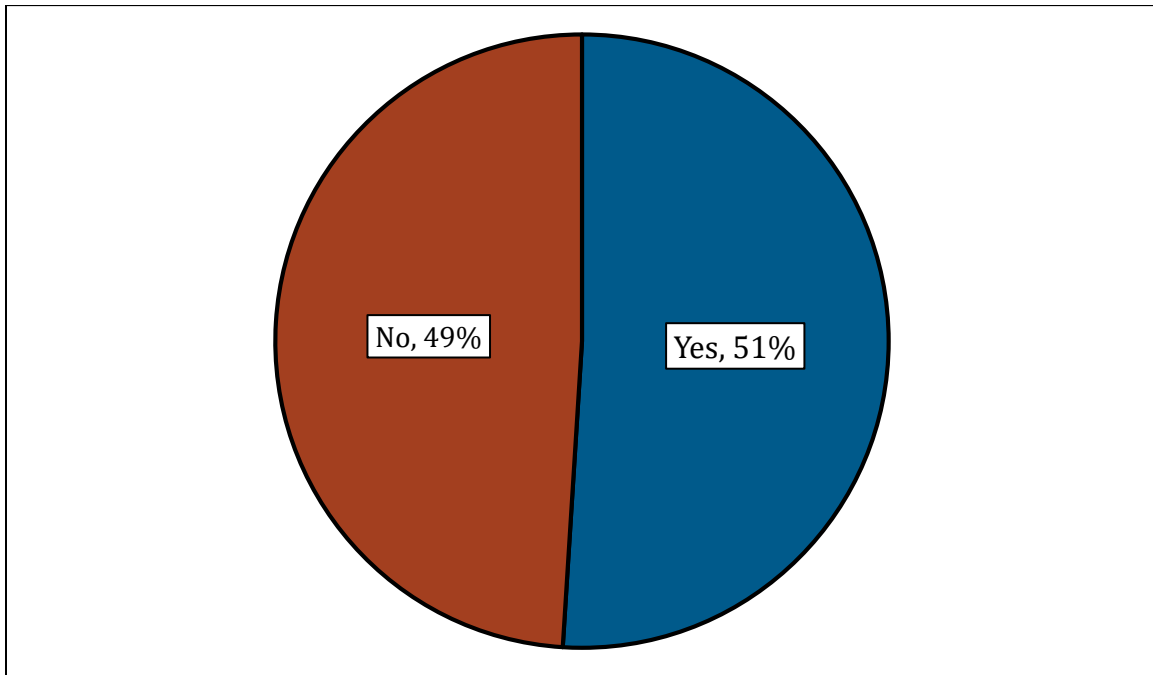
Figure 23 The top three concerns about children living in Carlisle



**Note: 49% of respondents replied “not applicable, I do not have children age 0-18”*

Figure 24 indicates that nearly one-half of survey respondents do not have a family member living nearby to call on for help. In many cases, particularly when friends and family are not living nearby, Carlisle residents will seek support and guidance from the Town or via other community resources to manage situations in which help is needed.

Figure 24. “Do you have family members living within 30 minutes of your home on whom you can rely for help?”

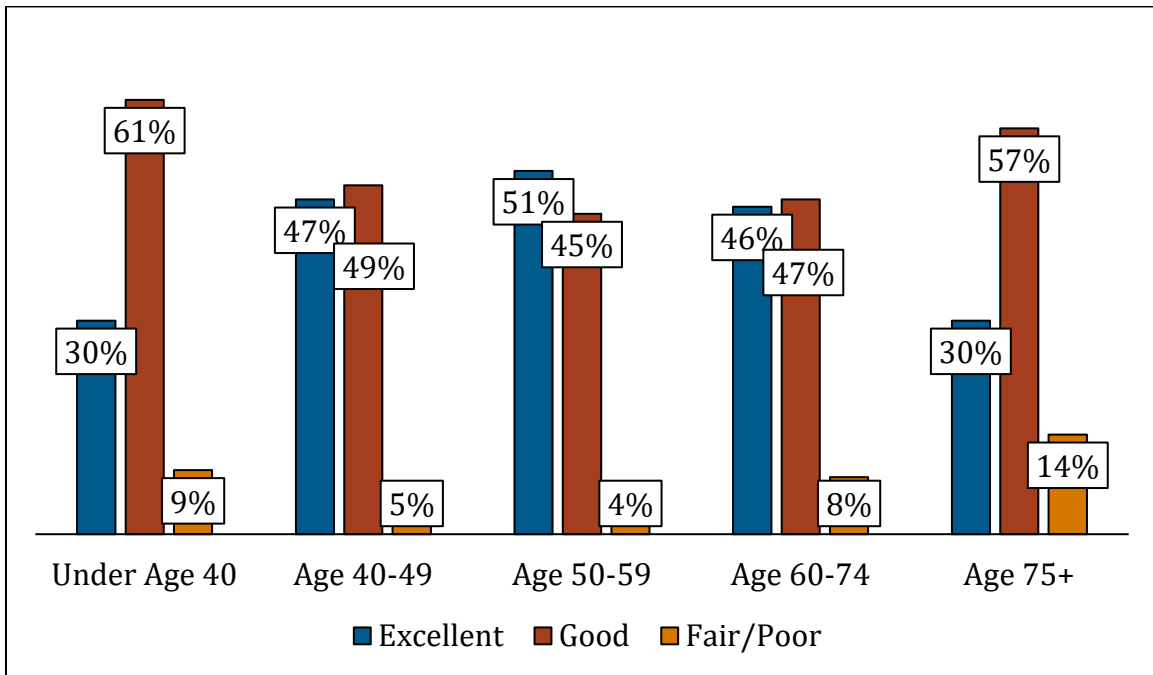


Health and Well-being

Large shares of survey respondents reported good physical health across all five age bands. The majority of respondents rated their health as “excellent” or “good”, whereas just 6% rated their health as “fair”, and only 1% said their health was “poor” (**Appendix B, Q21**).

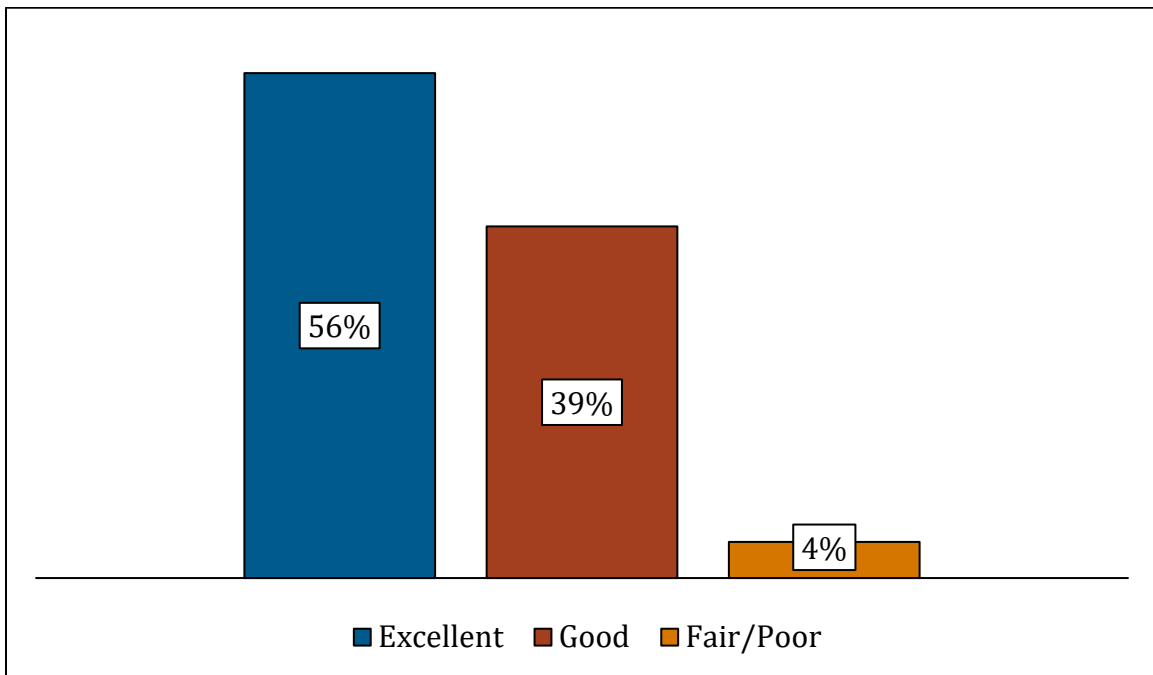
Below, self-ratings of physical health by age category are shown (see **Figure 25**). Nearly all respondents age 50-59 (96%), 40-49 (96%) and 21-39 (91%) reported “excellent” or “good” physical health. Within the senior age cohorts, 93% of respondents age 60-74 and 87% of respondent’s age 75+ reported “excellent” or “good” physical health. This suggests that most of Carlisle’s population is in good health, though segments of the older adult population, especially the oldest old, appear to experience some declines in their health status.

