**TECHNICAL DOCUMENTATION**

## Overview

This report contains details about the development of the 2019 New Hampshire Healthy Aging Data report. This includes technical definitions, data sources, years of data used, and definitions the geographic units employed for various indicators. In addition, we describe the statistical methods used to estimate indicators derived from micro-level data. Our general approach is hierarchical reporting. We report indicators at the smallest, most local level possible (i.e., neighborhood, zip code, or individual community) when data allow, and report in larger geographic units (i.e., county) when necessary.

## 1. Healthy Aging Indicator Definitions

Most of the indicators are derived from secondary data sources and limited to those indicators for which data are available for geographic subareas within New Hampshire. Table A-1 contains technical definitions for most of the indicators reported in this study, except the socio-demographic variables used to describe the population composition of communities.

## 2. Data Sources

Multiple data sources are used in this study. Table A-2 contains a summary of all data sources, and the specific years of data used for population composition and healthy-aging indicators. Estimates of community-level indicators of physical/mental health, chronic disease prevalence, access to care, wellness and prevention health behaviors, service utilization, and nutrition and diet were derived from two major data sources: the Medicare Master Beneficiary Summary File (2014-2015) and the Behavioral Risk Factor Surveillance System (2011-2016). Population composition measures were drawn from the Five-Year American Community Survey (2012-2016) produced by the U.S. Census Bureau. These major data sources, and other data sources used for other community, safety, and economic variables, are described below.

Medicare Master Beneficiary Summary File

Medicare claims data from the Centers for Medicare and Medicaid Services (CMS) are a rich source of data for measuring chronic disease prevalence and Medicare service utilization rates for individual cities and towns. The *Master Beneficiary Summary File (MBSF)* is an annual data file constructed by the Chronic Conditions Data Warehouse that includes individual records for all persons eligible for Medicare for at least one month during a calendar year. The MBSF is comprised of four data files containing different types of information:

(1) The *Master Beneficiary Summary File-A/B/D (MBSF-A/B/D)* includes standard Medicare administrative data fields (e.g., sex, race, dates of birth and death), monthly variables indicating specific months of Medicare eligibility, managed care

enrollment, and Medicaid state buy-in status, as well as geographic residence identifiers (state, county, zip code) based on each beneficiary's residence address used for Social Security Administration correspondence.

(2) The *Master Beneficiary Summary File-Chronic Conditions (MBSF-CC)* includes indicators derived from Medicare algorithms applied to diagnostic codes on individual Medicare fee-for-service provider claims for 27 prevalent chronic conditions (e.g., diabetes, stroke, depression, Alzheimer's disease or related dementia, chronic obstructive pulmonary disease, hip fracture, cancer), as well as the earliest date since 1999 that the diagnostic criteria for prevalence were first met.

*(3)* The *Master Beneficiary Summary File- Other Chronic or Potentially Disabling Conditions (MBSF-OC)* includes indicators derived from Medicare algorithms applied to diagnostic codes on individual Medicare fee-for-service provider claims for other chronic conditions (e.g., ADHD, Alcohol Use Disorders, Anxiety Disorders, Autism Spectrum Disorders, Bipolar Disorder, Depressive Disorders, Drug Use Disorders, Epilepsy, Fibromyalgia, Chronic Pain and Fatigue, Human Immunodeficiency Virus and/or Acquired Immunodeficiency Syndrome (HIV/AIDS), Leukemias and Lymphomas, Liver Disease, Migraine and Chronic Headache, Mobility Impairments, Obesity, Peripheral Vascular Disease, Personality Disorders, Post-Traumatic Stress Disorder, Pressure and Chronic Ulcers, Schizophrenia, Sensory - Blindness and Visual Impairment, Sensory – Deafness and Hearing Impairment, Tobacco Use, Traumatic Brain Injury), as well as the earliest date since 1999 that the diagnostic criteria for prevalence were first met.

(4) The *Master Beneficiary Summary File-Cost and Use (MBSF-CAU)* contains aggregated summaries of annual service utilization and reimbursements for various types of Medicare services (e.g., inpatient hospitalizations, physician visits, home health visits, skilled nursing facility stays, emergency room visits, hospital readmissions, and filled Part D prescriptions).

Each beneficiary record contains an encrypted individual identifier so that information from the four data files can be merged together. The four MBSF data files were obtained from CMS for all Medicare beneficiaries who were age 65 years or older on January 1st of the calendar year, and had a state residence code of New Hampshire for 2014 or 2015. The data were obtained under a formal data use agreement required for privacy protection of health information contained in research-identifiable data files.

A major strength of the MBSF data is their coverage of 100% of aged Medicare beneficiaries living in New Hampshire. This permits the estimation of health indicators for relatively small individual towns. These rates can be potentially updated annually. The major shortcoming of the MBSF data are that they are derived from claims data. Since chronic condition prevalence is identified from diagnoses on Medicare claims, rates of chronic disease prevalence and service use can only be measured for Medicare beneficiaries who receive their care from fee-for-service providers. Managed care providers such as Medicare Advantage plans do not submit claims data to Medicare for

processing. In addition, beneficiaries whose chronic condition is undiagnosed because they do not have access to a physician will not be identified as having that chronic condition. Finally, the health indicators constructed from MBSF data are limited in scope since they are based on administrative data. Nevertheless, these data are rich with respect to geographic specificity compared to other common data sources for health indicators.

Behavioral Risk Factor Surveillance System

The Behavioral Risk Factor Surveillance System (BRFSS) is a state-based system of annual health surveys established by the Centers for Disease Control and Prevention (CDC) that collects information via a telephone survey on health risk behaviors, preventive health practices, and health care access, primarily related to chronic disease and injury. The BRFSS provides a rich source of information about individual health behaviors such as smoking, excessive drinking, obesity, preventive health service use, which are relevant for the development of healthy aging indicators. A core set of questions about such health behaviors are included every year. The Division of Public Health Services (DPHS) is responsible for collecting BRFSS data for New Hampshire. The DPHS adds questions beyond the core CDC questions on relevant topics to support health care policy planning, to guide preventive health interventions, and to assess health status and its change over time for New Hampshire residents. Person-level BRFSS data for were obtained from the New Hampshire Department of Health and Human Services under a formal data use agreement required for individual privacy protection of health information.

The BRFSS survey is carried out under a complex survey design intended to enhance the efficiency of using limited sample population to produce reliable state-level estimates of health indicators. Interviews are administered in three alternative languages (English, Spanish, Portuguese) depending upon respondents' preferences. Respondents are oversampled in larger cities in the state under the BRFSS complex survey design to increase the representation of racial/ethnic minority respondents. Before 2008, BRFSS data were obtained entirely through land-line telephone surveys. Because of the rising prevalence of households with only cell-phones, the BRFSS survey design was modified in 2011 to include both land-line and cell phone samples. Furthermore, the method used to derive post-stratification factors was changed in 2011 to a raking procedure that permits finer adjustments to population weights based on multiple population attributes. These changes in the 2011 BRFSS survey design introduce some complexities when data from 2010 or earlier are pooled with more recent data. How these changes in survey design are addressed will be discussed later in the description of estimation methods.

A major strength of the BRFSS data is its rich information on health behaviors. To our knowledge no other secondary dataset has the range of variables on health behaviors of older New Hampshire residents. The BRFSS has several limitations for small area analyses. The BRFSS survey design was developed for obtaining the state-level estimates. Accordingly, the respondent sample sizes for most individual towns in New

Hampshire in any year are far too small to produce reliable estimates for most towns. Even if appropriate adjustments are made because of unrepresentative samples for many small towns, small area estimation will require that BRFSS survey data be pooled over multiple years. For example, the number of respondents 60 years or older with valid geographic residence identifiers in the entire state BRFSS sample has ranged from 2,953 in 2014 to 3,088 in 2016. This is far too small to estimate town-level rates for all 259 cities and towns in New Hampshire.

Because of the small sample size of annual BRFSS surveys, multiple years of survey data were pooled together, and multiple cities and towns were aggregated together to create larger geographic areas containing multiple cities and towns. Table A-2 shows the specific years of data used to derive estimates for each BRFSS indicator. Details about estimation methods are provided later in the section describing BRFSS estimation methods.

Medicare Compare Access to Care

Data on Medicare service providers (physicians, hospitals, nursing homes, and home health agencies) were obtained from Medicare website http://www.medicare.gov. Number of primary care providers was obtained from website (http://www.medicare.gov/physiciancompare/search.html) using the search term "city/town name, New Hampshire" and "Primary care". After initial searching with this term, we updated search results by selecting within 5 miles option. Number of hospitals was obtained from website (http://www.medicare.gov/hospitalcompare/search.html) using the search term "city/town name, New Hampshire". After initial searching with this term, we updated search results by selecting within 5 miles option. Number of nursing homes was obtained from website (http://www.medicare.gov/nursinghomecompare/search.html) using the search term "city/town name, New Hampshire". After initial searching with this term, we updated search results by selecting within 5 miles option. Number of home health agencies was obtained from website (http://www.medicare.gov/homehealthcompare/search.html) using the search term "city/town name, New Hampshire". There was no option for selecting within 5 miles for home health agencies. Home Health Compare lists agencies whose geographic service areas contain the selected zip code, city, or town.

U.S. Census Bureau

Data on population composition were downloaded from the U.S. Census Bureau Fact Finder website (http://factfinder2.census.gov). All census population estimates reported in the community profiles were derived from the 5-year American Community Survey data (2012-2016). Data were downloaded for all 259 individual cities and towns. In addition, census tract data were downloaded and aggregated for 5 neighborhoods within the city of Manchester. The advisory board from the Department of Health in the city of Manchester provided census tract definitions for Manchester neighborhoods. The zip code data were downloaded and aggregated for 4 neighborhoods within the city of Nashua.

Department of Agriculture

Data on the availability of supermarkets were downloaded from the U.S Department of Agriculture Food Access Research Atlas website (https://www.ers.usda.gov/data-products/food-access-research-atlas/download-the-data/). The data were initially released in January 2017, and updated in May 2017. The percentage of older adults with poor supermarket access was calculated based on the share of older population age 65 and over who were beyond 1 mile (in urban) or 10 miles (in rural) from supermarkets.

New Hampshire Voter Data

Data for voters of 18 years and older for 2018 were obtained for cities and towns from the New Hampshire Elections Division, Secretary of the Commonwealth. Data could not be reported separately for neighborhoods within Manchester and Nashua.

New Hampshire Department of Health and Human Services

Data on numbers of community health center and adult day health center were obtained from the New Hampshire Department of Health and Human Services website (https://www.dhhs.nh.gov/index.htm).

New Hampshire GIS Data

The NH GRANIT maintains an array of geographic services such as data development/distribution, image processing, cartography, spatial analysis, online mapping (http://www.granit.unh.edu/). The shape file of city/town boundary was downloaded from the NH GRANIT.

Elder Economic Security Standard™ Index

Four measures of geographic comparative cost of living are reported at the county level using the Elder Economic Security Standard™ Index. This index contains county estimates of the minimum income needed by older households to attain a modest standard of living in the community that reflects economic security. "The Elder Index defines economic security as the financial status where elders have sufficient income (from Social Security, pensions, retirement savings, and other sources) to cover basic and necessary living expenses" (Gerontology Institute, University of Massachusetts Boston (2012), p 5). While Elder Index estimates are available at the county-level for 18 different types of community-resident households with a head 65 years or older defined by health status (excellent, good, poor), living situation (alone, couple), housing costs (owner with mortgage, owner without mortgage, renter), we report Elder Index estimates for four types of households in good health (single renters, single owners without mortgages, couple renters, and couple owners without mortgages). Elder indices for

2017 were downloaded for all counties in New Hampshire from the Wider Opportunities for Women Economic Security Database (http://www.basiceconomicsecurity.org/EI/).

Federal Bureau of Investigation Uniform Crime Reports

Data from 2013-2015 on violent crime and property crime rates were downloaded from the Federal Bureau of Investigation website (http://www.fbi.gov/stats-services/crimestats). Crime data were based on the average rates of three years from 2013 to 2015. However, when crime data were missing in any one year, the rates were based on the average of two years. We reported crime rates just one year when crime data were missing of any two years. Crime rate indicators with missing data are reported as NA (not available) in the community profiles when crime data were missing in all three years.

U.S. Environmental Protection Agency

The AirNow website of the U.S. Environmental Protection Agency provides measures air quality with the Air Quality Index (AQI) with scores ranging from 0 to 500. *AirCompare* provides county-level comparisons of the number of days in a year that AQI values are between 101 and 150 (code orange) and/or exceed 150 (code red) for specific subpopulations. For the subpopulation that includes older persons without specific health concerns, the total count of days includes code red days for any pollutant and code orange days for ozone and particulate matter. Data on annual number of unhealthy days for persons age 65 and older was obtained from (https://www3.epa.gov/aircompare/#trends). The number of unhealthy days were showing by clicking each county on the map.

Fatality Analysis Reporting System

Data on fatality related with motor vehicle crash were downloaded from the National Highway Traffic Safety Administration (NHTSA) website (http://www.nhtsa.gov/FARS). The Fatality Analysis Reporting System (FARS) is annual data on traffic crashes resulting in at least one fatality occurring within 30 days of the crash. The FARS contains data derived from a census of fatal traffic crashes within 50 states, the District of Columbus, and Puerto Rico. We selected fatal crashes with at least one death of vehicle occupants (e.g. driver or passenger) or non-motorist (e.g. pedestrian) occurring in New Hampshire only from 2011 to 2015.

County Health Rankings
Data on dentist per 100,000 persons and firearm fatalities were obtained from the website of 2018 County Health Rankings (http://www.countyhealthrankings.org/).

## 3. Geographic Area Definitions of Communities

Data availability limited the geographic specificity of the community definitions for which healthy aging indicators could be measured. There are two major factors that

constrained how finely geographic communities could be defined. The first factor is the relatively small sample size of the New Hampshire BRFSS data. The second factor is the sparse actual populations of older persons residing in some Massachusetts towns, most of which are located in Western Massachusetts. Even if data were available for all older persons in some of these towns, the populations are too small for public reporting of town-level estimates.

In this study we addressed the problems associated with sparsely populated towns by strategically aggregating some smaller towns together into larger geographic areas to increase the sample size used for estimation. The estimates derived for the larger aggregated geographic area are then reported for all individual constituent cities/towns. This is an acknowledged limitation of this study.

