# THE GEOGRAPHY OF UNINSURANCE IN MASSACHUSETTS:
# AN UPDATE FOR 2013–2017

FOUNDATION
MASSACHUSETTS

URBAN
INSTITUTE

Michael Karpman
Dulce Gonzalez
Sharon K. Long
*Urban Institute*

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# INTRODUCTION

The uninsurance rate in Massachusetts fell sharply following the passage of a comprehensive state health care reform law in 2006 and declined further after implementation of key coverage provisions of the federal Affordable Care Act (ACA) in 2014.[1,2] As of 2017, an estimated 2.8 percent of Massachusetts residents were uninsured, representing the lowest state-level uninsurance rate in the nation.[3] However, previous studies have found significant variation in coverage across Massachusetts, with some communities facing much higher uninsurance than others.[4] Further progress toward universal coverage in Massachusetts requires information on the geographic location and characteristics of the remaining uninsured so that policymakers, outreach and enrollment workers, and other stakeholders can develop effective outreach strategies to maximize coverage gains.

In this brief, we use newly released data for 2013–2017 from the American Community Survey (ACS) to examine the geography of uninsurance in Massachusetts communities based on three measures of uninsurance: (1) the **uninsurance rate**—the percentage of the residents in a community who are uninsured; (2) the **number of uninsured** residents in a community; and (3) the **concentration of uninsured**—the number of uninsured residents per square mile of land area in a community. Our analysis, using those measures, has the following objectives:

- Identify the communities with the highest uninsurance rates in Massachusetts, referred to as **hot-spot communities**;

- Identify the subset of hot-spot communities with the highest concentration of uninsured residents, referred to as **priority hot-spot communities**, as a focus for outreach efforts; and

- Provide detailed information on the characteristics of hot-spot communities and priority hot-spot communities and their residents, including the uninsured, to support the targeting of outreach efforts.

The ACS is a nationally representative survey of the U.S. population conducted by the Census Bureau. It collects social, economic, housing, and demographic data from a sample of more than 2 million housing units each year.[5] The pooled 2013–2017 ACS data provide average estimates at the time of the survey for the residents of communities throughout Massachusetts over the five-year period.[6] For this analysis, we focus on communities defined by zip code tabulation areas (ZCTAs). See the text box for more information on ZCTAs.

We examine average uninsurance for 2013–2017 in ZCTAs across the state and within six regions as defined by the Massachusetts Executive Office of Health and Human Services: Boston, MetroWest, Northeast, Southeast, Central, and Western.[8] However, we also provide tables on average uninsurance by geography defined in a variety of ways in supplemental tables F through N, including Congressional districts, state legislative districts,

### Zip Code Tabulation Areas (ZCTAs)

**ZCTAs, based on the zip code areas used in mail delivery, are the geographic units in the ACS that come closest to capturing the geographic boundaries and populations of local communities. Nonetheless, the size of ZCTAs, and thus communities as we define them, does vary significantly between urban and rural areas. This study relies on data for 526 ZCTAs in Massachusetts, with a median size of 11.5 square miles and a median population of approximately 8,800 residents.[7] The size of the ZCTAs ranges from 0.05 to 95.5 square miles, and the ZCTAs' populations range from 25 to over 61,000 residents. The precision of estimates varies widely across ZCTAs based on differences in their population sizes, and hence their sample sizes in the ACS. For instance, the average margin of error around uninsurance rate estimates for the 66 Massachusetts ZCTAs with fewer than 1,000 residents is more than 10 percentage points, compared with an average margin of error of about 1 percentage point for the 116 ZCTAs with populations above 20,000. Unless otherwise noted, all estimates reported in the brief are for the civilian noninstitutionalized population.**

counties, county subdivisions (which in Massachusetts are cities and towns), places, school districts, and census tracts (see appendix table A1 for definitions of geographic units). These supplemental tables can be used to examine uninsurance in Massachusetts from a variety of perspectives. For example, table 1 (below) shows the 10 cities and towns in Massachusetts with the highest uninsurance rates (panel A) and the largest numbers of uninsured residents (panel B). These supplemental tables, which are provided for all persons, children 0 to 18, and nonelderly adults 19 to 64,[9] update the tables provided in an earlier brief that reported on 2011–2015 averages.[10]