Figure 25. Survey respondents’ self-ratings of physical health status, by age category



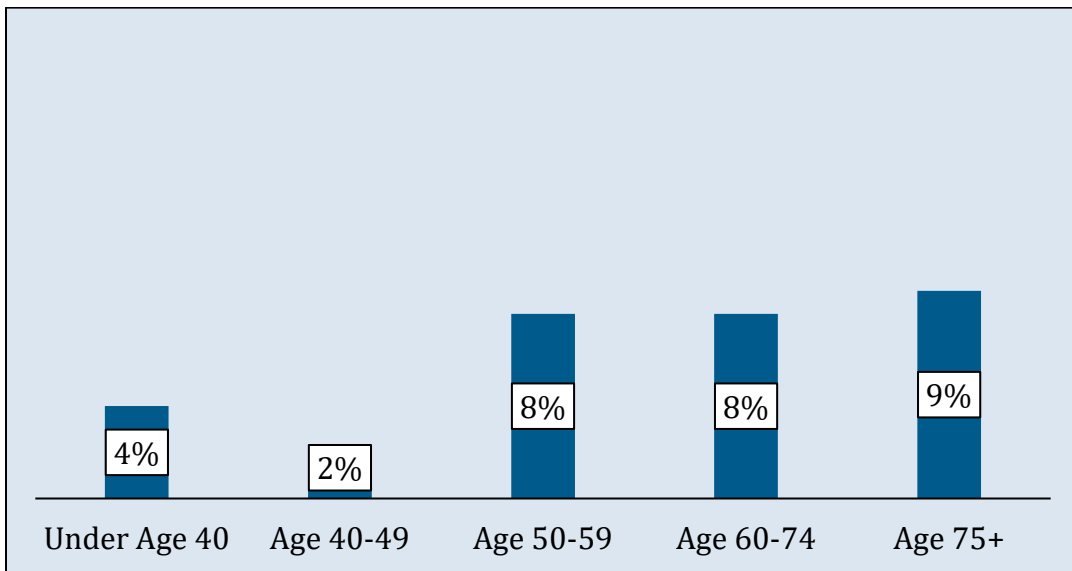
Similarly, nearly all survey respondents (95% or n=416) reported “excellent” or “good” emotional health. The majority of respondents rated their health as “excellent” or “good”, whereas just 4% rated their health as “fair” or “poor” (see **Figure 26**). Self-ratings of emotional health by age category show consistent patterns, suggesting that most Carlisle residents view themselves as being in good emotional health (see **Appendix B, Q22**).

Figure 26. Survey respondents’ self-ratings of emotional health



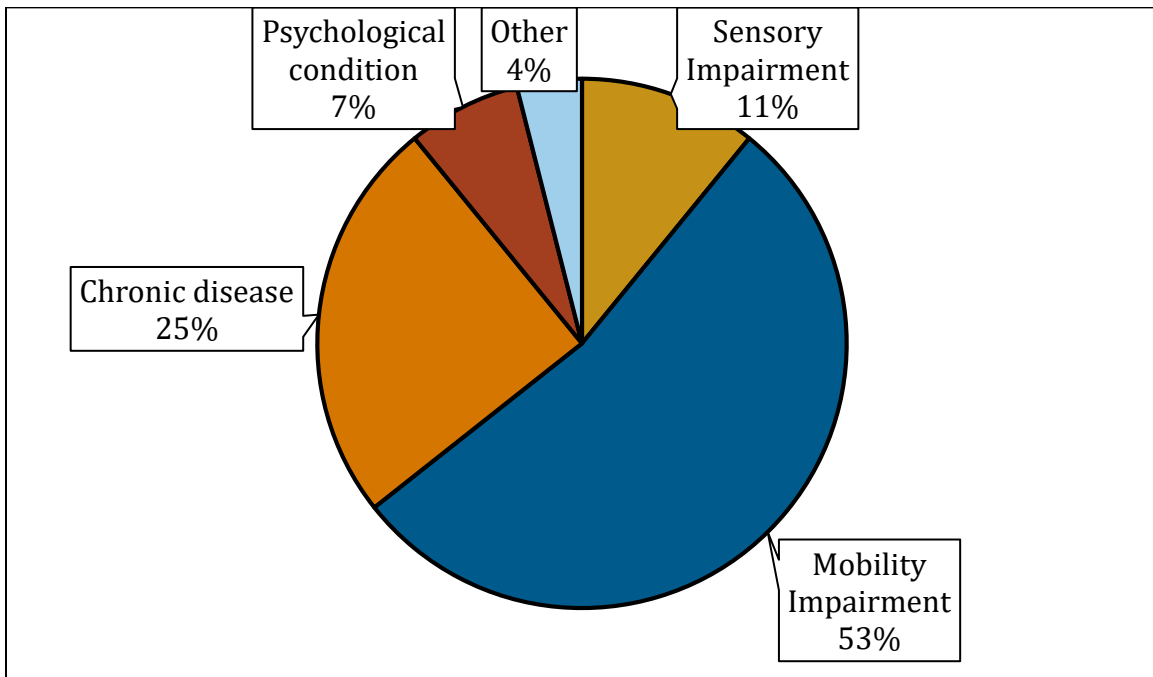
Beyond reflecting the need for medical care, self-ratings of health may also be indicative of the need for assistance with various activities including getting out of the house and participating in the community. **Figure 27** suggests that small portions of survey respondents reported a physical impairment that limits their participation in the community—regardless of age. Overall, only 6% of respondents reported having an impairment (**Appendix B, Q23**).

Figure 27. Rates of physical impairment that limits participation in the community, by age category



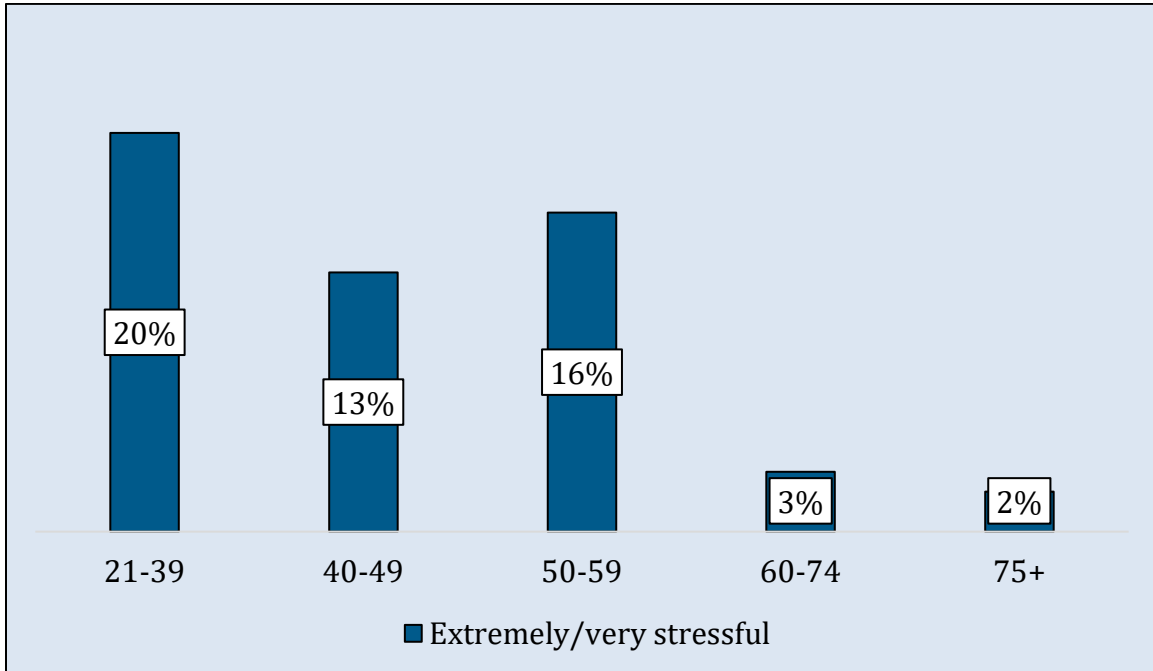
Among those with such a disabling condition, over half described this impairment as being a mobility limitation, 25% reported living with a chronic illness, 11% reported as sensory impairment like hearing or vision loss and 4% reported that a psychological condition prohibited them from participating in the community (see **Figure 28**).