Geographic Areas for Medicare MBSF Indicators

Although the Medicare MSBF contains individual records for 100% of beneficiaries who are eligible for Medicare in at least month in a calendar year, geographic aggregation of some smaller towns in New Hampshire was necessary. Under our CMS data use agreement prevalence rates for any chronic disease or disabling condition must be censored for any geographic area if either fewer than 11 resident beneficiaries have the condition, or all but 10 beneficiaries have the condition. While censoring is not a concern for most towns and MBSF indicators, we employed a two-part strategy to substantially reduce or eliminate the need for censoring indicators. This strategy entailed: (1) spatial aggregation of less-populated towns with adjacent towns to create more-populated geographic areas, and (2) stratification of chronic diseases and disabling conditions into high prevalence, low prevalence, and lowest prevalence subgroups.

*Geographic Areas for High Prevalence Conditions*

We classified 45 MBSF indicators as "high prevalence" conditions where the risk of censoring was more likely to be due to sparse population in a town rather than low prevalence of the condition among all aged Medicare beneficiaries. For high prevalence MBSF indicators we employed 154 geographic areas. Most of these geographic areas were individual towns or neighborhoods within Manchester and Nashua with at least 200 aged Medicare beneficiary residents satisfying sample selection requirements (described below) and where there were at least 11 beneficiaries with nearly all of the conditions classified as high-prevalence. Towns with fewer than 200 such beneficiaries and/or numerous censored indicators were combined with one or more adjacent towns to form an aggregate geographic area with a combined sample size of more than 200 beneficiaries and/or at least 11 beneficiaries for nearly all indicators. Combined towns had to border each other. The aggregation of specific bordering smaller towns together was guided by the following principles:

1. It is preferable to combine a smaller town with another smaller town rather than a larger town.

2. It is preferable to combine fewer towns rather than more towns together (e.g., a two-town geographic area is preferable to a three-town geographic area).

3. It is preferable to combine towns that are located in the same geographic Primary Care Service Area as defined by the Dartmouth Atlas of Health Care.

4. It is preferable to combine towns located within the same county relative to towns in different counties.

5. It is preferable to limit the number of communities with censored rates to 10 or fewer.

Using these principles as a guide, there were defined 154 geographic communities in New Hampshire for estimating high prevalence Medicare MBSF indicators. Among these 154 communities there were 87 stand-alone individual cities or towns, and 9 neighborhood areas within Manchester and Nashua. There were 58 aggregated geographic areas comprised of two or more individual towns. The individual towns that were combined together to form the 58 aggregated geographic areas were: (Allenstown-Pembroke, Andover-Salisbury, Antrim-Bennington, Ashland-Holderness, Bath-Monroe, Benton-Haverhill, Bradford-Warner, Berlin-Success, Campton-Ellsworth, Chatham-Conway, Chichester-Pittsfield, Dalton-Whitefield, Dunbarton-Weare, East Kingston-South Hampton, Eaton-Freedom, Effingham-Wakefield, Fitzwilliam-Rindge, Greenland-Newington, Greenville-Mason, Lebanon-Plainfield, Lee-Madbury, Lyndeborough-Mont Vernon, Meredith-New Hampton, Middleton-New Durham, Moultonborough-Sandwich, Newbury-Sutton, Newfields-Stratham, Northfield-Tilton, Peterborough-Sharon, Springfield-Wilmot, Thornton-Woodstock, Warren-Wentworth, Atkinson and Gilmanton Academy Grant-Clarksville-Pittsburg, Boscawen-Concord-Webster, Brentwood-Exeter-Kensington, Canaan-Grafton-Orange, Danbury-Hill-Sanbornton, Dublin-Marlborough-Troy, Easton-Franconia-Sugar Hill, Francestown-Greenfield-Temple, Goshen-Lempster-Sunapee, Harrisville-Nelson-Stoddard, Kilkenny-Northumberland-Stark, Landaff-Lisbon-Lyman, Lincoln-Livermore-Waterville Valley, Lyme-Orford-Piermont, Richmond-Swanzey-Winchester, Alexandria-Bridgewater-Bristol-Plymouth, Dorchester-Groton-Hebron-Rumney, Deering-Hillsborough-Washington-Windsor, Keene-Roxbury-Sullivan-Surry, Acworth-Alstead-Gilsum-Langdon-Marlow, Bartlett-Hadley's Purchase-Hale's Location-Hart's Location-Jackson, Colebrook-Columbia-Odell-Stewartstown-Stratford, Bean's Purchase-Gorham-Green's Grant-Martin's Location-Pinkham's Grant- Shelburne, Charlestown-Claremont-Cornish-Croydon-Newport-Unity, Bean's Grant-Carroll-Chandler's Purchase-Crawford's Purchase-Cutt's Grant-Jefferson Low and Burbank's Grant-Randolph-Sargent's Purchase-Thompson and Meserve's Purchase, Cambridge-Dix's Grant-Dixville-Dummer-Errol-Erving's Location-Milan-Millsfield-Second College Grant- Wentworth Location, ). The same common value for MBSF indicators is reported in the community

profiles of towns that were combined together to form these aggregated geographic areas.
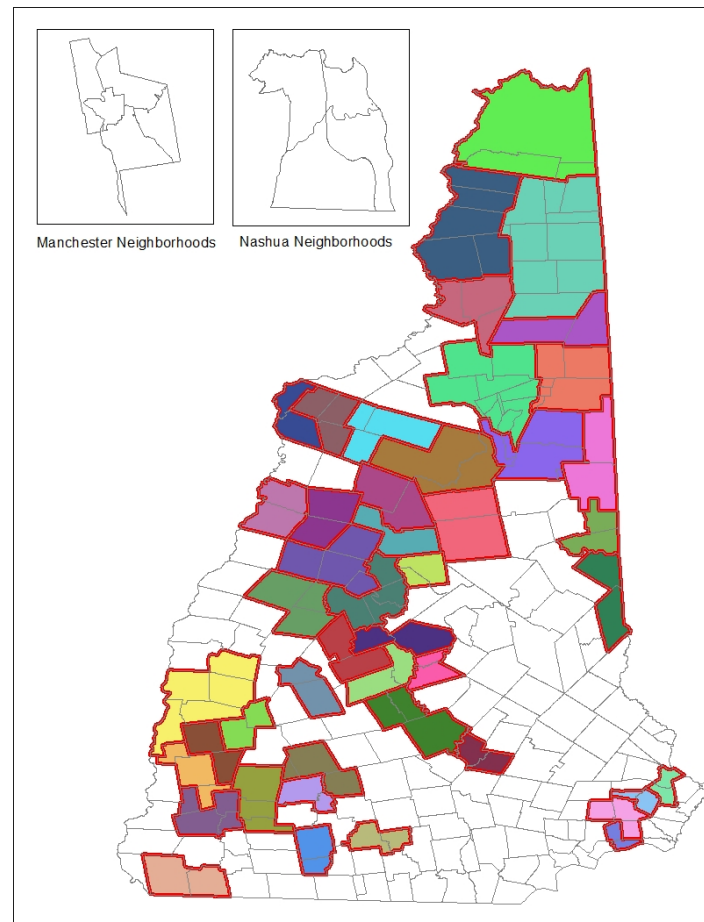


The city of Manchester is disaggregated into 5 neighborhoods defined by the advisory board of Manchester Public Health. Definitions between 2010 census tracts and 5 neighborhoods (i.e., central, East, West, North, and South) was given from the Manchester Public Health. The CMS *Master Beneficiary Summary File-A/B/D* obtained from CMS contained mail 9-digit zip codes (Zip+4 codes) for Medicare beneficiaries. We created a cross-walk file between Zip+4 codes and 2010 census tracts for all 5-digit zip codes in the City of Manchester from a Zip+4 data file purchased from Geolytics, Inc. This file was then merged it to the cross-walk file linking 2010 census tracts to Manchester neighborhoods. This cross-walk file was used to assign identifiers for the 5 neighborhoods in Manchester to beneficiary-level CMS Medicare data files.

The city of Nashua is disaggregated into 4 subareas based on the areas of zip code (i.e., 03060, 03062, 03063, and 03064). The CMS *Master Beneficiary Summary File-A/B/D* obtained from CMS contained mail 5-digit zip codes for Medicare beneficiaries.

*Geographic Areas for Low Prevalence Conditions*

We classified 14 MBSF indicators as "low prevalence" conditions because of the relatively high frequency of censoring required for reporting these indicators for the 154 high prevalence geographic areas described above. Nearly all of the low prevalence conditions were disabling mental health conditions. For low prevalence conditions (endometrial cancer, colorectal cancer, hip fracture, lung cancer, traumatic brain injury, bipolar disorder, personality disorder, blindness and visual impairments, post-traumatic stress disorder, leukemias and other lymphomas, epilepsy, mobility impairments, migraine/chronic headache, schizophrenia and other psychotic disorders) we defined 69 larger geographic areas (see map below) by selective spatial aggregation of adjacent high prevalence geographic areas. Decisions about which high prevalence areas to combine were based on the same goals which guided the spatial aggregation of individual towns into high prevalence geographic areas, namely, relatively homogeneous geographic areas with respect to population socioeconomic status and race/ethnicity. The resulting low prevalence geographic areas are generally relatively homogeneous. However, in a few instances it was not possible to combine areas with very similar populations without violating the requirement that the combined communities be adjacent to each other, and some heterogeneity exists. The same rate is reported in community profiles of all towns or neighborhoods grouped together for low prevalence geographic areas.
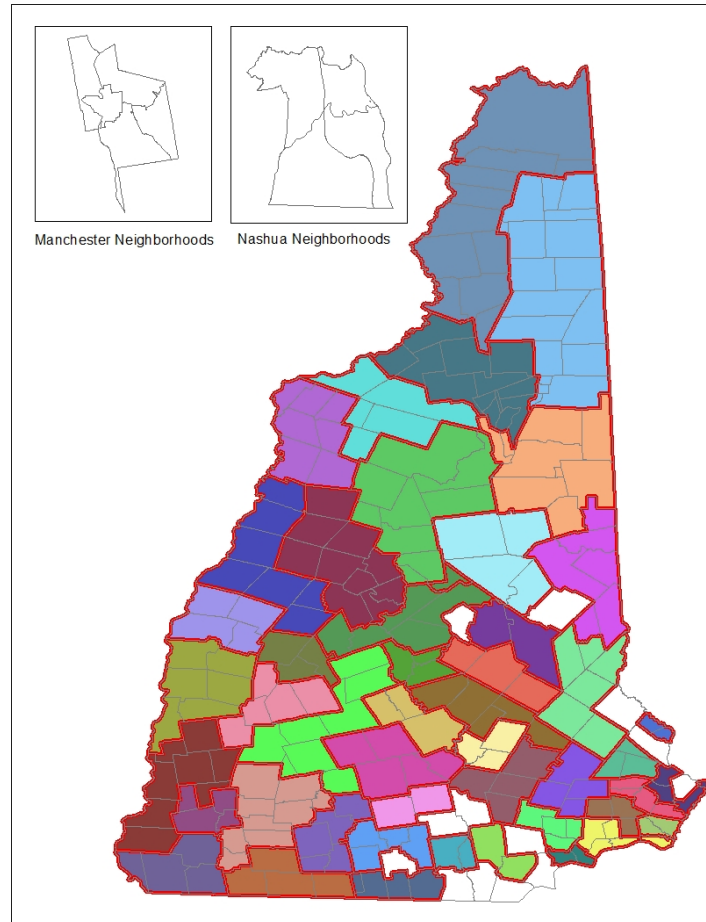
*Geographic Areas for Lowest Prevalence Conditions*

Two disabling conditions (HIV/AIDS, autism spectrum disorders) that we report have so low prevalence rates among aged Medicare beneficiaries that rates would be censored for most of the 69 low prevalence geographic areas described above. In order to reduce the frequency of censoring for these lowest prevalence conditions, we combined low prevalence geographic areas together to form 4 geographic areas for these lowest prevalence conditions. Spatial aggregation decisions were guided by the same goals discussed above with adjacency strictly required. All individual cities and towns that are grouped together for lowest prevalence conditions have the same value reported in community profiles.
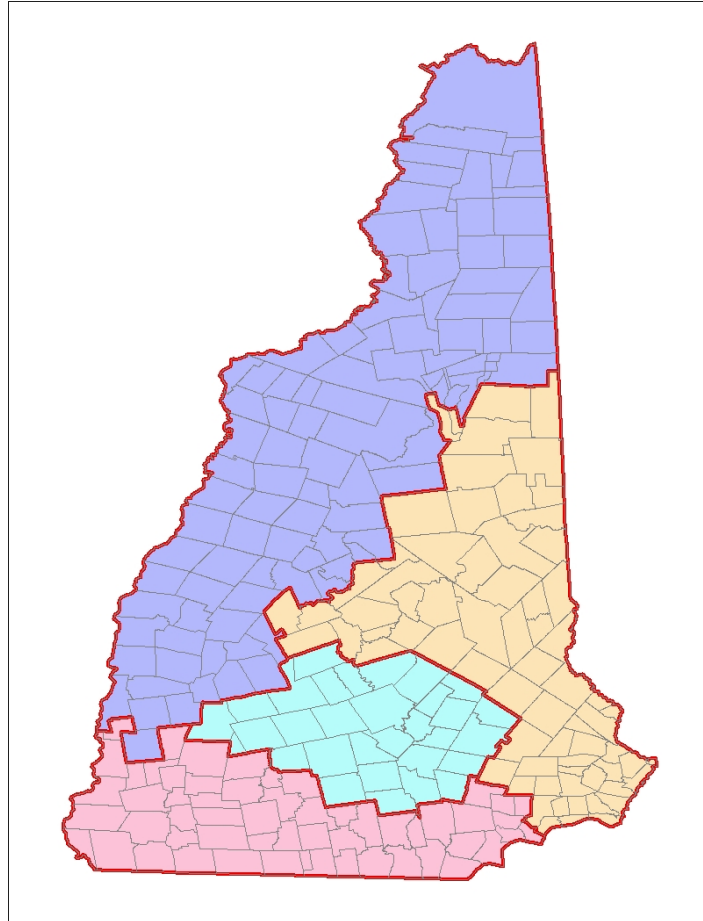
Geographic Areas for BRFSS Indicators

Given the small sample sizes of BRFSS respondents it was only feasible to estimate BRFSS indicators for 28 geographic subareas in the state. These geographic subareas were defined by spatial aggregation of cities and towns using a multi-step process similar to that used for geographic areas estimated from CMS Medicare data.