**TABLE 1.** TOP 10 CITIES/TOWNS IN MASSACHUSETTS WITH THE HIGHEST UNINSURANCE RATES AND LARGEST NUMBERS OF UNINSURED RESIDENTS, 2013–2017 AVERAGE

| (A) RANKED BY UNINSURANCE RATE | | | | (B) RANKED BY NUMBER OF UNINSURED | | | |
|---|---|---|---|---|---|---|---|
| CITY/TOWN | TOTAL POPULATION | NUMBER UNINSURED | UNINSURANCE RATE | CITY/TOWN | TOTAL POPULATION | NUMBER UNINSURED | UNINSURANCE RATE |
| Halifax | 7,722 | 716 | 9.3% | Boston | 663,031 | 25,703 | 3.9% |
| Great Barrington | 6,458 | 500 | 7.7% | Springfield | 153,787 | 6,904 | 4.5% |
| Lawrence | 78,694 | 5,633 | 7.2% | Worcester | 182,711 | 6,035 | 3.3% |
| Everett | 45,068 | 3,179 | 7.1% | Lowell | 109,822 | 5,800 | 5.3% |
| Chelsea | 38,891 | 2,746 | 7.1% | Lawrence | 78,694 | 5,633 | 7.2% |
| Framingham | 69,887 | 4,670 | 6.7% | Lynn | 92,684 | 5,113 | 5.5% |
| Chester | 1,517 | 102 | 6.7% | New Bedford | 93,687 | 4,860 | 5.2% |
| Brookfield | 3,397 | 217 | 6.4% | Framingham | 69,887 | 4,670 | 6.7% |
| West Brookfield | 3,632 | 223 | 6.1% | Fall River | 88,148 | 4,449 | 5.0% |
| Hadley | 5,164 | 300 | 5.8% | Brockton | 94,066 | 3,584 | 3.8% |

Source: 2013–2017 American Community Survey 5-Year Estimates.

# FINDINGS

**Despite near universal coverage in Massachusetts, uninsurance—whether measured as the uninsurance rate, number of insured, or concentration of uninsured—varies widely across Massachusetts communities, and pockets of high uninsurance persist.**

## UNINSURANCE RATE

In 2013–2017, the average uninsurance rate across Massachusetts ZCTAs (hereafter referred to as communities) was 2.7 percent (table 2). However, that average masks substantial differences, from the lowest uninsurance rate of 0 percent in 30 communities spread across five of the six regions (only the Boston region had no communities with no uninsurance) to the highest uninsurance rate of 25.8 percent in a community in the Southeast region. Uninsurance rates across Massachusetts communities follow a skewed pattern with a "long right tail" as the uninsurance rate increases (figure 1). Though average uninsurance rates among communities within the highest quartile (top 25 percent) of uninsurance rates vary from 3.4 percent to 25.8 percent, more than half of these communities have average uninsurance rates of less than 5 percent, and most of the remainder have average uninsurance rates between 5 and 10 percent. Only four communities have average uninsurance rates above 10 percent (as shown in the blue dots in map 1), and all of these communities have relatively small populations, resulting in relatively high margins of error around the uninsurance rate estimates for them. As shown in map 1, communities in the highest quartile of the uninsurance rate (indicated by dark orange) were dispersed across all regions of the state. We define the communities in the highest quartile of the uninsurance rate as the **hot-spot communities** in Massachusetts and those in the bottom three quartiles as not-hot-spot communities.