Figure 28. Types of physical impairment that limits participation in the community



Feelings of stress have been consistently and significantly linked to poor physical and mental health outcomes (Thoits, 2010). Thus it is important to notice that one in five survey respondents age 21-39 reported that most days are “extremely stressful” or “very stressful” (see **Figure 29**).

Figure 29. Percent who reported that most days are “extremely” or “very” stressful, by age category



Over one-third of survey respondents reported that their friends or family have been affected by suicide (see **Figure 30**), and 49% know someone who has been affected by substance abuse (see **Figure 31**).

Figure 30. “I have friends or family members who have been affected by suicide.”

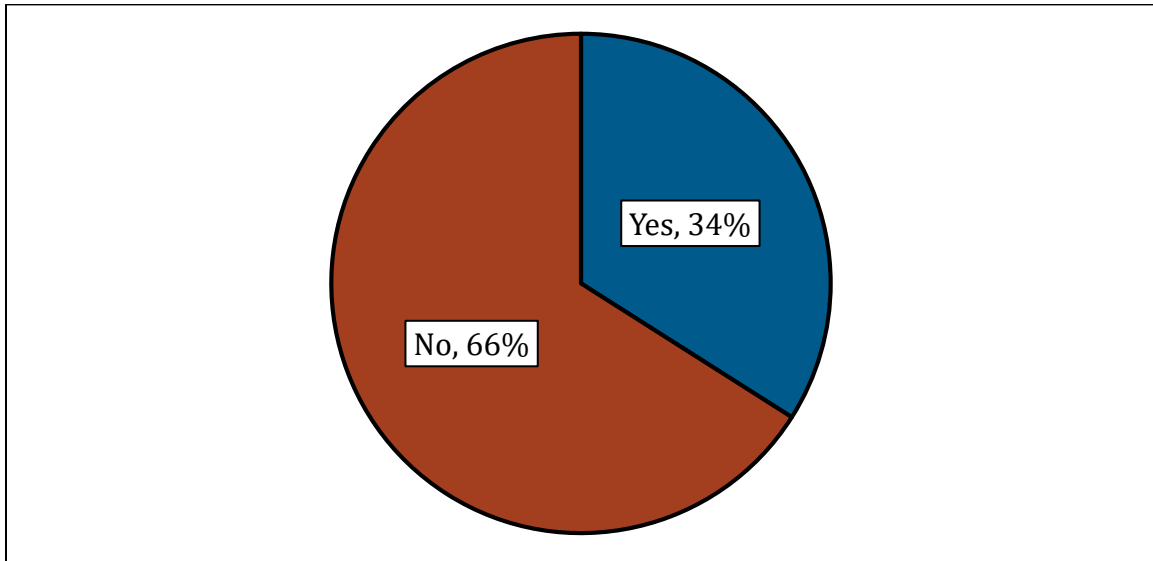
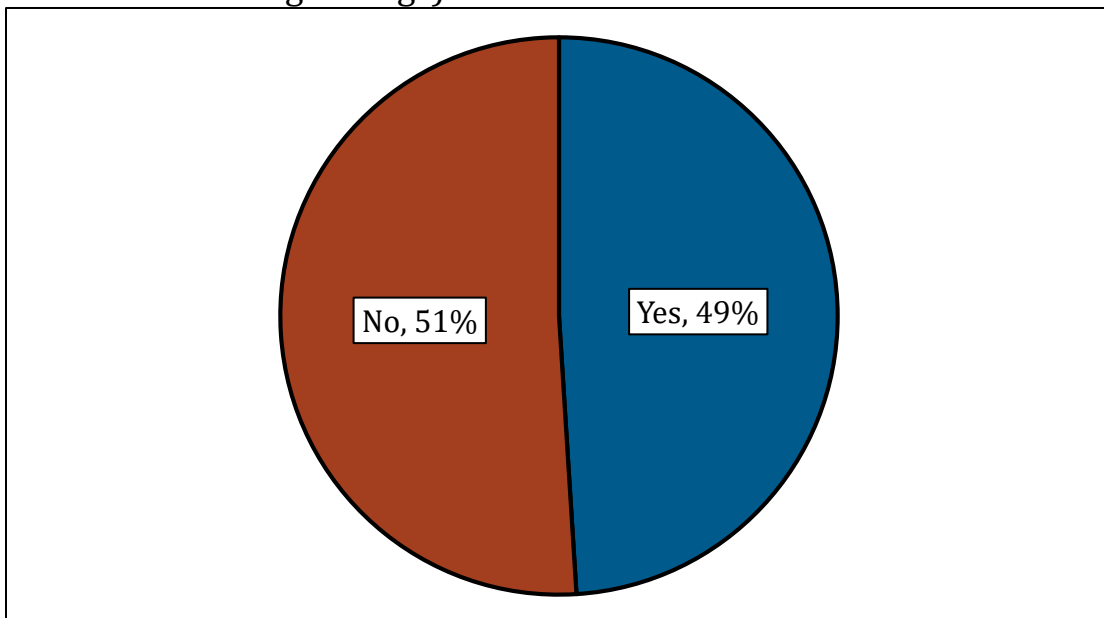
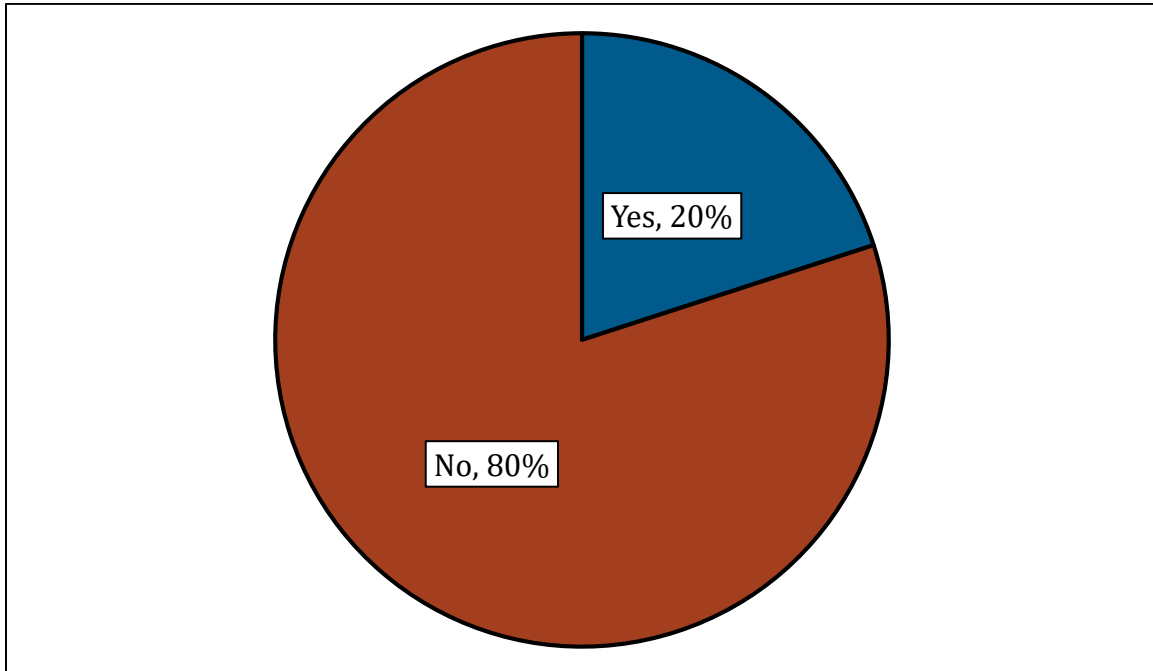


Figure 31 “I have friends or family members who have been affected by substance abuse (such as the misuse or abuse of alcohol, prescription medication or illegal drugs).”