In the first step we combined selected contiguous individual cities and towns into larger geographic areas, each containing 200 or more BRFSS respondents from 2011-2016 BRFSS surveys under a goal of forming relatively homogenous subareas with respect to socioeconomic status and racial/ethnic mix of the older population. We used ACS estimates of the education (% with less than a high school education, % with a high school education or some college, % with a college degree), income (% with incomes below the poverty level, % with annual incomes exceeding $50,000), and racial composition (% White, % African-American, % Asian, % Other race, % Hispanic) of the population 65 years or older to evaluate population homogeneity. Aggregation decisions were guided by the following principles:

- It is preferable to combine a smaller town with another smaller town rather than a larger town.

- It is preferable to combine fewer towns rather than more towns together (e.g., a two-town geographic area is preferable to a three-town geographic area).

- It is preferable to combine towns located within the same county relative to towns in different counties.

- It is preferable to limit the number of communities with censored rates to 5 or fewer.

In the second step we evaluated whether the preliminary BRFSS areas defined in the first step satisfied the minimum threshold for numerator counts that was used for CMS data privacy rules. For any percentage BRFSS indicator derived from a respondent-level binary (yes/no) variable we required that there be least 11 respondents with the smaller count of yes versus no responses. When this threshold count reporting requirement was not met for more than 5 geographic areas, the assignments of towns bordering the problematic geographic areas were re-evaluated. One or more of these border towns were reassigned to the problematic geographic area if they rectified the censoring problem without creating censoring problems in other geographic areas. This process produced a preliminary set of 28 geographic areas for estimating indicators from BRFSS data

In the third step, we evaluated whether the preliminary set of BRFSS geographic areas satisfied data privacy requirements stipulated in our data use agreement with the New Hampshire Department of Health and Human Services. There were four required privacy protections for reporting BRFSS estimates that are listed below:

1. Estimates should be based on appropriately weighted data
2. Estimates should be censored if based on denominators of fewer than 50
3. Estimates with confidence interval half-widths of more than 10 percentage points should be censored.
4. Estimates with a coefficient of variation greater than 30% should be suppressed or noted as statistically unreliable.

We satisfied the first requirement by employing case-weights derived from respondent-level BRFSS survey design weights and our own computed raked post-stratification weights based on age and sex composition of each geographic area. All denominator sample sizes were checked for the 28 preliminary BRFSS geographic areas and all satisfied the requirement of 50 or more respondents.

In order to evaluate the third and fourth New Hampshire DHHS privacy requirements, we had to produce preliminary estimates for all BRFSS indicators for the 28 BRFSS geographic areas. We then evaluated the confidence intervals and coefficients of variation for these estimates. All BRFSS indicator estimates in the 28 geographic areas satisfied the third privacy requirement that no estimate be reported with half-width confidence intervals exceeding 10 percentage points.

We then evaluated coefficients of variation to assess whether the BRFSS estimates satisfied the fourth NH DHHS privacy requirement. This requirement pertains to estimates with large coefficients of variation, defined as the estimate divided by its standard error). We found that four indicators (delayed care due to cost, 15 or more days with poor mental health, current smoker, and excessive drinker) in 15 different BRFSS areas had coefficient of variation estimates which exceeded 30 percent. The data use agreement required that we either censor these indicator estimates or flag those estimates with a note stating that the coefficients of variation for these indicators is large. Rather than suppress these estimated indicators, we have flagged these indicators and their confidence intervals in the set of community profiles containing 95% confidence intervals posted on the New Hampshire Healthy Aging Data Report website.

At the end of this development process there were 28 BRFSS geographic areas as shown in map below. All BRFSS indicators were estimated for these 28 geographic areas. All individual cities and towns combined together to form these BRFSS areas have the same values reported for BRFSS data indicators in their community profiles.
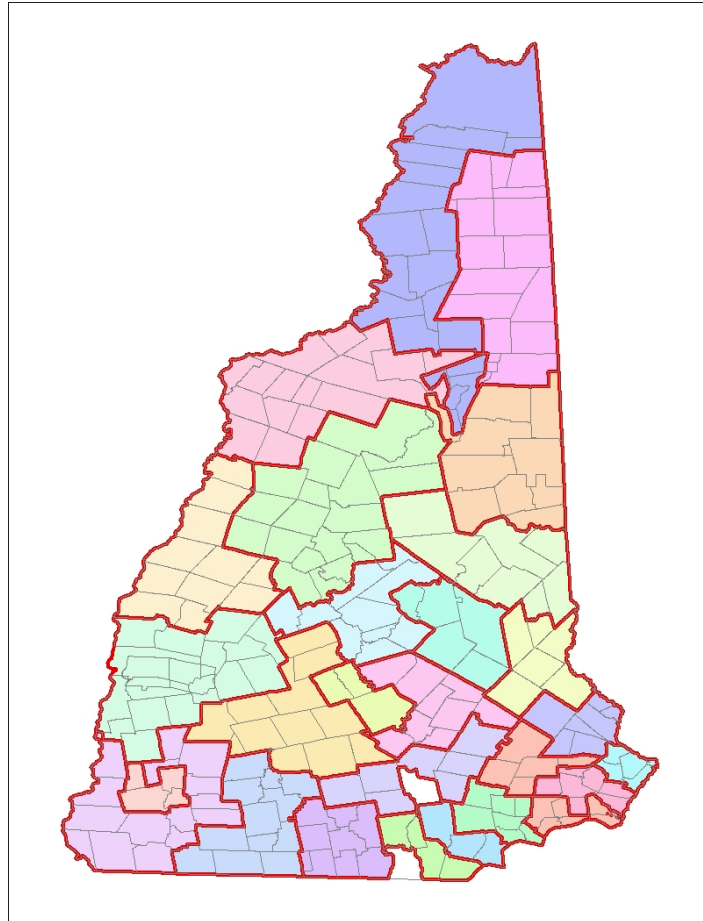
Geographic Areas for FBI Crime Rate Data

Crime rates were reported for individual cities and towns. We did not disaggregate crime rate data for the City of Manchester and Nashua into subareas. The same city-wide crime rates are reported for all subareas within these major cities in New Hampshire.

Geographic Areas for FARS Crash Data

FARS contains crash locations in cities / towns and counties in New Hampshire. We counted fatalities by city / town and county in New Hampshire. Note, we did not disaggregate number of fatality for the City of Manchester and Nashua into subareas.

Geographic Areas for Elder Economic Standard Index

The Elder Economic Standard Index data were only available for the 10 counties in New Hampshire. For these indicators all cities and towns within the same county were assigned common values.

## 4. Geographic Data Sources

Geographic information is used in this report in a variety of ways, ranging from the creation of cross-walk tables between different geographic units (e.g., 5-digit zip code areas to towns) to the mapping of healthy-aging indicator estimates with GIS software. This section summarizes the sources of other geographic data used in the study.

Zip code database

NH zip code data was downloaded from https://www.unitedstateszipcodes.org/. There are 284 zip codes in NH, 2018. The data file contains individual records for all valid 5-digit zip codes, the city/town, county, and state it is located in, and the latitude and longitude coordinates of the centroid of the zip code area. It also contains an indicator of whether the zip code value represents a standard geographic zip code area, a point zip code (e.g., post office box), or a unique zip code assigned to certain entities such as a university.

Zip code shape file

A zip code shape file used for mapping of 5-digit zip code areas was obtained from the U.S. Census Bureau based on the 2010 Census. The shape file was downloaded from an internet website (http://www.census.gov/geo/maps-data/data/tiger-line.html ). The downloaded zip code base contained about 284 records for all types of 5-digit zip codes (standard, point, etc.) in New Hampshire. The Census zip code shape file only contains 248 spatial 5-digit zip code areas. Zip code maps were used to checking the validity of matches between zip codes and towns in BRFSS data and to make decisions about assignments of certain zip codes to individual towns. Some zip code areas are located in more than one town, and some small towns do not have their own zip code. Small towns without their own 5-digit zip code are aggregated together with a bordering town within the same 5-digit zip code. When multiple towns shared a 5-digit zip code, the entire zip code is assigned to the most populated town. Data from the zip code data base and zip code shape file were combined using ArcGIS ArcMap V10 software (http://www.esri.com/).

Town and county shape files for New Hampshire were downloaded from the NH GRANIT web site (http://www.granit.unh.edu/data/downloadfreedata/category/databycategory.html). These shape files are used with ArcGIS ArcMap V10 software to produce maps of the CMS and BRFSS health indicators listed in Table A-1.

## 5. Estimation Methods for Medicare MBSF indicators

Sample Selection Criteria

While the Medicare MBSF contains data on all Medicare beneficiaries with at least once month of Medicare Part A or B eligibility in a calendar year, estimates of chronic

condition prevalence and service utilization rates can only be derived for beneficiaries who receive care from fee-for-service providers who submit claims to Medicare for reimbursement. Beneficiaries with prevalent chronic conditions are identified through algorithms applied to the diagnostic codes reported on Medicare claims over a defined surveillance period. Chronic condition prevalence is determined by the presence of one or several claims (depending on the condition) containing appropriate condition-specific diagnostic codes within surveillance period.[1] Most of these claims algorithms scan claims for both Medicare Part A and B covered services. Claims are not submitted to Medicare during any time interval in which an individual is not eligible for Medicare Part A and/or B and when a beneficiary is enrolled in a Medicare managed care plan that does not submit claims to Medicare for reimbursement. To reliably estimate chronic condition prevalence rates the sample population used for rate estimation should exclude beneficiaries for whom Medicare does not receive claims for services used. To retain such beneficiaries in the sample amounts to an implicit assumption that these beneficiaries used no Medicare covered services when they were not Medicare eligible or enrolled in a Medicare Advantage plan. Hence, rates of chronic condition prevalence and service utilization will generally be underestimated unless such beneficiaries are excluded from the estimation sample.

There are several analytic options for restricting the population sample and rate estimation under these circumstances. O'Donnell, Schneider, & Dean (2008) discuss some of the pros and cons of several options for imposing restrictions on the estimation sample. The most extreme option is to require "full coverage" where the sample is restricted to beneficiaries with a full year of Medicare Part A and B eligibility and who are never enrolled in a Medicare managed care plan during the year. While requiring full coverage ensures that claims were submitted for all Medicare services used by beneficiaries in a calendar year, such a restriction can result in underestimates of chronic condition prevalence rates because some beneficiaries with partial- year coverage have Medicare claims indicating prevalent chronic conditions in those months that claims were submitted. Under the "partial coverage" option, beneficiaries with nearly a full-year of Medicare Parts A and B eligibility and care from fee-for-service providers are retained in the sample. O'Donnell, Schneider, and Dean (2008) note that "a common recommendation is to allow for a one month break in coverage per year of surveillance. This is an attractive option to avoid losing many cases with the condition of interest (i.e., known cases, as indicated in claims) due to the occurrence of only partial FFS coverage" (O'Donnell, Schneider, & Dean (2008), p 7).

In this study we chose to use this" partial-year coverage" option for estimating population-based chronic condition prevalence and service utilization rates. The sample selection criteria used to apply the partial coverage requirements differ depending on the length of the claims surveillance period employed for the chronic condition of interest. While a one-year claims surveillance period is used for most chronic conditions

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[1] The diagnostic codes used in the algorithms used to flag Medicare beneficiaries are available from the Chronic Conditions Warehouse web site (https://www.ccwdata.org/web/guest/condition-categories).

reported in the Medicare MBSF, for some conditions such as congestive heart failure and diabetes, the claims surveillance period is two years. The claims surveillance period is also two years for all conditions included in the MBSF Other Chronic or Potential Disabling Conditions data file. For Alzheimer's disease or related dementias, the claims surveillance period is three years. With only two years of Medicare MBSF data (2014-2015) available to this study, we applied the two-year surveillance sample selection criteria for Alzheimer's disease or related dementia.

Since Part A and B Medicare service utilization rates are based on single-year claims surveillance, the same sample selection criteria are employed for single-year surveillance chronic conditions and all Medicare service utilization rates except for Part D prescription drug utilization.

Determination of Chronic Condition Prevalence: Ever versus Current Year

For each beneficiary the MBSF contains two flag variables for each chronic condition that indicate whether or not the Medicare claims data diagnostic requirements were met for the condition. First, there is a variable noting whether there is claims data evidence of prevalence during the *current* surveillance period only. This variable reports whether or not full-year surveillance coverage and/or diagnostic requirements from claims data were met for the chronic condition. The four categories are: (1) neither claims diagnosis nor surveillance coverage requirements were met, (2) claims diagnosis requirements were met but surveillance coverage requirements were not met, (3) claims diagnosis requirements were not met but surveillance coverage requirements were met, (4) both claims diagnosis claims and surveillance coverage requirements were met. Current-year prevalence requires that claims diagnosis requirements are met. If partial FFS coverage is used to select beneficiaries meeting surveillance coverage requirements then both (2) and (4) above are used to flag beneficiaries with claims data evidence of prevalence in the *current* year. For each beneficiary there is a second historical flag variable that contains earliest calendar year from 1999 onward that the CCW Medicare claims data diagnosis requirements for chronic condition prevalence were met.

Although chronic conditions can be managed effectively through medications, surgery, and/or diet and lifestyle changes, unlike acute illnesses they remain prevalent after onset. However, depending on the extent and type of a Medicare beneficiary's service use in any particular calendar year, there may be no *current-year* claims data evidence of chronic condition prevalence even when such claims data evidence exists in previous calendar years. While questions have been raised about the extent to which some prevalent chronic conditions may be missed for beneficiaries due to the brevity of the MBSF surveillance periods used to determine current-year prevalence[2], current-year

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[2] Gorina and Kramaroy (2011) applied Chronic Conditions Warehouse (CCW) claims data algorithms to the Medicare claims of NHANES I Epidemiologic Follow-up Study respondents who were identified has having one or more of five chronic conditions ( diabetes, ischemic heart disease, COPD, dementia, arthritis) *prior* to the claims surveillance time periods. Prior-period prevalence was determined from baseline and follow-up interview self-reports by respondents, records from baseline physical examinations conducted by physicians (including X-ray results for arthritis). In the case of dementia, baseline responses to the Mental Status Questionnaire and follow-up interview questions were used to

chronic condition prevalence rates are commonly reported (e.g., see Chronic Conditions Warehouse 508 Files https://www.ccwdata.org/web/guest/interactive-data/chronic-conditions-dashboard, Centers for Medicare and Medicaid Services (2012)).

In this report we have chosen to define chronic condition prevalence based on whether there was any CCW claims data algorithm evidence ever since 1999 rather than only current-year 2015 algorithm evidence. There are several reasons for this choice. First, self-reports of chronic conditions are typically based on questions asking whether a doctor *ever* told a respondent that he/she had a certain condition. The "ever-met" claims algorithm definition of prevalence is more similar to the "ever" time period used in self-reports. Second, while some studies have shown that for some conditions self-reports may result in underestimated prevalence rates (e.g., Porell and Miltiades, 2001), claims-based estimates based on finite surveillance time periods are more likely to understate than overstate prevalence rates (e.g., Gorina and Kramaroy, 2011).

Since prevalence rates based on any claims data surveillance evidence since 1999 will naturally include claims evidence from 2015, the prevalence rates reported in this study are higher than those based on current-year surveillance periods. (e.g., see tables on Chronic Conditions Warehouse website (https://www.ccwdata.org/web/guest/medicare-tables-reports). The reader should keep these differences in mind when comparing our reported prevalence rates, which are based on ever meeting the claims data requirements for prevalence since 1999, to rates reported elsewhere, which are commonly based on current surveillance period claims data requirements.

Specific Sample Selection Requirements

Even though chronic condition prevalence is determined on the basis of claims evidence prior to the current surveillance period, the beneficiaries selected to be counted in the denominator for prevalence rate estimation had to meet current-year surveillance rate requirements to avoid substantial under-estimation of prevalence rates because of beneficiaries enrolled in Medicare managed care plans. Below we describe the specific partial-year surveillance coverage requirements employed in rate estimation.

*Single-year surveillance chronic conditions and Parts A & B service utilization*

We followed the partial-year coverage requirements recommended by O'Donnell, Schneider, & Dean (2008) that differed depending upon whether or not a beneficiary

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determine prevalence prior to the claims surveillance time period. Among respondents identified as having the chronic condition prior to the claims surveillance period, application of the CCW claims algorithms over defined surveillance periods identified between 17% (arthritis) and 69% (diabetes) of respondent identified as having those conditions from survey information prior to the surveillance period. While Gorina and Kramaroy (2011) acknowledge that there may be errors in pre-surveillance prevalence status based on survey data (e.g., erroneous self-reports of chronic conditions) their empirical results suggest that the CCW chronic condition surveillance time periods are more likely to be too short to identify prevalence for those chronic conditions where there is a lesser need to regularly use Medicare services for management of the condition.

survived the full calendar year. It is important to retain beneficiaries who die during the year in the estimation sample to mitigate potential biases. If a beneficiary dies on the day when a heart attack occurs he/she cannot meet full-year coverage requirement unless the heart attack occurs on December 31$^{st}$ and would not be counted as experiencing a heart attack. The bias of not including beneficiaries who die during the calendar may be substantial given the high medical costs experienced in the last years of life for many beneficiaries.

For all single-year surveillance chronic conditions and for all service utilization rates except Part D prescription fills and hospital readmission rates, partial-year coverage for beneficiaries alive at the end of 2015 requires that:

- a beneficiary have at least 11 months of both Medicare Part A and B eligibility and at most one month of Medicare managed care enrollment in 2015.

Beneficiaries who died in 2015 are required to have full coverage (Medicare Part A and B eligibility and no Medicare managed care enrollment) in all months that they were alive in 2015. All beneficiaries are further required to have a valid 5-digit residence zip code recorded in the 2015 Medicare MBSF for residence assignment to towns. There were 178,419 Medicare beneficiaries who met these sample selection requirements.

For the readmission rate indicator, we naturally imposed an additional condition that a beneficiary must have been hospitalized at least once during 2015. There were 28,013 Medicare beneficiaries who met this additional sample selection requirement for hospital readmissions.

*Two-year surveillance chronic conditions*

For all other 2-year chronic conditions, partial-year coverage for beneficiaries alive at the end of the 2015 required that:

- a beneficiary has at least 22 months of both Medicare Part A and B eligibility and at most two months of Medicare managed care enrollment over the two calendar years 2014-2015.

Beneficiaries who died in 2015 are required to meet the partial-year coverage requirements in 2014 and meet full coverage requirements in the months they were alive in 2015. Beneficiaries are also required to have a valid 5-digit residence zip code recorded in the 2015 Medicare MBSF. There were 164,368 Medicare beneficiaries who met these sample selection requirements.

Since New Hampshire residence requirements were applied to 2014 MBSF data, there are some beneficiaries with records in the 2015 MBSF who did not meet the two-year surveillance sample selection criteria because they did not live in New Hampshire in 2014. Unfortunately, these beneficiaries had to be excluded from the two-year surveillance estimation sample. If Medicare beneficiaries who recently moved to New

Hampshire tend to have systematically better/worse health status than longer term resident beneficiaries, this difference will not be reflected in the town-level estimated prevalence and service utilization rates.

While beneficiaries younger than 65 years of age can be entitled to Medicare due to disability, most beneficiaries are not entitled to Medicare until they reach 65 years of age under Old Age Survivors Insurance status. Accordingly, to satisfy the one-year surveillance sample selection criteria most beneficiaries must have been 65 years old by February 1st of 2015. The two-year surveillance sample selection criteria require that such beneficiaries be 65 years old as of March 1st of 2014. While we do not make this distinction in our general descriptions of the chronic condition prevalence indicators, the prevalence rates for two-year surveillance period chronic conditions strictly pertain to an older population than the population for single-year conditions and service utilization rates. It is also possible that by employing the two-year sample selection criteria for Alzheimer's disease or related dementias (with a three-year surveillance period), this may have produced underestimates of prevalence rates for this condition.

*Part D prescription drug utilization rates*

In contrast to other Medicare covered services the Medicare MBSF contains summary information about Part D prescription drug utilization for both beneficiaries receiving care from fee-for-service providers and Medicare managed care enrollees. Furthermore, some Medicare beneficiaries with Parts A and B eligibility may not have opted to enroll for Part D Medicare coverage. Because of these factors, the sample selection criteria for the Part D prescription drug utilization indicator differ from that employed for other Medicare covered services.

For Part D prescription utilization, partial-year coverage for beneficiaries alive at the end of 2015 requires that:

- a beneficiary have at least 11 months of Medicare Part D coverage.

Beneficiaries who died in 2015 are required to have Medicare Part D coverage in all months they were alive in 2015. Beneficiaries are also required to have a valid 5-digit residence zip code recorded in the 2015 Medicare MBSF. There were 129,193 Medicare beneficiaries who met these sample selection requirements.

*Medicaid dual eligibility and Medicare managed care status*

For our estimates of Medicare managed care enrollment status and dual eligibility for Medicare and Medicaid, no additional sample selection criteria are imposed beyond the basic age and state residence requirements used to select beneficiaries contained in the MBSF data for New Hampshire. Beneficiaries had to be 65 years or older on January 1st, 2015, eligible for Medicare for at least one month in 2015, and have a state residence code for New Hampshire. There were 277,877 Medicare beneficiaries who met these sample selection requirements.

*One-year age-sex adjusted mortality rates*

Although 2015 dates of death are reported for all beneficiaries with at least one month of Medicare eligibility regardless of managed care status, additional sample selection requirements are imposed for estimates one-year mortality rates. We also require that beneficiaries reside in the same zip code in 2014 as 2015 to mitigate any potential bias associated with beneficiaries whose move to a town in 2015 may have been motivated by health concerns in their last year of life. There were 201,879 Medicare beneficiaries who met these sample selection requirements.

Post Stratification Weights

Medicare beneficiaries are assigned to towns based on their 5-digit residence zip code using a cross-walk file that we created to link all valid 5-digit zip codes to a specific city/town. Because of the sample selection criteria that are employed to ensure the potential presence of Medicare claims for all sample beneficiaries during the surveillance period, the age-sex distributions of these estimation samples in towns may differ from that of all aged Medicare beneficiaries actually residing those towns. Post stratification weights for 10 age-sex classes (males 65-69, males 70-74, males 75-79, males 80-84, males 85+, females 65-69, females 70-74, females 75-59, females 80-84, females 85+) were computed for each geographic area in the state defined for respective high prevalence, low prevalence, and lowest prevalence Medicare MBSF indicators. Individual beneficiaries in age-sex groups that are under-represented (over-represented) in the town's estimation sample relative to the total town beneficiary population are assigned post-stratification weights greater than (less than 1). These weights are computed so that when these post-stratification weights are applied, the weighted age-sex distribution of the estimation sample in each town matched the actual age-sex distribution of all Medicare beneficiaries in the town.

Different town-level post-stratification weights are computed for Medicare indicators depending upon on length of the current surveillance period (single-year versus two-year), and for Medicare Part D versus Medicare Parts A & B service utilization rates. In addition, for estimates of state-level prevalence and service utilization rates, another set of post-stratification weights were computed at the state level to ensure that the weighted age-sex distribution of the entire state estimation sample matched the actual beneficiary age-sex distribution for the state. These state-level post-stratification weights did not ensure that the age-sex distribution of the estimation sample in each town matched the town's actual beneficiary age-sex distribution. In other words, the target population for these adjustments is the state rather than the town.

The post-stratification weights for Medicare service utilization rates were applied to beneficiaries in the estimation sample after another adjustment weight was applied. This additional weight is based on the portion of the year that potential claims could have been submitted for Medicare reimbursement. This first adjustment might best be explained with an example. Beneficiary A, who was continuously entitled for Medicare Parts A and B for a full calendar year and was never enrolled in a Medicare Advantage

plan, has claims over the full year showing 6 physician visits. These six visits reflect an annual physician visit rate of 6 visits per year. Consider an otherwise identical beneficiary who had six physician visits before his/her death at the end of June. The annualized rate of physician visits for this beneficiary who died before the end of the year is actually 12 visits per year rather than 6 visits per year. However, in contrast to the former beneficiary who survived the full year, the latter beneficiary who died did was only at risk for making a physician visit for one-half of a year. Hence the decedent beneficiary contributed only ½ of a full person-year to the denominator used for calculating a mean physician visit rate for the town.

For all Medicare service utilization rate indicators, the service use reported in the MBSF for beneficiaries in the estimation sample are first annualized to reflect the expected utilization with full-year coverage (12 months). Then individual person-weights are assigned to all sample beneficiaries. These weights are equal to the fraction of the year (i.e., # months of full coverage/12) that they had full coverage. Sampled beneficiaries with full-year coverage are assigned a weight of one (12/12) and beneficiaries with less than full-year coverage are assigned a fractional weight less than one.

The post-stratification town-level weights were also computed differently for the one-year mortality rates. In this case the weights were computed so that the weighted age-sex distribution of the estimation sample in each individual town population matched the state-wide age-sex distribution of all aged Medicare beneficiaries. By computing the post-stratification weights in this manner, the one-year mortality rate in a town reflects the expected mortality rate if its age-sex beneficiary population composition matched that of the entire state.

Some caveats should be noted about what these post stratification weights do and do not do with respect to rate estimation. By applying these weights the prevalence and service utilization rate estimates are adjusted to reflect differences between the age-sex population composition of the sample and that of actual beneficiaries in the town. The age-sex distribution of all aged beneficiaries in each town contains beneficiaries who were excluded from the estimation sample because they did not have a sufficient history of fee-for-service Medicare claims. This includes the exclusion of Medicare Advantage enrollees. If such managed care enrollees are systematically younger than beneficiaries receiving care from fee-for-service providers, younger beneficiaries in the estimation sample will be assigned larger post-stratification weights to reflect their under-representation in the town estimation sample. However, application of these post-stratification weights will not adjust health indicators to reflect any systematic unmeasured health status differences between Medicare Advantage enrollees and fee-for-service beneficiaries within the same age-sex class. Past research has consistently found that Medicare managed care enrollees tend to be healthier than their counterparts receiving care from fee-for-service providers. A recent study suggests that this still is true in the Medicare Advantage program (Morrissey, Kilgore, Becker, Smith, & Delzell 2013).

The reported healthy aging indicators derived from the Medicare MBSF strictly only reflect the health status of fee-for-service Medicare beneficiaries. For this reason we report the percentage of Medicare beneficiaries with at least two months of Medicare Advantage enrollment as a town population composition attribute. Some caution should be exercised in interpreting MBSF indicators for towns where the Medicare Advantage market penetration rate is very high.

<u>Fixed Effects Estimation of Rates</u>

Geographic residence dummy variables were constructed for beneficiaries in the estimation samples defined for the various MBSF indicator groups discussed above. Stata 14.0 was used to estimate separate fixed effects dummy variable ordinary least squares regressions with a suppressed constant on the full beneficiary estimation samples for each MBSF indicator noted in Tables A1 and A2. Beneficiary cases were weighted with individual population weights equal to the computed post-stratification weights for all MBSF indicators, except for Medicare service utilization rates where an additional partial-year weight adjustment was also made. The estimated dummy variable coefficients corresponding to weighted sample mean rates for towns or clusters of smaller towns. These estimated coefficients are the estimated MBSF rates reported in the main tables. Robust standard errors were estimated for the coefficient estimates. The 95% confidence intervals for these estimates are the reported margins of error for the estimates. The state-level estimates for the MBSF indicators along with their 95% confidence intervals are similarly estimated on the sample of all beneficiaries in the state estimation sample using different population weights.

The estimates for health indicators derived from Medicare MBSF data and their margins of error are reported for all towns and planning districts within Boston on the community profiles with confidence intervals available for download. We took a conservative approach in distinguishing those indicators where the difference between the town rate and the state rate is statistically significant at the 5% level.  We only distinguish those indicators where the 95% confidence interval of the town estimate does not overlap with the 95% confidence interval of the state estimate as ones where the difference is estimated with enough precision so that the reported difference is unlikely to be due to chance associated with sampling variation.