One in five survey respondents know someone affected by violence or domestic violence (see **Figure 32**). Although we cannot know if these affected individuals reside in Carlisle, we can discern that families in Carlisle are dealing with the impact of these social and behavioral health challenges in their daily lives.

Figure 32. “I have friends or family members who have been affected by violence or domestic violence.”



Focus Groups

Focus Group #1: Community Stakeholders and Town Agencies

Focus group #1 consisted of public officials (including the Finance Director, Board of Selectmen member, representative from the Board of Health, the Superintendent of Carlisle Public Schools, a member of the Land Stewardship Committee, Chair of the Housing Authority, and the chair of the Master Planning Steering Committee), a representative from a local faith group in Town, and public safety personnel (including representatives from the Fire Department and the Police Department in Carlisle).

The discussion began with a question to participants about what constitutes a “healthy community”. According to a representative of the Land Stewardship Committee, the connection between outdoor spaces and health is clear. Not only

because of the opportunities this natural space provides for physical activity; but also because it brings a sense of peace and relaxation to those who appreciate it—this participant likened the connection between nature and health as practically spiritual.

Another participant spoke about the importance of social connections to the health and wellbeing of a community and its residents. It was acknowledged by the group that there is a sense of community in Carlisle; but there are not sufficient opportunities to deepen this sense of community. A challenge associated with diminishing connectedness is a perceived high turnover among residents. This is intensified by the lack of geographic proximity of neighbors and the dissolution of landline telephones. One spiritual leader from the community goes further to say that a sense of belonging, a deeper connection than simply social interaction, is important to the health of community. This participant references the fear and anxiety expressed by members of the congregation about leaving Carlisle, a place they have belonged for most of their adult lives, and having to leave the community to find affordable, accessible and more manageable housing as they get older.

Mental health was raised as being important to consider as a facet of community health, particularly when it comes to aging in place. One participant raised the issue of affordability of living in Carlisle and the mental health implications of rising costs of living. Taken together, participants of this group generated a concept of community health that encompasses spirituality, mental health, social connectedness and the opportunity to remain in a community in which an individual feels a sense of belonging.

"I think there is a mental health component to that... a lot of people really can't, realistically, afford to live here without an income, say when their income is fixed. How do they look ahead 10, 20 years and imagine themselves in this town? It's stressful, I think, and there's a health component to it."

Next, participants in Focus Group #1 were asked about the barriers to quality of life for residents of Carlisle and their families. The emergent themes are described in the next sections.

Housing Diversity

Residential development of Carlisle is cited as both a barrier to quality of life in Carlisle as well as something that could benefit current residents. For example, much of the residential development in Carlisle is skewed towards expensive homes with a lot of square footage—leaving very few options for anyone wishing to downsize and remain in Town or those who may consider moving to Carlisle seeking a smaller home. In addition, this development stands to change the very characteristics of the community that residents of Carlisle value (e.g., open spaces and quiet rural atmosphere). Further, most of the participants of this discussion, residential development was limited to single-family homes. They discussed the possibility of developing some more diverse housing stock that could draw new residents to Carlisle and allow current residents an opportunity to stay in the community they

love without becoming burdened by the maintenance of their property. It was also linked to the lack of cultural and socioeconomic diversity of Carlisle residents, which is also viewed by focus group participants as something that limits Carlisle in terms of community strength and quality of life for residents.

Transportation

According to focus group participants, people living in the Town of Carlisle are dependent on cars because there is no public transportation in town. They recognized that creating public transportation options in Town should be a priority in order to improve mobility for those who do not drive. Focus group participants were concerned about the implications of having no public transportation options in Carlisle for the seniors and individuals with disabilities living in Town. Not only does it make it hard for them to get to medical appointments, but it constrains their freedom of movement and independence.

This auto-dependence also impacts parents in Carlisle who are forever driving to and from Concord or other neighboring communities. Due to lack of sidewalks and off-road paths, this also prohibits children from riding their bicycles as a mode of transportation or just to get around Town to engage socially with their peers.

“But, you know, it's hard to allow children to have physical freedom if we're too afraid for their safety, and I think that getting from point A to point B is a big issue in Carlisle.”

It is not surprising that Carlisle is a destination for cyclists with its winding roads and beautiful landscape. However, the narrow roads in Town combined with through traffic to Concord and Boston create a treacherous environment for the riders and those who seek to share the road with them.

I've never felt so scared walking, and I take a walk every day, and I understand why the only cyclists are very serious cyclists in a mob because it's too dangerous otherwise.

Natural Resources

Despite the immense natural beauty and public access to conservation land in Carlisle, a fear of tick-borne illnesses is a real threat to quality of life for residents, according to this group of focus group participants. It prohibits parents from feeling comfortable with their children playing outside and also prevents them from utilizing the outdoor spaces for exercise and recreation.

In addition, the issue of water supply and water quality were raised by this group of community stakeholders as potentially becoming a serious health concern for the Town. Each residence has an individual water supply and the Town offers bi-annual testing of water for toxins and pollutants, however, not all residents capitalize on this opportunity—which leaves the community feeling skeptical of how their neighbors water may be influencing their supply. Further, these focus group participants acknowledge that there is not a secondary plan for water supply when the individual wells run dry in times of a severe drought.

“...everyone we know, literally, every family we know has somehow been affected by tick-borne illness”

Social Connectedness

Despite the importance of social connection to community health that this group described at the start of the conversation, they also cite it as a barrier to quality of life for community residents. First and foremost, they describe the sheer lack of spaces to gather in Town. This is important in a Town like Carlisle that has a dispersed residential population and subsequently there are not natural opportunities for neighbors to connect with neighbors.

“The transfer station is the social hub of the town.”

“You walk out of the house – “Hey, how you doing?” ... None of that happens around here, and I don't love that aspect of the town.

The focus group participants discussed how social activities must be planned in advance and often center around children or programs related to the schools. Subsequently, older residents,

those without kids in school, and those without families in the area are thought to experience additional barriers to social connections in Town. Given that this group emphasized social connection and a sense of belonging as important components of community health, these barriers to social connection are certainly priorities for action towards a healthier Carlisle.

“I remember those long, hot summers, when he was 7 years old and we were bored out of our heads, and we were wandering around 'cause there wasn't a friend in town and not knowing where to go”

Mental and Behavioral Health

Secondary students from the Town of Carlisle attend Concord-Carlisle Regional High School. Focus group participants say that the dynamic of entering a regional school after years of being a part of the tight-knit Carlisle Public School raises the concern of Carlisle students struggling socially and even being bullied. Relatedly, one focus group said that there is an added academic pressure for students in Carlisle and describes the community as a “very high achievement community”. The connection between this pressure to succeed and related stress on children in Carlisle and issues of mental health and even suicide was made.

...the children were asked what they wanted to focus on next year, and at the top of their list was death. ...seeing the heroin epidemic and the suicide, you know, if it's not in this town, it's everywhere around here, and with social media, that feels very close and very real.

The conversation in Focus Group #1 ended with a discussion of possible solutions to the barriers to health previously expressed by the group. It was evident through the facilitation of this discussion that the various stakeholders had more in common than perhaps they imagined; and therefore, the solutions they generated were largely focused around ways to collaborate more effectively to meet their shared goals and work more efficiently with one another.

For example, a suggestion was made for any committee, organization, or department in Town wishing to bring forth a proposal to Town leadership about building projects, program development, or expansion should be asked to consult with other groups in Town that may have an interest and require that they be brought into the proposal before it is considered. Another participant suggested the utility of a Town Leadership Council that could meet monthly before the workday begins (e.g., a breakfast meeting or coffee hour) that allows community stakeholders to update one another on their activity and to share resources, lessons learned and to spark collaborative efforts.

Focus Group #2: Intergenerational Residents

Focus Group #2 consisted of residents who represent various generations of Carlisle residents in age and duration of residency. For example, participants included a newcomer to Carlisle with children not yet in school, adult residents of Carlisle with children in high school or college as well as a participant without children and long-time residents of Carlisle with family also living in Carlisle. A primary goal of this Focus group discussion was to acquire a better understanding of the community health needs in Carlisle based on the lived experiences of residents with various histories in Carlisle.

Features of Carlisle that Promote Quality of Life

The discussion started with a description of the aspects of Carlisle that promote a healthy community. One participant, new to Town, described a drop-in playgroup that was hosted at the Library as a great way to connect with other parents of young children but also to give the children a chance to interact socially. In addition, the free local newspaper was also cited as a way for residents to feel connected, a key component to community health as defined by members of this particular group.

Another participant cited the three churches in Town as being key to community health as they not only bring residents together; but they care for vulnerable segments of their faith communities. The conversation swiftly moved to features of the community that impede quality of life in Carlisle. Themes from this part of the discussion are described in the next sections of this report.

“a large, the majority of the homes are either on a two acre or a four-acre lot or even larger, so you could get lost if you want to. but that's sort of the nature of the beast of this town, too. I think some people move here because they do want to get lost and other people, don't. I don't know how we can fix that because that's people's choice.”

Issues facing young residents

This group of resident representatives voiced some concern about alcohol and substance abuse among the youth in Carlisle as an area of risk to be monitored. Referring to the recent epidemics of drug use in surrounding communities, Carlisle residents recognize that these issues face the youth in Carlisle as well. To this point, others made clear that although underage drinking and drug use among the youth may not be physically occurring in the Town of Carlisle—the issues stand to have an incredible impact on the community. Further, one parent of school-aged children told a story of her children being racially bullied by their peers. This spurred a discussion of the measures being taken by the school and parent organizations to ensure that children have the skills to communicate about these issues both among themselves but also to authority figures.

Transportation

Through a discussion of the risk of older residents of Carlisle being isolated from the rest of the community, the issue of transportation came up and quickly became clear as a barrier to quality of life across generations of residents--older adults who no longer drive, persons with mobility limitations, commuters to Boston, as well as kids who do not yet drive. A local shuttle or transportation system in Carlisle is described as an opportunity to improve quality of life for a large segment of the population. In fact, the parent organization and the Council on Aging have had conversations about the ability to pool resources to invest in transportation options that would meet the needs of both resident groups they serve.

Ticks

Residents participating in this focus group discussed concerns that they are at a higher risk of contracting Lyme disease due to the sheer amount of ticks in the Town. Focus group participants said that this degrades their quality of life because they are not comfortable going outdoors despite valuing the trails and natural environment of the rural town. Several contributors mentioned that they do not allow their children play outside at all. This is a topic that Carlisle residents feel very strongly about. Through this discussion, participants concluded that there also seems to be a significant amount of misinformation and confusion regarding both how to prevent tick bites and Lyme disease and also what the Town of Carlisle is doing to combat this issue. It was this discussion of misinformation about Tick prevention and safety that participants began to identify possible solutions that would alleviate some of the concern in the community regarding this issue.

“Ticks make me and my wife feel like prisoners in our house.”

Communication & Information

Despite the existing communication channels available in Town--the Mosquito, Town websites, online groups, social media and newsletters from the schools--focus group participants describe difficulty in getting this information absorbed by residents with very demanding and busy schedules. The participants described the way they learned about opportunities to get involved in the community and much of it was via word-of-mouth referrals. This is a powerful communication tool, particularly in a small community, but the geographic distance between neighbors and a decline in home telephones makes it a difficult community strategy to leverage. For example, there was discussion about ways to centralize the volunteer opportunities in Town so that residents identify ways to get involved without having to first know and be invited by someone else.

This conversation also ended with a discussion of possible solutions to the aforementioned barriers to quality of life in Carlisle. First, a shuttle or bus service was suggested, running a continual loop to the high school from 2:30pm until 7pm that would make a couple of other stops, including Ferns and the commuter rail station, and could be used by all residents. To the issue of ticks, consensus was reached in the group for the need for resident education about ticks. In addition to learning about preventative treatments and tick borne diseases, the group also made clear that education about the broader ecological impact of ticks could help residents understand where ticks come from and how to create an environment that keeps ticks under control would be useful. In addition, there are “tick tubes” available that can control the number of ticks in particular areas. One suggestion was to request the Town purchase a number of Tick tubes and make them available at a lower cost to residents.

Not surprising given the intergenerational nature of Focus Group #2, a request for more opportunities for intergenerational activities was made. In addition to the suggestion of community gathering space that would include children, families and older adults. This notion of shared community space seems to be an agreed upon way to foster intergenerational experiences but also to sustain the sense of community that Carlisle residents perceive may be disintegrating. One other example given was the sponsorship of neighborhood “come together” events to engage multiple generations and create bonds between neighbors.

“The more people get to know each other ...you're not voting for the schools; you're voting for “Joey's” school. And you're not taking care of somebody else's lawn, you're taking care of, you know, “Fred's” lawn and he can't get out and do. I mean, it's going back to that old stuff which I think a lot of us perceived Carlisle has...but maybe it doesn't.”

Focus Group #3: Special Interest Groups

Participants in Focus Group #3 included representatives involved with various special interest groups in Carlisle. For example, small business owners and farmers, League of Women Voters, transportation advocates, and the Carlisle Artisans Group were represented in this group. The primary goal of this group discussion was to learn about how various groups in Town perceive their contributions to community health and how the Town can do better to engage them.

Social Isolation

There is a social gap for adults who do not have children in the school system and also do not think that they are old enough to utilize services through the Council on Aging. As some of the focus group participants fit into this profile, they noted a lack of physical places in town to meet informally. A town without social space, they agreed, contributes to social isolation and even deters people from participating in community events. All of the focus groups brought up a population within the Town of Carlisle who do not participate in Town events or programs. While some people cannot be actively involved in the community, some choose not to be. Both scenarios lead to social isolation. Other town-specific factors in Carlisle that contribute to social isolation is the 2-acre land minimum that physically distances neighbors and a lack of social spaces and activities for adults without school aged children.

“There's still an unserved segment of town that we haven't talked about and can't reach because they just, they don't come out.”

Several focus group participants voiced that despite living in town for many years, they do not know most of their neighbors. This disconnect among neighbors may contribute to the isolation of residents who are limited in their ability to socialize as they wish, and it can also allow problems or challenges go unnoticed until they become crisis situations. As one participant noted, those who are socially isolated

may have unknown needs that could be met through town programs. Some participants discussed the value in the Town of Carlisle’s RUOK program through the Police Department. RUOK is a voluntary daily check-in with an officer over the phone. This program is extremely beneficial to seniors and others who are at risk of social isolation. However, it is a voluntary program that requires the consent of the resident; and thus is only effective for those who are aware and engaged with the program.

Outdoor Spaces & Walkability

One focus group participant mentions an ad hoc committee in Town focused on the promotion of walking and biking to school for kids in Carlisle. However, the initiative hasn’t received widespread support from the community.

Communication & Information

Members of Focus Group #3 learned a lot about one another. Together with their commentary, this finding illustrates a disconnection between Town committees, local groups and advocacy organizations. There was

...backstreets and sidewalks – we only have a few. And we have ways that we can get around that, kind of “Carlisle ways”, but we’re not focused on that as a goal for everyone,

consensus in the group that a centralized events calendar that is published on the Town’s website would be a valuable asset to connecting the community efforts and getting information out to the residents. The inadequacy of the current Town website was discussed. Currently all of the committees have their own webpages and they are responsible for updating and maintaining the sites in addition to their volunteer work on the committee. Furthermore, this lack of communication among Town committees and departments creates barriers to residents wishing to advocate or become involved. One resident tells a story about requesting support for an issue and being referred to three different committees before she found the appropriate outlet for her issue. Another participant agreed and recalled a time when a fellow committee member stated that they could not share information from another committee due to conflict of interest. These considerations for improving the communication in Carlisle are also important due to the volunteer nature of much of the Town’s government and the need for efficiency.

Conclusions & Recommendations

The purpose of this planning process was to bring together a variety of community members to identify assets of living in Carlisle and examine challenges to achieving quality of life. Ultimately, the goal is to use information from this study to put a plan in place for building a healthier community. In this context, health is not simply access to healthcare and absence of illness; but rather health is considered the strength of the social, mental, physical, economic and environmental conditions for residents of all ages.