## 6. Estimation Methods for New Hampshire BRFSS Indicators

While there are some similarities in the methodologies used to obtain estimates from Medicare MBSF and New Hampshire BRFSS data, there were some important differences due to the complex survey design of the BRFSS and the much smaller respondent samples in the BRFSS.

<u>Sample Selection Criteria</u>

The selection criteria for the estimation samples used to estimate BRFSS indicators were straightforward. The estimation samples included all BRFSS respondents who

were 60 years or older with a valid residence zip code or town code. These selection criteria were applied to BRFSS data from 2011 through 2016.

Assignment of Respondents to Geographic Areas

As noted earlier, there were 28 geographic services areas defined for estimation of BRFSS indicators. Before assigning respondents to their appropriate BRFSS geographic area we examined the correspondence between the 5-digit residence zip codes and the town codes reported in the BRFSS data for all respondents selected for the estimation samples. Using a zip code-to-town crosswalk file, we identified a relatively small number of cases where the reported zip codes and towns did not match those recorded in the zip code to town cross-walk data file. The respondent's self-reported town was accepted over the reported zip code in these situations. If a respondent's town code was missing but a valid five-digit zip code was reported, the zip code-to-town cross-walk file was used to assign the respondent to a NH city or town.

1. Respondents were assigned to the New Hampshire residence town reported in the BRFSS data.

2. If this town code was invalid or missing and the respondent's residence five-digit zip code was valid, his/her zip code was used to assign them to a city or town.

Over the six-year period 2011-2016, there were 19,086 BRFSS respondents. The zip code correctly matched the self-reported town for 18,035 BRFSS respondents (94.5%). For 939 respondents (4.9%) we either accepted the self-reported town when the zip code was missing, invalid, or did not match the self-reported town, or when the town was missing and the zip code was valid, we accepted the town corresponding to that zip code from the cross-walk file. Finally, there were 112 respondents (0.6%) with missing and/or invalid data for both their residence town and zip code who were dropped from the estimation sample.

After assigning individual BRFSS respondents to specific towns, they were subsequently assigned to the 28 geographic BRFSS areas via a cross-walk file.

Estimation Samples

The estimation samples for specific BRFSS indicators varied depending upon whether the questions were asked of all respondents every year, to all respondents every other year, to all respondents in some years but to fewer respondents in other years, to a subset of respondents based on gender (e.g., use of mammograms). Due to occasional missing data for individual respondents, the sample sizes of the estimation samples also varied among indicators when the same years of BRSS data were used for estimation. For BRFSS indicators based on three years of data (2014-2016) most of the sample sizes exceeded 6,000 respondents. Sample sizes ranged from 6,610 for the pneumonia vaccine to 9,643 for self-reported fair or poor health status. Sample sizes for

indicators estimated with three years (2012, 2014, and 2016) of BRFSS data were as follows: mammography only for women (5,309) and a dentist visit within a year (9,425). Sample sizes for indicators estimated with three years (2011, 2013, and 2015) of BRFSS data were as follows: muscle strength and aerobic activity (8,465) and cholesterol screening (9,233). Table A-2 contains information about the specific years of data were used to estimate each of the BRFSS indicators.

<u>Survey Design and Post–Stratification Weights</u>

The BRFSS data are derived from telephone surveys of the non-institutionalized adult population in New Hampshire. Since the BRFSS has a complex survey design in with unequal probabilities of respondent selection, statistical analyses of BRFSS data require the application of design weights to account for different probabilities of selection. The BRFSS uses disproportionate stratified sampling in its landline telephone surveys where the sampling rate differs depending on telephone density. There is also geographic stratification in the New Hampshire BRFSS sampling where some geographic areas are sampled at a higher rate than other ones. The probabilities of selection differ among BRFSS respondents due to this stratification, telephone availability, type of phone (cell versus landline since 2011), and the number of adults in the household, the number of telephones in the household, and rates of nonresponse by households. Since these factors can affect the representativeness of the sample data, survey design weights are produced to adjust for these factors in statistical analyses of BRFSS survey data.

In addition to these survey design weights, raking weights are computed so that summed counts of weighted BRFSS respondents match known state population totals along population characteristics, including age, sex, and race/ethnicity, telephone source, education level, marital status, and renter/owner status. Since these "ready-to-use" raking weights provided with BRFSS data are only suitable for state-level estimates we had to compute our own post-stratification weights to derive estimates for BRFSS geographic areas within the state.

Town-level population estimates for 12 age-sex classes (males 60-64, males 65-69, males 70-74, males 75-79, males 80-84, males 85+, females 60-64, females 65-69, females 70-74, females 75-59, females 80-84, females 85+) were obtained from the 2012-2016 American Community Survey for all cities and towns within New Hampshire and for BRA Planning Districts within Boston defined by census tracts (http://factfinder2.census.gov ). Data for individual towns was aggregated into the 29 BRFSS geographic areas described earlier. These BRFSS area age-sex population distributions served as the target population matrix for computation of raked post-stratification weights. Post-stratification weights were computed using an iterative raking procedure in which inflation weights were computed to match by sex and then recomputed to match by age group. This process was repeated until stable post-stratification were obtained. Individual respondents in age-sex groups that were under-represented (over-represented) in the estimation sample relative to the BRFSS area census population distribution were assigned weights greater than (less than 1) so that

when these post-stratification weights are applied, the weighted age-sex distribution of the estimation sample matched the 2012-2016 ACS age-sex distribution of each BRFSS area.

Different post-stratification weights are computed for groups of indicators depending upon how many years and which years of BRFSS data were pooled together for the estimation sample. As noted earlier depending upon the health indicator, different years of BRFSS data were pooled together. For state-level BRFSS estimates another set of post-stratification weights were computed at the state level to ensure that the sum of weighted age-sex counts of the entire estimation sample matched the 2012-2016 ACS age-sex distribution for the state of New Hampshire. These state-level post-stratification weights did not ensure that the age-sex distribution of the estimation sample for each BRFSS area matched the ACS age-sex population distribution for BRFSS area. In other words, the target population for these latter adjustments was the entire state rather than individual BRFSS geographic areas. The final population weights for individual BRFSS respondents are computed by multiplying the BRFSS survey design weights by our own computed raked post-stratification weights.

Fixed Effects Estimation of Rates

Geographic residence dummy variables were constructed for each respondent in the various sample populations used to estimating the set of BRFSS indicators. Because of the complex survey design of the BRFSS, a survey design effect regression procedure in Stata 14.0 "regress" was used for parameter estimation. Separate fixed effects dummy variable ordinary least squares regressions with a suppressed constant are estimated on appropriate estimation samples for all BRFSS indicators shown in Tables A-1 and A-2. Respondent cases were weighted with individual population weights equal to the BRFSS survey design weight multiplied by our computed raked post-stratification weights described above.[3] The estimated coefficients for the geographic dummy variables from the regression models are the estimated rates for BRFSS geographic areas. The same estimated rates are reported for all individual cities and towns comprising the BRFSS geographic areas reported in Table A-4. The 95% confidence intervals for these estimates reflect the margins of error of the estimates. State-level estimates for each BRFSS indicator along with their 95% confidence intervals were similarly estimated using weighted data from the full state estimation samples.

The estimates for health indicators derived from BRFSS data and their confidence intervals are reported all towns on the community profiles with confidence intervals available for download. We take a conservative approach in distinguishing those indicators where the difference between the BRFSS geographic area rate and the state rate is statistically significant at the 5% level. We only distinguish those indicators as significant where the BRFSS area 95% confidence interval does not overlap with the state 95% confidence interval as ones where there the difference between the BRFSS

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[3] Weighted ordinary least squares regression was also used to obtain estimates with robust standard errors without the standard Stata regress procedure. These estimates were virtually identical to those obtained with the Stata svy procedure.

area and state estimates is unlikely to be due to chance associated with sampling variation. We note that fewer BRFSS indicator estimates are distinguished as differing significantly from the state estimates than was found for Medicare MBSF town-level estimates. This is a consequence of the much smaller sample populations used to estimate the BRFSS indicators.

Some caution should be exercised in interpreting differences between the BRFSS indicators reported for individual towns for several reasons. First, rates for which there is no distinction made regarding the statistical significance of the difference between the town and the state rate may be due to sampling variation. Second, data from multiple towns was pooled together to obtain estimates for the larger BRFSS geographic areas and the same estimates are reported for all towns within the geographic area. Actual BRFSS indicators are likely vary among individual towns that constitute the BRFSS areas. Unfortunately, BRFSS samples were too small to generate town-level estimates for most individual cities and towns.

**REFERENCES**

Centers for Disease Control and Prevention (2013) "The BRFSS Data User Guide", Behavioral Risk Factor Surveillance System, August 15, 2013 (http://www.cdc.gov/brfss/data_documentation/index.htm).

Centers for Medicare and Medicaid Services (2012). "Chronic Conditions among Medicare Beneficiaries, Chartbook", 2012 Edition. Baltimore, MD.

Gerontology Institute, University of Massachusetts Boston, "The National Economic Security Standard Index" (2012). *Gerontology Institute Publications.* Paper 75. (http://scholarworks.umb.edu/gerontologyinstitute_pubs/75).

Gorina, Y, and Kramarow, EA (2011). "Identifying chronic conditions in Medicare claims cata: Evaluating the Chronic Condition Data Warehouse algorithm" *Health Services Research* 46: (5) 1610-1627.

Morrissey, MA, Kilgore, ML, Becker, DJ, Smith, W., and Delzell, E., (2013). "Favorable Selection, Risk Adjustment and the Medicare Advantage Program," Health Services Research 48: (3) 1039-1056.

O'Donnell, B, Schneider, K, and Dean, D. (2008). "CMS Chronic condition data warehouse:Technical guidance for researchers calculating population statistics" Buccaneer, A General Dynamics Company . (https://www.ccwdata.org/cs/groups/public/documents/document/ccw_techguideresearchers.pdf).

Porell, FW, and Miltiades, HB (2001). Access to care and functional status change among aged Medicare beneficiaries. *Journals of Gerontology Social Sciences* 56: (2) S69-S83.

**Table A-1:   New Hampshire Healthy Aging Indicator Definitions**

| INDICATORS | DEFINITION |
|---|---|
| **POPULATION CHARACTERISTICS** | |
| Total population all ages | The number of total population of all ages. |
| % of total population age 60 or older | The percentage of persons 60 years or older among the total population. |
| Total population age 60 or older | The number of persons 60 years or older. |
| % of total population age 65 or older | The percentage of persons 65 years or older among the total population. |
| % female (65+ population) | The percentage of females 65 years or older among population aged 65 year or older. |
| % White (65+ population) | The percentage of persons 65 years or older reporting their race as "White" or reporting entries such as Irish, German, Italian, Lebanese, Arab, Moroccan, or Caucasian. |
| % African American (65+ population) | The percentage of persons 65 years or older reporting their race as "Black or African American" or reporting entries such as African American, Kenyan, Nigerian, or Haitian. |
| % Asian (65+ population) | The percentage of persons 65 years or older reporting their race as "Asian Indian," "Chinese," Filipino," "Korean," "Japanese," Vietnamese," and "Other Asian" or provide other detailed Asian responses. |
| % Other (65+ population) | The percentage of persons 65 years or older reporting their race as "American Indian or Alaska Native" or "Native Hawaiian or other Pacific Islander", or reporting entries such as Navajo, Blackfeet, Inupiat, Yup'ik, or Central American Indian groups, or South American Indian groups. |
| % Hispanic/Latino (65+ population) | The percentage of persons 65 years or older reporting their origin as "Hispanic or Latino". |
| % married (65+ population) | The percentage of persons 65 years or older reporting that they are currently married with spouse present or with spouse absent due to employment, living away from home, institutionalization, or serving away from home in the Armed Forces. |
| % divorced/separated (65+ population) | The percentage of persons 65 years or older reporting that they are legally divorced and who have not remarried, or they are legally separated or otherwise absent from their spouse because of marital discord. |
| % widowed (65+ population) | The percentage of persons 65 years or older reporting they are widows and widowers who have not remarried. |

| INDICATORS | DEFINITION |
|---|---|
| % never married (65+ population) | The percentage of persons 65 years or older reporting they have never been married, including people whose only marriage(s) was annulled. |
| % with less than high school education (65+ population) | The percentage of persons 65 years or older reporting they have completed less than 9th grade, or 9th grade to 12th grade with no diploma. |
| % with high school or some college (65+ population) | The percentage of persons 65 years or older reporting they have graduated from high school, attended a college but did not receive a degree, or received an associate's degree. |
| % with college degree (65+ population) | The percentage of persons 65 years or older reporting they received a bachelor's master's, or professional or doctorate degree. |
| % 65+ population living alone | The percentage of persons 65 years or older reporting that they live alone. |
| % 65+ population who speak only English at home | The percentage of persons 65 years or older reporting that no language other than English is spoken at home. |
| % 65+ population who are veterans of military services | The percentage of persons 65 years or older reporting to have served in the military forces for the United States (Army, Navy, Air Force, Marine Corps, or Coast Guard) in time of war or peace. |
| Age-sex adjusted 1-year mortality rate | The percentage of Medicare beneficiaries 65 years or older on January 1, 2015 who lived in the same community for both 2014 and 2015 and who died in 2015 (beneficiary population is weighted to match state age-sex distribution of aged Medicare beneficiaries. |
| % moved within same county | The percentage of persons 65 years or older reporting to have changed residence within same county in MA since a year ago. |
| % moved from different county in New Hampshire | The percentage of persons 65 years or older reporting to have hanged residence between different counties in MA since a year ago. |
| % moved from different state | The percentage of persons 65 years or older reporting to have changed residence between states since a year ago. |