To inform its planning process, the C4C Steering Committee, along with the research team from UMass Boston, solicited input from residents age 18+ to assess their

perception of health in the Town of Carlisle and to address specific features of livability and health-related needs of the Town's population.

Results of this study suggest that Carlisle residents experience a very high quality of life. We heard from long-time residents who have a vested interest in maintaining Carlisle as a safe and enjoyable place to live as they age. Additionally, many newcomers expressed attributes that make it a community that is highly livable and amenable to families. Therefore, it is not surprising that many residents reported a strong desire to remain living in Carlisle.

Despite the many positive findings about Carlisle as a place to live, several challenges were also identified. For example, given the significant portion of survey respondents who reported providing care to a sick, disabled or frail person in the last 12 months, the C4C initiative may consider additional focus on developing resources for caregivers in Carlisle. In addition to the development of resources or supportive programs for those residents providing care, C4C could also raise awareness among all residents who may need supports or services as they, and their families, grow older.

The agencies leading the C4C initiative, the Board of Health, the Council on Aging, the Gleason Public Library, and the Planning Department are central partners in supporting the community of Carlisle. Results of this study suggest an unevenness in the satisfaction with the variety of services and supports available to Carlisle residents.

Carlisle residents are fortunate to live in a community that recognizes the need for ongoing planning to ensure the quality of life and wellbeing of its residents. Nevertheless, planning must continue with an eye toward addressing many issues raised in this report, including increasing availability of transportation options; cultivating adequate, desirable, and supportive housing options; supporting facilities that can accommodate a growing older adult population, improving access to information about services and assistance when needed; and maintaining the walkability of Carlisle's outdoor spaces.

We offer the following recommendations, based on the results of this need assessment process, to the C4C initiative in planning to achieve their mission and meet their goals for a healthier Carlisle. We have organized these recommendations in two categories: short-term action and long-term action.

Short-Term Recommendations:

- ❖ Recreational Activities, Greenspace & Ticks
 - Host informational sessions about ticks and tick-borne illnesses. Include information about preventing ticks, controlling ticks and the consequences of tick borne illnesses.
 - For purposes of encouraging regular walking and cycling for residents of all ages, evaluate the need for connecting pathways.
- ❖ Caregiving
 - Consider piloting a “Caregiver Café” to facilitate the exchange of informal respite among Carlisle residents. Develop programs to connect caregivers to one another and offer a few hours of self-care.
- ❖ Socioemotional health
 - Explore collaborations between local school systems or the Town of Concord to develop stress-reducing programs for youth in the area. For example, offering yoga or meditation during school hours or hosting social events for young people to connect and engage in recreational activities (e.g., daytrips).
 - Identify a liaison from Carlisle to engage in regional and nearby task forces addressing substance abuse. Create a regular spot on CCTV for them to report on the available resources and recent activities to combat this issue affecting Carlisle residents.
- ❖ Social Connectedness
 - Support social activity among residents. For example, sponsor neighborhood/area picnics that bring neighbors together and facilitate a conversation about how to communicate with one another in times of distress or inclement weather and for simple socialization. Emphasize outreach efforts to include multiple generations and ensure inclusivity.
- ❖ Transportation
 - Explore opportunities to fund a pilot study of an intra-town transportation loop.
 - Support existing transportation committees by convening a summit of all interested parties to establish a committee that includes a holistic group of members and work to generate a shared mission. Explore the pooling of resources and funding opportunities.
- ❖ Information & Community Outreach
 - Consider establishing a community calendar where groups in Town can share information about their activities and residents have only one place to look for things to do.
 - Generate an email listserv that can generate notifications on a monthly basis to keep interested residents aware of additions to the calendar.
 - Pilot the “Town Leadership Council” breakfast model to generate more cohesion among Town government and to promote collaboration, information exchange and efficiency of resources.

- Create a coordinated social media presence for the Town of Carlisle as a mechanism for communicating about resources and services available in Town. This will be particularly useful to better inform young residents.

Long-Term Recommendations

❖ Community Planning

- Consider quality of life in the master planning process. Include partners and resident representatives who can speak to the variety of challenges facing the social, spiritual, physical and emotional health of the community to ensure that the future of the community continues to be C4C.
- More specifically, plan for substantial growth of the number of older residents. By 2030, residents who are age 60 and older will constitute 35% of the entire population of Carlisle. Recognize that expanding numbers of older residents will impact virtually every aspect of the community, most obvious is the Council on Aging.
 - Consider an application to join the Age-Friendly Communities Network as a mechanism for planning.¹⁰

❖ Housing Options

- Arrange for opportunities to develop creative solutions to address the shortage of appropriate and affordable housing for younger families and older residents, including reviewing zoning regulations, and exploring the viability of implementing alternative residential models (e.g., The Village Model, accessory units, and group living options).

❖ Intergenerational gathering space.


- Consider development of a senior center or community center building. Convene an intergenerational working group to address the need for communal gathering space in Carlisle. Generate a cohesive and consistent message of advocacy for a community center space. Involved parties need to develop a public information campaign in order to be successful in Town Meeting with any proposed changes to existing space or proposals of new construction.
 - Consider elements of this space to include drop-in space for residents to gather. This type of space can benefit all residents of Carlisle and offers opportunities to socialize and potentially relieve stress.

¹⁰ <http://www.aarp.org/livable-communities/network-age-friendly-communities/info-2014/an-introduction.html>

References

- Fitzgerald, K. G., & Caro, F. G. (2014). An overview of age-friendly cities and communities around the world. *Journal of Aging & Social Policy*, 26(1-2), 1-18.
- Lee, P., & Paxman, D. (1997). Reinventing public health. *Annual Review of Public Health*, 18, 1-35. doi: 10.1146/annurev.publhealth.18.1.1
- Marmot, M. (2005). Social determinants of health inequalities. *The Lancet*, 365(9464), 1099-1104.
- McGinnis, J. M., Williams-Russo, P., & Knickman, J. R. (2002). The case for more active policy attention to health promotion. *Health Affairs*, 21(2), 78-93.
- Nelson, B. M. & Guengerich, T. (2009). Going from good to great: A livable communities survey in Westchester County, New York. Washington DC: AARP.
- Thoits, P. A. (2010). Stress and health: Major findings and policy implications. *Journal of Health and Social Behavior*, 51(1_suppl), S41-S53.
- Royse, D., Thyer, B. A., & Padgett, D. K. (2010). Program evaluation: An introduction (5th edition). Belmont, CA: Wadsworth.

Appendix A—Community Survey



SOCIAL • EMOTIONAL • SPIRITUAL • PHYSICAL • YOUTH • TEEN • ADULT • SENIOR

Carlisle Community Health Needs Survey

Caring4Carlisle is a grant-funded* assessment of the social, emotional, spiritual and physical well-being of the Carlisle community. This research will inform the Town's action towards creating a healthy and vibrant community for all residents.

The Town of Carlisle's Board of Health, Council on Aging and the Gleason Public Library, in partnership with researchers from UMass Boston, are requesting that residents of Carlisle age 18 or older share their views about Carlisle as a place to live. Please complete the following survey, it should take you approximately 15 minutes to complete. You cannot save your answers and return to the survey.

All of your responses will be kept confidential. Please do not include your name or other identifying information on this survey. This project has been approved by the Institutional Review Board at UMass Boston (#2016172) and all data will be de-identified and stored securely on campus. If you have questions or would like assistance completing this survey please call UMass Boston at 617-287-7467.

***This project is funded through CHNA15 with funds from Lahey Hospital and Medical Center.**

1. Which aspects of living in Carlisle positively impact your quality of life *the most*? In other words, what do you like about living in Carlisle?

2. Which aspects of living in Carlisle interfere *the most* with your quality of life? In other words, what concerns do you have about living in Carlisle?

Appendix B—Community Survey Responses

Section I: Community & Neighborhood

Q3. How would you rate your overall quality of life?

	All Ages	21-39 (n=54)	40-49 (n=107)	50-59 (n=80)	60-74 (115)	75+ (n=46)
Excellent	67%	56%	70%	71%	71%	65%
Good	31%	41%	28%	25%	28%	30%
Fair	2%	4%	2%	4%	1%	5%
Poor	--	--	--	--	--	--
Total:	100%	100%	100%	100%	100%	100%

Q4. How important is it to you to remain living in Carlisle?

	All Ages	21-39 (n=54)	40-49 (n=107)	50-59 (n=80)	60-74 (n=116)	75+ (n=46)
Very Important	54%	46%	63%	45%	55%	65%
Moderately Important	33%	35%	29%	37%	26%	33%
Neutral	9%	11%	6%	13%	15%	--
Slightly Important	2%	2%	1%	2%	2%	--
Not at All Important	2%	6%	1%	3%	2%	2%
Total:	100%	100%	100%	100%	100%	100%

Q5. Please indicate your level of agreement with the following statement, “I feel a sense of belonging in the community where I live.”

	All Ages	21-39 (n=54)	40-49 (n=107)	50-59 (n=79)	60-74 (n=116)	75+ (n=46)
Strongly Agree	34%	17%	36%	38%	41%	46%
Agree	44%	55%	44%	48%	34%	39%
Neutral	14%	22%	11%	11%	14%	13%
Disagree	5%	4%	7%	1%	8%	--
Strongly Disagree	3%	2%	2%	2%	3%	2%
Total:	100%	100%	100%	100%	100%	100%

Q6. In the past month, have you talked with any of your fellow residents for 10 minutes or more?

	All Ages	21-39 (n=54)	40-49 (n=107)	50-59 (n=79)	60-74 (n=116)	75+ (n=45)
Yes	92%	91%	92%	90%	92%	93%
No	8%	9%	8%	10%	8%	7%
Total:	100%	100%	100%	100%	100%	100%

Q7. The following items refer to programs and services that are currently offered in the Town of Carlisle. Please rate your level of satisfaction with each item. (n=439)

	Not at All Satisfied	Somewhat dissatisfied	Somewhat satisfied	Very satisfied	N/A
Health and wellness programs	3% (n=13)	7% (n=31)	22% (n=96)	20% (n=86)	48% (n=213)
Community engagement or volunteer opportunities	1% (n=5)	5% (n=18)	30% (n=132)	52% (n=233)	12% (n=56)
Opportunities to socially engage with peers, family and friends	4% (n=19)	12% (n=55)	37% (n=163)	43% (n=192)	4% (n=15)
Economic Opportunities (e.g., jobs, business opportunities etc.)	13% (n=56)	18% (n=79)	12% (n=55)	6% (n=25)	51% (n=229)
Natural amenities (e.g., to hike, fish or garden)	-- (n=1)	2% (n=8)	8% (n=35)	88% (n=394)	2% (n=9)
Town government in Carlisle	4% (n=18)	14% (n=61)	45% (n=199)	32% (n=145)	5% (n=24)
Veteran Services	1% (n=4)	2% (n=10)	6% (n=27)	2% (n=10)	87% (n=382)
Support groups (grief/bereavement, alcoholism or substance abuse, chronic illness)	1% (n=5)	3% (n=14%)	12% (n=53)	5% (n=22)	79% (n=345)
Council on Aging programs and services	1% (n=5)	1% (n=6)	10% (n=45)	36% (n=162)	51% (n=226)
Programs for newcomers	6% (n=25)	9% (n=38)	16% (n=72)	10% (n=42)	59% (n=257)
Local Schools	1% (n=6)	3% (n=12)	7% (n=31)	68% (n=303)	21% (n=94)
After school programs	2% (n=7)	4% (n=18)	17% (n=74)	30% (n=133)	47% (n=210)
Recreational programs	2% (n=11)	6% (n=27)	36% (n=158)	37% (n=161)	19% (n=82)
Parenting support (e.g., parenting classes, child wellness, breastfeeding support)	2% (n=8)	6% (n=27)	18% (n=78)	7% (n=32)	67% (n=284)

Q8. Are there sufficient places to go to socialize or for leisure activity?

	All Ages	21-39 (n=54)	40-49 (n=107)	50-59 (n=80)	60-74 (n=116)	75+ (n=46)
Yes	41%	41%	37%	38%	41%	41%
No	50%	50%	54%	57%	49%	49%
I don't know	9%	9%	9%	5%	10%	10%
Total:	100%	100%	100%	100%	100%	100%

Q9. Are there sufficient housing options available in Carlisle?

	All Ages	21-39 (n=29)	40-49 (n=60)	50-59 (n=39)	60-74 (n=56)	75+ (n=16)
Yes	25%	41%	26%	36%	13%	19%
No	57%	31%	62%	41%	73%	56%
I don't know	18%	28%	12%	23%	14%	25%
Total:	100%	100%	100%	100%	100%	100%

Q11. Do you have concerns about any of the following in Carlisle?

	Yes	No	Sometimes	N=
Transportation Options	33%	46%	21%	n=436
Traffic	17%	65%	18%	n=433
Road Safety	42%	38%	20%	n=430
Cyclists	54%	25%	21%	n=434
Pedestrian Safety	52%	25%	23%	n=433
Total:	100%	100%	100%	

Q13. Have you provided care or assistance to a person who is sick, disabled or frail within the last 12 months?

	All Ages	21-39 (n=54)	40-49 (n=107)	50-59 (n=80)	60-74 (n=116)	75+ (n=46)
Yes	40%	13%	34%	50%	42%	63%
No	60%	87%	66%	50%	58%	37%
Total:	100%	100%	100%	100%	100%	100%

Q14. Have you provided care or assistance to a person who is sick, disabled or frail within the last 12 months?

	Male (n=133)	Female (n=282)	Prefer not to respond (n=15)
Yes	43%	34%	47%
No	57%	66%	53%
Total:	100%	100%	100%

Q14a. If yes: How challenging is/was it for you to care for this person (s) and meet you other responsibilities with family and/or work?

	All Ages (n=176)
Very Challenging	22%
Somewhat Challenging	27%
Neither Challenging Nor Easy	27%
Somewhat Easy	12%
Very Easy	12%
Total:	100%

Q15. Do you have any of the following concerns about your children living in Carlisle who are under 18 years old? (Check all that apply).

	Yes	N=
Academic performance (includes difficulty in school, amount of homework or pressure to succeed)	21%	n=79
Too much “screen time” (includes time on computers, cellular phones or other electronic devices)	40%	n =151
Friendships or connections	21%	n =80
Self-esteem	17%	n =64
Quality of education	6%	n =24
Alcohol Consumption	4%	n =16
Illicit drug use	5%	n =20
Engagement in sexual activity	3%	n =11
Mental health (e.g., depression, mood disorders)	15%	n =56
Sleep quality	12%	n =47
N/A I do not have any children age 0-18	49%	n =185

Q16. How often do you talk on the phone, send email, use social media or get together to visit with family, friends, relatives, or neighbors? (n=435)

	Daily	Weekly	Monthly	2-3 times/year	Never
Talk on the phone with family, friends, or neighbors	42% (n=181)	45% (n=194)	8% (n=36)	3% (n=14)	2% (n=10)
Send email, use social media with family, friends, or neighbors	75% (n=325)	19% (n=83)	4% (n=17)	1% (n=2)	2% (n=8)
Get together, in person with family, friends, or neighbors	16% (n=68)	56% (n=248)	21% (n=93)	5% (n=23)	1% (n=4)

Q17. Do you have family members living within 30 minutes of your home on whom you can rely for help when you need it?

	21-39 (n=54)	40-49 (n=107)	50-59 (n=80)	60-74 (n=116)	75+ (n=46)	21-39 (n=54)
Yes	51%	54%	44%	45%	48%	72%
No	49%	46%	56%	55%	52%	28%
Total:	100%	100%	100%	100%	100%	100%

Q18. How often do you feel unsafe in the community where you live?

	All Ages	21-39 (n=54)	40-49 (n=107)	50-59 (n=80)	60-74 (n=116)	75+ (n=46)
Never	54%	42%	60%	62%	66%	67%
Rarely	33%	54%	34%	34%	29%	28%
Sometimes	9%	2%	6%	4%	4%	4%
Most of the time	2%	2%	--	--	--	1%
Always	2%	--	--	--	1%	--
Total:	100%	100%	100%	100%	100%	100%

Q19. Have you ever felt discriminated against in your community because of your:
(Check all that apply)

	Yes	N=
Skin color, race or ethnicity	3%	11
Sexual orientation	1%	3
Age	4%	18
Religion or cultural background	4%	16
Income	6%	26
Disability	1%	6
No, I have never experienced discrimination	86%	367

Q20 Do you feel informed about what to do in the event of a weather or other local emergency?