| INDICATORS | DEFINITION |
|---|---|
| **WELLNESS and PREVENTION** | |
| % 60+ with any physical activity last month | The percentage of persons 60 years or older who answered yes to the question- "During the past month, (other than your regular job) did you participate in any physical activities such as running, calisthenics, golf, gardening or walking for exercise?" |
| % 60+ met CDC guidelines for muscle-strengthening activity | The percentage of persons 60 years or older who met CDC guidelines for muscle-strengthening activity |
| % 60+ met CDC guidelines for aerobic physical activity | The percentage of persons 60 years or older who met CDC guidelines for aerobic physical activity |
| % 60+ met CDC guidelines for both types of physical activities | The percentage of persons 60 years or older who met CDC guidelines for both types of physical activities |
| % 60+ getting recommended hours of sleep | The percentage of persons 60 years or older reporting average hours (7 or 8 hours for age 60-64 years and 7,8,or 9 hours for age 65 years or older) of sleeping in a 24 period. |
| % 60+ injured with a fall in last 12 months | The percentage of persons 60 years or older reporting to have fallen at least once in the past 12 months resulting in injury (defined as causing one to limit regular activities for at least a day or to go see a doctor). |
| % 65+ had hip fracture | The percentage of Medicare beneficiaries 65 years or older in 2015 who ever met the claims-based criteria indicating a hip/pelvic fracture since 1999. These criteria are having at least 1 inpatient or skilled nursing facility Medicare claim with appropriate diagnosis codes during a 1-year period. |
| % 60+ with self-reported fair or poor health status | The percentage of persons 60 years or older reporting fair or poor to question: Would you say that in general your health is: excellent, very good, fair, poor? |
| % 60+ with 15+ physically unhealthy days last month | The percentage of persons 60 years or older reporting at least 15 days to the question- "Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good? " |
| % 60+ with physical exam/check-up in past year | The percentage of persons age 60 years or older who reporting seeing a doctor for a regular check-up within the past year. |
| % 60+ met CDC preventive health screening goals | The percentage of persons age 60 or older who were up to date on Centers for Disease Control and Prevention health screening goals for flu shot, colorectal cancer screening, pneumonia vaccine, and mammograms (women only). |

| INDICATORS | DEFINITION |
|---|---|
| % 60+ flu shot past year | The percentage of persons age 60 years or older who answered yes to the question- "During the past 12 months, have you had a seasonal flu shot (or seasonal flu vaccine that was sprayed in your nose [added in 2010])?" |
| % 65+ with pneumonia vaccine | The percentage of persons age 65 years or older who reported ever having a pneumonia vaccination. |
| % 60+ with cholesterol screening | The percentage of persons age 60 years or older who had their cholesterol checked within past 5 years. |
| % 60+women with mammogram within last 2 years | The percentage of women 60 years or older whose last mammogram was two years ago or less. |
| % 60+ with colorectal cancer screening | The percentage of persons age 60 years or older whose last proctoscopic exam was five years ago or less. |
| % 60+ with HIV test | The percentage of persons age 60 years or older who answered yes to the question- "Have you ever been tested for HIV?" |
| % 60+ current smokers | The percentage of persons 60 years or older reporting to have ever smoked at least 100 cigarettes and who now smoke on some or all days. |
| % 60+ with loss of 6 or more teeth | The percentage of persons 60 years or older reporting to have had 6 or more teeth removed because of tooth decay or gum disease. |
| % 60+ with annual dental exam | The percentage of persons age 60 years or older who reporting visiting a dentist or dental clinic within the past year. |
| # dentists per 100,000 persons (all ages) | The number of professionally active dentists per 100,000 persons. |
| **NUTRITION/DIET** | |
| % 60+ with 5 or more servings of fruit or vegetables per day | The percentage of persons 60 years or older reporting to have eaten five or more servings of fruit or vegetables per day in the last month. |
| % 60+ self-reported obese | The percentage of persons 60 years or older with a body mass index of 30 or higher |
| % 65+ clinically diagnosed obese | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating obesity since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claim, or two hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 2-year period. |

| INDICATORS | DEFINITION |
|---|---|
| % 60+ with high cholesterol | The percentage of Medicare beneficiaries 65 years or older in 2015 who ever met the claims-based criteria indicating high cholesterol since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claim, or two hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 1-year period. |
| % 60+ excessive drinking | The percentage of persons 60 years or older reporting excessive alcoholic drinking during the past month. For men excessive drinking is defined as consuming 60 or more alcoholic drinks in the past month or consuming 5 or more alcoholic drinks on at least one occasion during the past month. For women excessive drinking is defined as consuming 30 or more alcoholic drinks in the past month or consuming 4 or more alcoholic drinks on at least one occasion during the past month. One drink is equivalent to a 12-ounce beer, a 5-ounce glass of wine, or a drink with one shot of liquor. |
| % 65+ with poor supermarket access | The percentage of persons age 65 and over who are beyond 1 mile (in urban) or 10 miles (in rural) from supermarkets. |
| **BEHAVIORAL HEALTH** | |
| % 60+ with 15+ days poor mental health last month | The percentage of persons 60 years or older reporting at least 15 days to the question- "Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?" |
| % 65+ with depression | The percentage of Medicare beneficiaries 65 years or older in 2015 who ever met the claims-based criteria indicating depression since 1999. These criteria are having at least one inpatient, skilled nursing facility, home health, outpatient or Part B Medicare claim with appropriate diagnosis codes during a 1-year period. |
| % 65+ with anxiety disorders | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating anxiety disorders since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claim, or two hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 2-year period. |

| INDICATORS | DEFINITION |
|---|---|
| % 65+ with bipolar disorders | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating bipolar disorders since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claim, or two hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 2-year period. |
| % 65+ with post-traumatic stress disorder | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating post-traumatic stress disorders since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claim, or two hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 2-year period. |
| % 65+ with schizophrenia & other psychotic disorders | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating schizophrenia & other psychotic disorders since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claim, or two hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 2-year period. |
| % 65+ with personality disorders | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating personality disorders since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claim, or two hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 2-year period. |
| # opioid deaths (all ages) (county) | Number of confirmed all intents opioid-related overdose deaths by city/town of residence for the decedent among Massachusetts residents in 2017 |
| % 65+ with substance abuse (drug use +/or alcohol abuse) | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating drug use or alcohol abuse disorders since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claim, or two hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 2-year period. |

| INDICATORS | DEFINITION |
|---|---|
| % 65+ with tobacco use disorders | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating tobacco disorders since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claim, or two hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 2-year period. |
| **CHRONIC DISEASE** | |
| % 65+ with Alzheimer's disease or related dementias | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating Alzheimer's disease or related dementia since 1999. These criteria are having at least one inpatient, skilled nursing facility, home health, hospital outpatient or Part B Medicare claim with appropriate diagnosis codes during a 3-year period. |
| % 65+ with diabetes | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating diabetes since 1999. These criteria are having at least one inpatient, skilled nursing facility, home health Medicare claims, or at least two hospital outpatient or Part B Medicare claims with the appropriate diagnosis codes during a 2-year period. |
| % 65+ with stroke | The percentage of Medicare beneficiaries 65 years or older in 2015 who ever met the claims-based criteria indicating a transient ischemic attack (stroke) since 1999. These criteria are having at least one inpatient Medicare claim or at least 2-hospital outpatient or Part B Medicare claim with appropriate diagnosis codes during a 1-year period. |
| % 65+ with chronic obstructive pulmonary disease (COPD) | The percentage of Medicare beneficiaries 65 years or older in 2015 who ever met the claims-based criteria indicating chronic obstructive pulmonary disease since 1999. These criteria are having at least one inpatient, skilled nursing facility, or home health Medicare claim or at least 2 hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 1-year period. |
| % 65+ with asthma | The percentage of Medicare beneficiaries 65 years or older in 2015 who ever met the claims-based criteria indicating asthma since 1999. These criteria are having at least one inpatient, skilled nursing facility, or home health Medicare claim or at least 2 hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 1-year period. |

| INDICATORS | DEFINITION |
|---|---|
| % 65+ with hypertension | The percentage of Medicare beneficiaries 65 years or older in 2015 who ever met the claims-based criteria indicating hypertension since 1999. These criteria are having at least one inpatient, skilled nursing facility, or home health Medicare claim or at least 2 hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 1-year period. |
| % 65+ ever had a heart attack | The percentage of Medicare beneficiaries 65 years or older in 2015 who ever met the claims-based criteria indicating an acute myocardial infarction (heart attack) since 1999. These criteria are having at least one inpatient, skilled nursing facility, or home health Medicare claim or at least 2 hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 1-year period. |
| % 65+ with ischemic heart disease | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating ischemic heart disease since 1999. These criteria are having at least one inpatient, skilled nursing facility, or home health, hospital outpatient or Part B Medicare claim with appropriate diagnosis codes during a 2-year period. |
| % 65+ with congestive heart failure | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating congestive heart failure since 1999. These criteria are having at least one inpatient, hospital outpatient or Part B Medicare claim with appropriate diagnosis codes during a 2-year period. |
| % 65+ with atrial fibrillation | The percentage of Medicare beneficiaries 65 years or older in 2015 who ever met the claims-based criteria indicating atrial fibrillation since 1999. These criteria are having at least one inpatient Medicare claim,or at least 2 hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 1-year period. |
| % 65+ with peripheral vascular disease | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating peripheral vascular disease since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claim, or two hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 2-year period. |

| INDICATORS | DEFINITION |
| --- | --- |
| % 65+ with osteoarthritis/rheumatoid arthritis | The percentage of Medicare beneficiaries 65 years or older in 2011 who ever met the claims-based criteria indicating osteoarthritis/rheumatoid arthritis since 1999. These criteria are having at least 2 inpatient, skilled nursing facility, home health, hospital outpatient, or Part B Medicare claims (or any combination of claim types at least one day apart) with appropriate diagnosis codes during a 1-year period. |
| % 65+ with osteoporosis | The percentage of Medicare beneficiaries 65 years or older in 2011 who ever met the claims-based criteria indicating osteoporosis since 1999. These criteria are having at least one inpatient, skilled nursing facility, home health Medicare claims or at least 2 hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 1-year period. |
| % 65+ with leukemias and lymphomas | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating leukemia's and lymphomas since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claim, or two hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 2-year period. |
| % 65+ with lung cancer | The percentage of male Medicare beneficiaries 65 years or older in 2015 who ever met the claims-based criteria indicating lung cancer since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claims or at least 2 hospital outpatient or Part B Medicare claims (or any combination of outpatient or Part B claims at least a day apart) with appropriate diagnosis codes during a 1-year period. |
| % 65+ with colon cancer | The percentage of Medicare beneficiaries 65 years or older in 2015 who ever met the claims-based criteria indicating colon cancer since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claims or at least 2 hospital outpatient or Part B Medicare claims (or any combination of outpatient or Part B claims at least a day apart) with appropriate diagnosis codes during a 1-year period. |

| INDICATORS | DEFINITION |
|---|---|
| % 65+ women with breast cancer | The percentage of female Medicare beneficiaries 65 years or older in 2015 who ever met the claims-based criteria indicating breast cancer since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claims or at least 2 hospital outpatient or Part B Medicare claims (or any combination of outpatient or Part B claims at least a day apart) with appropriate diagnosis codes during a 1-year period. |
| % 65+ women with endometrial cancer | The percentage of female Medicare beneficiaries 65 years or older in 2015 who ever met the claims-based criteria indicating endometrial cancer since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claims or at least 2 hospital outpatient or Part B Medicare claims (or any combination of outpatient or Part B claims at least a day apart) with appropriate diagnosis codes during a 1-year period. |
| % 65+ men with prostate cancer | The percentage of male Medicare beneficiaries 65 years or older in 2015 who ever met the claims-based criteria indicating prostate cancer since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claims or at least 2 hospital outpatient or Part B Medicare claims (or any combination of outpatient or Part B claims at least a day apart) with appropriate diagnosis codes during a 1-year period. |
| % 65+ with benign prostatic hyperplasia | The percentage of Medicare beneficiaries 65 years or older in 2015 who ever met the claims-based criteria indicating benign prostatic hyperplasia since 1999. These criteria are having at least one inpatient, skilled nursing facility, or home health Medicare claim or at least 2 hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 1-year period. |
| % 65+ with HIV/AIDS | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating the human immunodeficiency virus and/or acquired immunodeficiency syndrome since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claim, or two hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 2-year period. |

| INDICATORS | DEFINITION |
|---|---|
| % 65+ with hypothyroidism | The percentage of Medicare beneficiaries 65 years or older in 2015 who ever met the claims-based criteria indicating hyperthyroidism since 1999. These criteria are having at least one inpatient, skilled nursing facility, or home health Medicare claim or at least 2 hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 1-year period. |
| % 65+ with anemia | The percentage of Medicare beneficiaries 65 years or older in 2015 who ever met the claims-based criteria indicating anemia since 1999. These criteria are having at least one inpatient, skilled nursing facility, or home health Medicare claim or at least one Part B Medicare claim with appropriate diagnosis codes during a 1-year period. |
| % 65+ with chronic kidney disease | The percentage of Medicare beneficiaries 65 years or older in 2015 who ever met the claims-based criteria indicating chronic kidney disease since 1999. These criteria are having at least one inpatient, skilled nursing facility Medicare claim or at least 2 hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 2-year period. |
| % 65+ with liver diseases | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating liver diseases since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claim, or two hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 2-year period. |
| % 65+ with fibromyalgia, chronic pain and fatigue | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating fibromyalgia, chronic pain and fatigue since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claim, or two hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 2-year period. |
| % 65+ with migraine and other chronic headache | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating migraine and other chronic headache since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claim, or two hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 2-year period. |

| INDICATORS | DEFINITION |
|---|---|
| % 65+ with epilepsy | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating epilepsy since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claim, or two hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 2-year period. |
| % 65+ with traumatic brain injury | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating traumatic brain injury since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claim, or two hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 2-year period. |
| % 65+ with autism spectrum disorders | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating autism spectrum disorders since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claim, or two hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 2-year period. |
| % 65+ with glaucoma | The percentage of Medicare beneficiaries 65 years or older in 2015 who ever met the claims-based criteria indicating glaucoma since 1999. These criteria are having at least one Part B Medicare claim with appropriate diagnosis codes during a 1-year period. |
| % 65+ with cataract | The percentage of Medicare beneficiaries 65 years or older in 2015 who ever met the claims-based criteria indicating cataract since 1999. These criteria are having at least one Part B Medicare claims with appropriate diagnosis codes during a 1-year period. |
| % 65+ with pressure ulcer or chronic ulcer | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating pressure ulcer or chronic ulcer disease since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claim, or two hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 2-year period. |