	All Ages	21-39 (n=54)	40-49 (n=107)	50-59 (n=80)	60-74 (n=116)	75+ (n=46)
Yes	83%	63%	74%	90%	89%	96%
No	17%	37%	26%	10%	11%	4%
Total:	100%	100%	100%	100%	100%	100%

Q21. How would you rate your overall physical health?

	All Ages	21-39 (n=54)	40-49 (n=107)	50-59 (n=79)	60-74 (n=116)	75+ (n=46)
Excellent	43%	30%	46%	51%	45%	30%
Good	50%	61%	49%	45%	47%	57%
Fair	6%	9%	5%	4%	7%	11%
Poor	1%	0%	--	--	1%	2%
Total:	100%	100%	100%	100%	100%	100%

Q22. How would you rate your overall mental health?

	All Ages	21-39 (n=54)	40-49 (n=107)	50-59 (n=79)	60-74 (n=116)	75+ (n=46)
Excellent	56%	30%	53%	59%	65%	61%
Good	39%	68%	42%	30%	32%	37%
Fair	4%	2%	5%	10%	3%	2%
Poor	1%	--	--	1%	--	--
Total:	100%	100%	100%	100%	100%	100%

Q23. Do you have a mental or physical impairment or condition that limits your ability to participate in your community?

	All Ages	21-39 (n=54)	40-49 (n=107)	50-59 (n=80)	60-74 (n=116)	75+ (n=46)
Yes	6%	4%	2%	8%	8%	9%
No	94%	96%	98%	92%	92%	91%
Total:	100%	100%	100%	100%	100%	100%

Q24. If yes: which of the following best describes the condition that limits your ability to participate in your community?

Sensory impairment (vision, hearing etc.)	9%	n=2
Mobility impairment (difficulty walking, climbing stairs etc.)	38%	n=9
Chronic disease (cancer, diabetes, asthma etc.)	22%	n=5
Psychological condition (anxiety, depression etc.)	9%	n=2
Other	21%	n=5

Q25. Thinking about the amount of stress in your life, would you say that most days are:

	All Ages	21-39 (n=54)	40-49 (n=107)	50-59 (n=80)	60-74 (n=116)	75+ (n=46)
Extremely stressful	1%	--	2%	1%	1%	2%
Very stressful	9%	20%	11%	15%	3%	--
Moderately Stressful	34%	48%	50%	30%	22%	13%
Mildly stressful	35%	32%	30%	33%	41%	35%
Not at all stressful	21%	--	7%	21%	33%	50%
Total:	100%	100%	100%	100%	100%	100%

Q26. I have friends or family members who have been affected by suicide.

	All Ages	21-39 (n=54)	40-49 (n=107)	50-59 (n=80)	60-74 (n=115)	75+ (n=46)
Yes	34%	22%	36%	50%	33%	15%
No	66%	78%	64%	50%	67%	85%
Total:	100%	100%	100%	100%	100%	100%

Q27. I have friends or family members who have been affected by substance abuse (such as the misuse of alcohol, prescription medication or illegal drugs).

	All Ages	21-39 (n=54)	40-49 (n=107)	50-59 (n=80)	60-74 (n=116)	75+ (n=46)
Yes	49%	48%	53%	51%	50%	37%
No	51%	52%	47%	49%	50%	63%
Total:	100%	100%	100%	100%	100%	100%

Q28. I have friends or family members who have been affected by violence or domestic violence.

	All Ages	21-39 (n=54)	40-49 (n=107)	50-59 (n=80)	60-74 (n=116)	75+ (n=45)
Yes	20%	28%	23%	24%	16%	7%
No	80%	72%	77%	76%	84%	93%
Total:	100%	100%	100%	100%	100%	100%

Q29. Would you know who to contact in Carlisle should you or someone in your family need help accessing social services, health services or long-term services and supports?

	All Ages	21-39 (n=54)	40-49 (n=107)	50-59 (n=80)	60-74 (n=116)	75+ (n=46)
Yes	57%	24%	36%	55%	78%	89%
No	43%	76%	64%	45%	22%	11%
Total:	100%	100%	100%	100%	100%	100%

Q30. Which of the following is your most preferred source of information about the Town of Carlisle?(Check all that apply)

	All Ages	21-39 (n=54)	40-49 (n=107)	50-59 (n=80)	60-74 (n=116)	75+ (n=46)
E-mail	24%	33%	29%	24%	22%	7%
Town website	11%	13%	13%	20%	4%	--
Town meeting or other civic engagements	1%	--	1%	--	--	4%
Newspaper	53%	44%	36%	47%	67%	80%
Automated phone calls	2%	--	2%	1%	2%	4%
Social Media (e.g., Facebook or Twitter)	6%	10%	15%	8%	--	--
Direct Mailing	3%	--	4%	--	3%	5%
Public television	--	--	--	--	2%	--
Total:	100%	100%	100%	100%	100%	100%

Q31. Which of the following civic activities are you currently participating in?
(Check all that apply)

	All Ages	N=
Attend Town Meeting	49%	212
Serve on a board or committee in Carlisle	27%	114
Volunteer my time with churches or other local organizations	55%	194
I work for the Town of Carlisle	3%	15
I am not currently participating in civic activities in Carlisle	26%	112
Other	6%	76

Q32. If you are not currently participating in Town government or decision-making, what is the reason why?

	All Ages	N=
I do not have time	41%	49
I am involved in other activities elsewhere	9%	11
I am not interested	13%	16
Other	37%	45
Total:	100%	

Q33. Please select your gender.

	All Ages	21-39 (n=54)	40-49 (n=107)	50-59 (n=80)	60-74 (n=116)	75+ (n=46)
Male	31%	26%	24%	31%	38%	46%
Female	65%	68%	75%	69%	59%	54%
Prefer Not To Respond	4%	6%	1%	--	3%	--
Total:	100%	100%	100%	100%	100%	100%

Q34. Which of the following best describes your race/ethnicity? (Check all that apply)

	All Ages	N=
White/Caucasian	86%	375
Black/African American	--	2
Asian	5%	20
Hispanic/Latino	2%	9
Do not Care to respond	6%	26
Other	1%	7

Q35. What is your current employment status?

	All Ages	N=
Working Full-time	35%	155
Working part-time	21%	89
Retired	29%	125
Other	15%	69
Total:	100%	

Q36. Was there any time in the past 12 months when you did not have money for the following necessities? (Check all that apply)

	All Ages	N=
N/A I did not lack money	85%	391
Pay rent, mortgage, real estate taxes	3%	14
Pay for medical needs (e.g., prescriptions or prescribed treatment)	2%	10
Childcare	1%	3
Pay for car repairs or home repairs	4%	13
Pay utility bills (e.g., oil or electricity)	2%	7
Buy food	1%	4
Other	2%	11

Q37. How long have you lived in the Town of Carlisle?

	All Ages	21-39 (n=54)	40-49 (n=107)	50-59 (n=80)	60-74 (n=116)	75+ (n=46)
Fewer than 5 years	23%	74%	34%	14%	2%	4%
5-9 years	16%	15%	39%	15%	--	7%
10-19 years	24%	7%	23%	44%	21%	9%
20-29 years	13%	4%	3%	24%	22%	6%
30-39 years	13%	--	1%	3%	40 %	15%
40 years or longer	11%	--	--	1%	15%	59%
Total:	100%	100%	100%	100%	100%	100%

Q38. Who do you live with (Check all that apply)

	All Ages	N=
Alone	7%	29
A spouse/partner	88%	378
My child(ren) (age 18 or younger)	52%	226
My adult child(ren) (age 18 or older)	12%	52
My grandchild(ren)	1%	2
My parents	4%	16
Another relative	1%	2
Other	2%	13

Appendix C—Focus Group Questions

- *Introductions*
- *How would you describe the definition of a “healthy community”?*
- *More specifically, tell me about the things you like most about living in Carlisle.*
 - *What are the features of Carlisle that promote health and wellness?*
- *Tell me about features of Carlisle that interfere with health and wellness of residents?*
 - *How do these features of Carlisle affect your life and/or the lives of your family and friends? Examples?*
- *What changes or improvements could Carlisle put in place that would improve the health and wellness opportunities in the community? Overall quality of life?*