| INDICATORS | DEFINITION |
|---|---|
| % 65+ with 4+ chronic conditions (of 15) | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating at least 4 of 15 chronic conditions since 1999. The 15 chronic conditions include Alzheimer's disease or related dementia, asthma, atrial fibrillation, cancer (breast, colorectal, lung, and prostate), chronic kidney disease, chronic obstructive pulmonary disease (COPD), depression, diabetes, congestive heart failure, hypertension, hyperlipidemia (cholesterol) ischemic heart disease, osteoporosis, osteoarthritis/rheumatoid arthritis, and stroke. |
| % 65+ with no chronic conditions (of 15) | The percentage of Medicare beneficiaries 66 years or older in 2015 who never ever met the claims-based criteria indicating any of 15 chronic conditions since 1999. |
| **LIVING WITH DISABILITY** | |
| % 65+ with self-reported hearing difficulty | The percentage of persons age 65 or older reporting to be deaf or has serious difficulty hearing. |
| % 65+ with clinical diagnosis of deafness or hearing impairment | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating deafness or hearing impairment since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claim, or two hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 2-year period. |
| % 65+ with self-reported vision difficulty | The percentage of persons age 65 or older reporting to be blind or has serious difficulty seeing even with corrective lenses. |
| % 65+ with clinical diagnosis of blindness or visual impairment | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating blindness or visual impairment since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claim, or two hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 2-year period. |
| % 65+ with self-reported cognition difficulty | The percentage of persons age 65 or older reporting cognitive difficulties (such as learning, remembering, concentrating, or making decisions) because of a physical, mental, or emotional condition. |
| % 65+ with self-reported ambulatory difficulty | The percentage of persons age 65 or older reporting to have a condition that substantially limits one or more basic activities, such as walking, climbing stairs, reaching, lifting, or carrying. |

| INDICATORS | DEFINITION |
|---|---|
| % 65+ with clinical diagnosis of mobility impairments | The percentage of Medicare beneficiaries 66 years or older in 2015 who ever met the claims-based criteria indicating mobility impairments since 1999. These criteria are having at least one inpatient or skilled nursing facility Medicare claim, or two hospital outpatient or Part B Medicare claims with appropriate diagnosis codes during a 2-year period. |
| % 65+ with self-reported self-care difficulty | The percentage of persons age 65 or older reporting to have a physical or mental health condition that has lasted at least 6 months and makes it difficult for them to take care of their own personal need, such as bathing, dressing, or getting around inside the home. |
| % 65+ with self-reported independent living difficulty | The percentage of persons age 65 or older reporting to have a physical, mental, or emotional condition lasting six months or more that makes it difficult or impossible to perform basic activities outside the home alone. |
| **ACCESS TO CARE** | |
| % Medicare managed care enrollees | The percentage of Medicare beneficiaries age 65 years or older enrolled in a Medicare managed care plan (Medicare Advantage) for at least 1 month in 2015 |
| % dually eligible for Medicare and Medicaid | The percentage of Medicare beneficiaries age 65 years or older with at least one month of full or restricted Medicaid entitlement in 2015.  (Beneficiaries with restricted Medicaid entitlement are only entitled to some Medicaid benefits (e.g., drug coverage only, and/or premium/copayments for services). |
| % 60+ with a regular doctor | The percentage of persons 60 years or older reporting to have a personal doctor or health care provider. |
| % 60+ who did not see doctor when needed due to cost | The percentage of persons 60 years or older responding yes to the question-"Was there a time during the last 12  months when you needed to see a doctor but could not due to the cost?" |
| # of primary care providers (within 5 miles) | A count of primary care provider (i.e., family practice, general practice, geriatric medicine, and internal medicine) within 5 miles of the center of the city/town. |
| # of hospitals (within 5 miles) | A count of short-term general hospitals within 5 miles of the center of the city/town. |
| # of nursing homes (within 5 miles) | A count of Medicare-certified nursing homes within 5 miles of the center of the city/town. |
| # of home health agencies (in same town) | A count of home health agencies serving patients living in the city/town. |
| # of community health centers | A count of community health centers in the city/town |

| INDICATORS | DEFINITION |
|---|---|
| # of adult day health centers | A count of adult day health centers in the city/town |
| # of memory cafes | A count of memory cafes in the city/town |
| # of dementia-related support groups | A count of dementia-rated support groups in the city/town |
| **SERVICE UTILIZATION** | |
| Physician visits per year | Average Part B  physician office visit evaluation and management services received in 2015 by Medicare beneficiaries 65 years or older |
| Emergency room visits/1000 persons 65+ years per year | Average number of emergency department visits (where beneficiaries were released or admitted to a hospital) in 2015 per 1,000 Medicare beneficiaries 65 years or older. |
| Part D monthly prescription fills per person per year | Average number of standard 30 days supplies of a filled Part D prescriptions in 2015 by Medicare beneficiaries 65 years or older. |
| Home health visits per year | Average home health visits in 2015 per Medicare beneficiary 65 years or older. |
| Durable medical equipment claims per year | Average Part B durable medical equipment services received in 2015 by Medicare beneficiaries 65 years or older |
| Inpatient hospital stays/1000 persons 65+ years per year | A count of inpatient hospital discharges in 2015 per 1,000 Medicare beneficiaries 65 years or older. |
| Medicare inpatient hospital readmissions (as % of admissions) | The percentage of inpatient hospital discharges for Medicare beneficiaries 65 years or older which were followed by an admission to an acute care hospital for any cause within 30 days. |
| # skilled nursing facility stays/1000 persons 65+ years per year | A count of skilled nursing facility discharges in 2015 per 1,000 Medicare beneficiaries 65 years or older |
| # skilled nursing home Medicare beds/1000 persons 65+ years | The number of Medicare- certified nursing home beds in the community per 1,000 Medicare beneficiaries age 65 years or older in 2015. |
| % 65+ getting Medicaid long term services and supports | The percentage of Medicare beneficiaries age 65 years or older enrolled who had $0 cost-sharing for Medicare Part D for at least 1 month in 2015. (Dual-eligible beneficiaries who are either nursing home residents or who receive Medicaid-financed long term supports and services have $0 Part D cost sharing. |
| **COMMUNITY VARIABLES & CIVIC ENGAGEMENT** | |
| AARP Age-Friendly efforts in community | City/town that is or that is making efforts to become age-friendly |
| # of senior center | The number senior centers in the community. |

| INDICATORS | DEFINITION |
|---|---|
| Air pollution: Annual # of unhealthy days for older adults | The number of days in 2016 where there was an Air Quality Index score classified as "code red" or "code orange for ozone or particulate matter in the county. |
| % of grandparents raising grandchildren | The percentage of grandparents who are financially responsible for any or all grandchildren living in the household |
| % of grandparents who live with grandchildren | The percentage of grandparents who are living with a grandchild in the household |
| # of assisted living sites | The number of assisted living sites in the community. |
| % of vacant homes in community | The percentage of rental and homeowner vacant housing units in community. |
| # of universities and community colleges | The number of universities or community colleges in the community. |
| # of public libraries | The number of public libraries in the community. |
| # of YMCAs | The number of YMCAs in the community. |
| % in county with access to broadband (all ages) | The percentage of persons in county with access to broadband. |
| % 60+ who used Internet in last month | The percentage of persons age 60 years or older who answered yes to the question- "Have you used the internet in the past 30 days?" |
| Voter participation rate in 2018 presidential election (age 18+) | The % of registered voters aged 18 and older who voted in the 2018 election. |
| **SAFETY** | |
| Violent crimes / 100,000 persons | The number of violent crimes (murder and non-negligent manslaughter, forcible rape, robbery, and aggravated assault) from 2013 to 2015 known to law enforcement per 100,000 persons |
| Homicide rate / 100,000 persons (county) | The number of death due to homicide per 100,000 persons from 2010 to 2016. |
| # firearm fatalities (county) | The number of death due to firearms per 100,000 persons from 2012 to 2016. |
| Property crimes / 100,000 persons | The number of property crimes (burglary, larceny-theft, motor vehicle theft, and arson) from 2013 to 2015 known to law enforcement per 100,000 persons |
| % 65+ who own a motor vehicle | The percentage of households with a householder age 65 years or older who own one or more vehicles. |
| % 60+ who always drive wearing a seatbelt | The percentage of persons age 60 years or older who reporting to use seat belt always while driving a car. |
| # of motor vehicle fatalities involving adult age 60+ / town | The number of motor vehicle fatalities in town involving an adult age 60 or older (driver, passenger, or pedestrian) from 2011 to 2015. |

| INDICATORS | DEFINITION |
|---|---|
| # of motor vehicle fatalities involving adult age 60+ / county | The number of motor vehicle fatalities in county involving an adult age 60 or older (driver, passenger, or pedestrian) from 2011 to 2015. |
| **ECONOMIC VARIABLES** | |
| % 65+ with income below the poverty level past year | The percentage of households with a householder (i.e., the person (or one of the people) in whose name the housing unit is owned or rented (maintained)) age 65 years or older with an annual family income below the appropriate official poverty threshold. |
| % 60+ receiving food stamps past year | The percentage of the households with a householder age 60 years or older received food stamps/Supplemental Nutrition Assistance Program (SNAP) benefits in the past 12 months. |
| % 65+ employed past year | The percentage of persons 60 years or older worked in the past year. |
| % households with annual income < $20,000 | The percentage of households with a householder (i.e., the person (or one of the people) in whose name the housing unit is owned or rented (maintained)) age 65 years or older with an annual income in 2010 less than $20,000. |
| % households with annual income $20,000-$49,000 | The percentage of households with a householder age 65 years or older with an annual income in 2010 between $20,000 and $49,000. |
| % households with annual income > $50,000 | The percentage of households with a householder age 65 years or older with an annual income in 2010 more than $50,000. |
| % 60+ own home | The percentage of households with a householder age 60 years or older who are homeowners. |
| % 60+ have mortgage on home | The percentage of households with a householder age 60 years or older who have mortgage on home. |
| % 65+ households spend >35% of income on housing (renter) | The percentage of households with a householder age 65 years or older who spend more than 35% of income on renting a house. |
| % 65+ households spend >35% of income on housing (owner) | The percentage of households with a householder age 65 years or older who own the house and spend more than 35% of income on housing expense. |
| *Elder Economic Security Standard Index* | |
| Single, homeowner without mortgage, good health | Annual income needed for a single homeowner with no mortgage in good health to attain a modest standard of living in the county |
| Single, renter, good health | Annual income needed for a single renter in good health to attain a modest standard of living in the county |

| INDICATORS | DEFINITION |
|---|---|
| Couple, homeowner without mortgage, good health | Annual income needed for a couple who are homeowners with no mortgage in good health to attain a modest standard of living in the county |
| Couple, renter, good health | Annual income needed for a couple who are renters in good health to attain a modest standard of living in the county |

**Table 2:  Years and Data Sources for Community Profile Indicators**

| INDICATORS | SOURCES and YEAR |
|---|---|
| **POPULATION CHARACTERISTICS** | |
| Total population all ages, Population 60 years or older as a % of total population, Total population 65 years or older, % 65-74 years, 75-84 years, 85 years or older , % female | United States Census Bureau / American FactFinder. "B01001:  SEX BY AGE." *2012 – 2016 American Community Survey*. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |
| *Race/Ethnicity:*<br><br>% White, % African American, % Asian, % Other race, % Hispanic/Latino | United States Census Bureau / American FactFinder. "B01001A-B01001I: SEX BY AGE." *2012 – 2016 American Community Survey*. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |
| *Marital status:*<br><br>% married, divorced/separated, widowed, never married | United States Census Bureau / American Factfinder. "B12002: SEX BY MARITAL STATUS BY AGE FOR THE POPULATION 15 YEARS AND OVER." 2012 – 2016 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017 <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |
| *Education:*<br><br>% with less than a high school education, high school education or some college, with college degree | United States Census Bureau / American FactFinder. "B15001:  SEX BY AGE BY EDUCATIONAL ATTAINMENT FOR THE POPULATION 18 YEARS AND OVER." *2012 – 2016 American Community Survey*. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017 <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |
| % 65+ population living alone | United States Census Bureau / American FactFinder. "B09021: RELATIONSHIP BY HOUSEHOLD TYPE (INCLUDING LIVING ALONE) FOR THE POPULATION 65 YEARS AND OVER." 2012 – 2016 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |

| INDICATORS | SOURCES and YEAR |
|---|---|
| % 65+ population who speak only English at home | United States Census Bureau / American FactFinder. "B16007: AGE BY LANGUAGE SPOKEN AT HOME BY ABILITY TO SPEAK ENGLISH FOR THE POPULATION 5 YEARS AND OVER" 2012 – 2016 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |
| % 65+ population who are veterans of military service | United States Census Bureau / American FactFinder. "B21001: SEX BY AGE BY VETERAN STATUS FOR THE CIVILIAN POPULATION 18 YEARS AND OVER" 2012 – 2016 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |
| Age-sex adjusted 1-year mortality rate | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| Geographic Migration (65+ population) <br><br> % moved within same county <br> % moved from different county in NH <br> % moved from different state | United States Census Bureau / American FactFinder. "B07001: GEOGAPHICAL MOBILITY IN THE PAST YEAR BY AGE FOR CURRENT RESIDENCE IN THE UNITED STATE" 2012 – 2016 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |
| **WELLNESS and PREVENTION** | |
| % 60+ with any physical activity last month | 2014-2016 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |
| % 60+ met CDC guidelines for muscle-strengthening activity | 2011, 2013, 2015 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |
| % 60+ met CDC guidelines for aerobic physical activity | 2011, 2013, 2015 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |
| % 60+ met CDC guidelines for both types of physical activities | 2011, 2013, 2015 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |

| INDICATORS | SOURCES and YEAR |
|---|---|
| % 60+ getting recommended hours of sleep | 2013, 2014, 2016 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |
| % 60+ injured with a fall in last 12 months | 2012, 2014, 2016 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |
| % 65+ had hip fracture | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 60+ with self-reported fair or poor health status | 2014-2016 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |
| % 60+ with 15+ physically unhealthy days last month | 2014-2016 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |
| % 60+ with physical exam/check-up in past year | 2014-2016 Behavioral Risk Factor Surveillance Survey, Massachusetts Department of Health. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |
| % 60+ met CDC preventive health screening goals | 2012, 2014, 2016 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |
| % 60+ flu shot past year | 2014-2016 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |
| % 65+ with pneumonia vaccine | 2014-2016 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |
| % 60+ with cholesterol screening | 2011, 2013, 2015 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |
| % 60+women with mammogram within last 2 years | 2012, 2014, 2016 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |

| INDICATORS | SOURCES and YEAR |
|---|---|
| % 60+ with colorectal cancer screening | 2012, 2013, 2014 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |
| % 60+ with HIV test | 2014-2016 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |
| % 60+ current smokers | 2014-2016 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |
| % 60+ with loss of 6 or more teeth | 2012, 2014, 2016 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |
| % 60+ with annual dental exam | 2012, 2014, 2016 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |
| # dentists per 100,000 persons (all ages) | Dentists per 100,000 persons were retrieved in 2018 from County Health Ranking < http://www.countyhealthrankings.org/app/new-hampshire/2018/measure/factors/88/data> |
| **NUTRITION/DIET** | |
| % 60+ with 5 or more servings of fruit or vegetables per day | 2011, 2013, 2015 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |
| % 60+ self-reported obese | 2014-2016 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |
| % 65+ clinically diagnosed obese | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with high cholesterol | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 60+ excessive drinking | 2014-2016 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |

| INDICATORS | SOURCES and YEAR |
|---|---|
| % 65+ with poor supermarket access | Department of Agriculture Food Access Research Atlas website <https://www.ers.usda.gov/data-products/food-access-research-atlas/download-the-data/> <br> The data were initially released in January 2017, and updated in May 2017. |
| **BEHAVIORAL HEALTH** | |
| % 60+ with 15+ days poor mental health last month | 2014-2016 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |
| % 65+ with depression | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with anxiety disorders | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with bipolar disorders | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with post-traumatic stress disorder | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with schizophrenia & other psychotic disorders | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with personality disorders | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| # opioid deaths (all ages) | CDC WONDER website < wonder.cdc.gov/wonder/help/mcd.html> <br> Data were obtained for year 2014-2016 |
| % 65+ with substance abuse (drug use +/or alcohol abuse) | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with tobacco use disorders | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |

| INDICATORS | SOURCES and YEAR |
|---|---|
| **CHRONIC DISEASE** | |
| % 65+ with Alzheimer's disease or related dementias | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with diabetes | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with stroke | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with chronic obstructive pulmonary disease (COPD) | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with asthma | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with hypertension | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ ever had a heart attack | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with ischemic heart disease | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with congestive heart failure | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with atrial fibrillation | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with peripheral vascular disease | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with osteoarthritis/rheumatoid arthritis | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with osteoporosis | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with leukemias and lymphomas | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |

| INDICATORS | SOURCES and YEAR |
|---|---|
| % 65+ with lung cancer | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with colon cancer | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ women with breast cancer | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ women with endometrial cancer | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ men with prostate cancer | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with benign prostatic hyperplasia | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with HIV/AIDS | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with hypothyroidism | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with anemia | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with chronic kidney disease | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with liver diseases | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with fibromyalgia, chronic pain and fatigue | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with migraine and other chronic headache | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with epilepsy | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |

| INDICATORS | SOURCES and YEAR |
|---|---|
| % 65+ with traumatic brain injury | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with autism spectrum disorders | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with glaucoma | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with cataract | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with pressure ulcer or chronic ulcer | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with 4+ chronic conditions (of 15) | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with no chronic conditions (of 15) | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| **LIVING WITH DISABILITY** | |
| % 65+ with self-reported hearing difficulty | United States Census Bureau / American FactFinder. "B18102: SEX BY AGE BY HEARING DIFFICULTY" 2012 – 2016 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |
| % 65+ with clinical diagnosis of deafness or hearing impairment | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with self-reported vision difficulty | United States Census Bureau / American FactFinder. "B18103: SEX BY AGE BY VISION DIFFICULTY" 2012 – 2016 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |
| % 65+ with clinical diagnosis of blindness or visual impairment | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |

| INDICATORS | SOURCES and YEAR |
|---|---|
| % 65+ with self-reported cognition difficulty | United States Census Bureau / American FactFinder. "B18104: SEX BY AGE BY COGNITIVE DIFFICULTY" 2012 – 2016 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |
| % 65+ with self-reported ambulatory difficulty | United States Census Bureau / American FactFinder. "B18105: SEX BY AGE BY AMBULATORY DIFFICULTY" 2012 – 2016 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |
| % 65+ with clinical diagnosis of mobility impairments | 2014-2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ with self-reported self-care difficulty | United States Census Bureau / American FactFinder. "B18106: SEX BY AGE BY SELF-CARE DIFFICULTY" 2012 – 2016 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |
| % 65+ with self-reported independent living difficulty | United States Census Bureau / American FactFinder. "B18107: SEX BY AGE BY INDEPENDENT DIFFICULTY" 2012 – 2016 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |
| **ACCESS TO CARE** | |
| % Medicare managed care enrollees | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % dually eligible for Medicare and Medicaid | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 60+ with a regular doctor | 2014-2016 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm > |

| INDICATORS | SOURCES and YEAR |
|---|---|
| % 60+ who did not see doctor when needed due to cost | 2014-2016 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. <https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |
| # of primary care providers (within 5 miles) | The number of primary care provider downloaded from <http://www.medicare.gov/physiciancompare/search.html> in June 2018 using the search term "city/town name, new Hampshire" and option for within 5 miles. |
| # of hospitals (within 5 miles) | The number of hospital downloaded from <http://www.medicare.gov/hospitalcompare/search.html> in July 2017 using the search term "city/town name, New Hampshire" and option for within 5 miles. |
| # of nursing homes (within 5 miles) | The number of home health agency downloaded from <http://www.medicare.gov/homehealthcompare/search.html> in June 2018 using the search term "city/town name, New Hampsshire". |
| # of home health agencies (in same town) | The number of home health agency downloaded from <http://www.medicare.gov/homehealthcompare/search.html> in June 2018 using the search term "city/town name, New Hampshire". |
| # of community health centers | The number of community health centers were downloaded from New Hampshire Department of Health and Human Services website <https://www.dhhs.nh.gov/> |
| # of adult day health centers | The number of community health centers were downloaded from New Hampshire Department of Health and Human Services website <https://www.dhhs.nh.gov/> |
| # of memory cafes | Memory cafes were downloaded from the Kalendar Kards website <http://www.kalendarkards.com/> |
| # of dementia-related support groups | The number of dementia-related support groups were downloaded from Alzheimer's Association website < https://www.alz.org/help-support/community/support-groups> |
| **SERVICE UTILIZATION** | |
| Physician visits per year | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| Emergency room visits/1000 persons 65+ years per year | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |

| INDICATORS | SOURCES and YEAR |
|---|---|
| Part D monthly prescription fills per person per year | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| Home health visits per year | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| Durable medical equipment claims per year | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| Inpatient hospital stays/1000 persons 65+ years per year | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| Medicare inpatient hospital readmissions (as % of admissions) | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| # skilled nursing facility stays/1000 persons 65+ years per year | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| # skilled nursing home Medicare beds/1000 persons 65+ years | Medicare Nursing Home Compare December, 2018 https://data.medicare.gov/data/archives/nursing-home-compare; 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| % 65+ getting Medicaid long term services and supports | 2015 Master Beneficiary Summary File – A/B/C/D/Other, CMS Chronic Condition Data Warehouse <www.ccwdata.org> |
| **COMMUNITY VARIABLES & CIVIC ENGAGEMENT** | |
| AARP Age-Friendly efforts in community | Age-friendly communities were collected from AARP website <https://www.aarp.org/livable-communities/network-age-friendly-communities/info-2014/member-list.html> |
| # of senior centers | Data were downloaded from the Senior Activity Center in City of Portsmouth website < https://www.cityofportsmouth.com/recreation/senior> |
| Air pollution: Annual # of unhealthy days for older adults | United States Environmental Protection Agency. Air Compare, 2016. Web. August 2017. <https://www3.epa.gov/aircompare/#trends> |

| INDICATORS | SOURCES and YEAR |
|---|---|
| % of grandparents raising grandchildren | United States Census Bureau / American FactFinder. "B10050: GRANDPARENTS LIVING WITH OWN GRANDCHILDREN UNDER 18 YEARS BY RESPONSIBILITY FOR OWN GRANDCHILDREN BY LENGTH OF TIME RESPONSIBLE FOR OWN GRANDCHILDREN FOR THE POPULATION 30 YEARS AND OVER." 2012 – 2016 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |
| % of grandparents who live with grandchildren | United States Census Bureau / American FactFinder. "B10050: GRANDPARENTS LIVING WITH OWN GRANDCHILDREN UNDER 18 YEARS BY RESPONSIBILITY FOR OWN GRANDCHILDREN BY LENGTH OF TIME RESPONSIBLE FOR OWN GRANDCHILDREN FOR THE POPULATION 30 YEARS AND OVER." 2012 – 2016 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |
| # of assisted living sites | The number of assisted living sites were retrieved in 2016 from NH assisted living facilities website < https://www.assistedlivingfacilities.org/directory/nh/> |
| % of vacant homes in community | United States Census Bureau / American FactFinder. "B25002: OCCUPANCY STATUS" 2012 – 2016 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |
| # of universities and community colleges | Number of university and community colleges in community is retrieved from NH Department of Education <https://www.education.nh.gov/schools/index.htm> in December 2018. |
| # of public libraries | Number of public libraries in community is downloaded from the Institute of Museum and Library Services <https://www.imls.gov/> in August 2018 |
| # of YMCAs | Data were obtained from the NH YMCA website < http://www.ymcasofnh.org/index.php?page=locations > in July 2018 |

| INDICATORS | SOURCES and YEAR |
|---|---|
| % in county with access to broadband (all ages) | The percentage of persons in county with access to broadband was retrieved in 2017 from Federal Communications Commission which was released in 2016 <https://docs.fcc.gov/public/attachments/FCC-16-6A1.pdf> |
| % 60+ who used Internet in last month | 2014-2016 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm> |
| Voter participation rate in 2018 presidential election (age 18+) | Number of voters were obtained from NH secretary of State website < http://sos.nh.gov/18GenResults.aspx> |
| **SAFETY** | |
| Violent crimes /100,000 persons | United States Department of Justice, Federal Bureau of Investigation.  Crime in the United States, 2013-2015.  Web. August 2017. <http://www.fbi.gov/stats-services/crimestats> |
| Homicide rate /100,000 (county) | Homicide rates were retrieved from CDC WONDER online database in Centers for Disease Control and Prevention  < https://wonder.cdc.gov/> |
| # firearm fatalities (county) | The number of death due to firearms were retrieved in 2018 from County Health Ranking <http://www.countyhealthrankings.org/app/new-hampshire/2018/measure/factors/148/data> |
| Property crimes / 100,000 persons | United States Department of Justice, Federal Bureau of Investigation.  Crime in the United States, 2013-2015.  Web. August 2017. <http://www.fbi.gov/stats-services/crimestats> |
| % 65+ who own a motor vehicle | United States Census Bureau / American FactFinder. "B25045: TENURE BY VEHICLES AVAILABLE BY AGE OF HOUSEHOLDER" 2012 – 2016 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |
| % 60+ who always drive wearing a seatbelt | 2012, 2014, 2016 Behavioral Risk Factor Surveillance Survey, New Hampshire, Division of Public Health Services. < https://www.dhhs.nh.gov/dphs/hsdm/brfss/index.htm > |
| # of motor vehicle fatalities involving adult age 60+ / town | National Highway Traffic Safety Administration, Fatal Accident Reporting System. Downloaded from <http://www.nhtsa.gov/FARS>  in August, 2017. Data for years 2011-2015 |

| INDICATORS | SOURCES and YEAR |
|---|---|
| # of motor vehicle fatalities involving adult age 60+ / county | National Highway Traffic Safety Administration, Fatal Accident Reporting System. Downloaded from <http://www.nhtsa.gov/FARS>  in August, 2017. Data for years 2011-2015 |
| **ECONOMIC VARIABLES** | |
| % 65+ with income below the poverty level past year | United States Census Bureau / American FactFinder. "B17001: "POVERTY STATUS IN THE PAST 12 MONTHS BY SEX BY AGE" 2012 – 2016 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |
| % 60+ receiving food stamps past year | United States Census Bureau / American FactFinder. "B22001: RECEIPT OF FOOD STAMPS/SNAP IN THE PAST 12 MONTHS BY PRESENCE PEOPLE 60 YEARS AND OVER FOR HOUSEHOLDS" 2012 – 2016 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |
| % 65+ employed past year | United States Census Bureau / American FactFinder. "B23004: WORK STATUS IN THE PAST 12 MONTHS BY AGE BY EMPLOYMENT STATUS FOR THE CIVILIAN POPULATION 65 YEARS AND OVER" 2012 – 2016 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |
| Household income (65+ householder)<br>   % households with annual income < $20,000<br>   % households with annual income  $20,000-$49,999<br>   % households with annual income > $50,000 | United States Census Bureau / American FactFinder. "B19037: AGE OF HOUSEHOLDER BY HOUSEHOLD INCOME IN THE PAST 12 MONTHS (IN 2013 INFLATION-ADJUSTED DOLLARS)" 2012 – 2016 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |

| INDICATORS | SOURCES and YEAR |
|---|---|
| % 60+ own home | United States Census Bureau / American FactFinder. "B25007: TENURE BY AGE HOUSEHOLDER" 2012 – 2016 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |
| % 60+ have mortgage on home | United States Census Bureau / American FactFinder. "B25027: MORTGAGE STATUS BY AGE HOUSEHOLDER" 2012 – 2016 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |
| % 65+ households spend >35% of income on housing (renter) | United States Census Bureau / American FactFinder. "B25072: AGE OF HOUSEHOLDER BY GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME IN THE PAST 12 MONTHS" 2012 – 2016 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |
| % 65+ households spend >35% of income on housing (owner) | United States Census Bureau / American FactFinder. "B25093: AGE OF HOUSEHOLDER BY SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME IN THE PAST 12 MONTHS" 2012 – 2016 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2016. Web. 2017. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> |
| *Elder Economic Security Standard Index* | |
| Single, homeowner without mortgage, good health | Elder Economic Security Index data from the University of Massachusetts Boston Center for Social and Demographic Research on Aging, August, 2017. |
| Single, renter, good health | |
| Couple, homeowner without mortgage, good health | |
| Couple, renter, good health | |