**TABLE 2.** UNINSURANCE IN MASSACHUSETTS COMMUNITIES, OVERALL AND BY REGION, 2013–2017 AVERAGE

|  | MEASURES OF COMMUNITY UNINSURANCE | | | |
| --- | --- | --- | --- | --- |
|  | UNINSURANCE RATE | NUMBER OF UNINSURED | CONCENTRATION OF UNINSURED PER SQUARE MILE* | NUMBER OF COMMUNITIES |
| Statewide average | 2.7% | 381 | 102 | 526 |
| Average by region |  |  |  |  |
| Boston | 3.6% | 992 | 667 | 32 |
| MetroWest | 1.9% | 399 | 104 | 95 |
| Northeast | 2.6% | 677 | 149 | 64 |
| Southeast | 3.1% | 321 | 47 | 120 |
| Central | 2.4% | 256 | 36 | 92 |
| Western | 2.8% | 204 | 33 | 123 |

Source: 2013–2017 American Community Survey 5-Year Estimates.

Notes: Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). Estimates are for residents of all ages in the civilian noninstitutionalized population.

* Defined as the number of uninsured per square mile of land area (excluding bodies of water) in the community.

**FIGURE 1.** DISTRIBUTION OF UNINSURANCE RATES IN MASSACHUSETTS COMMUNITIES IN THE HIGHEST UNINSURANCE RATE QUARTILE, 2013–2017 AVERAGE
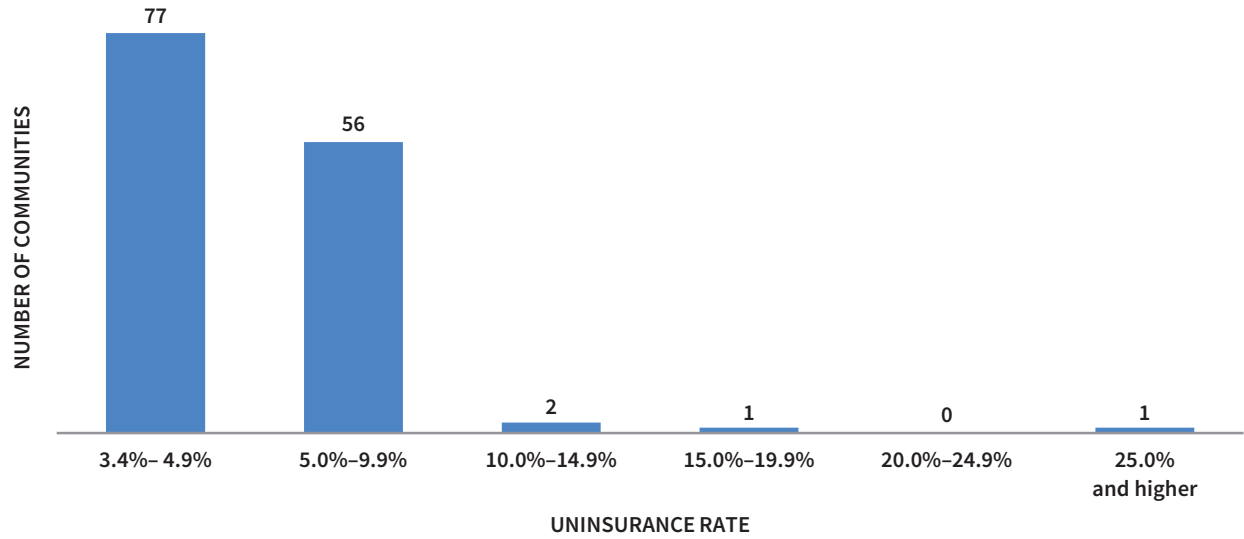


Source: 2013–2017 American Community Survey 5-Year Estimates.

Notes: Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). Estimates are for residents of all ages in the civilian noninstitutionalized population. Estimates are for Massachusetts communities that were in the highest quartile of the uninsurance rate (3.4 percent to 25.8 percent) for all Massachusetts communities in 2013–2017.

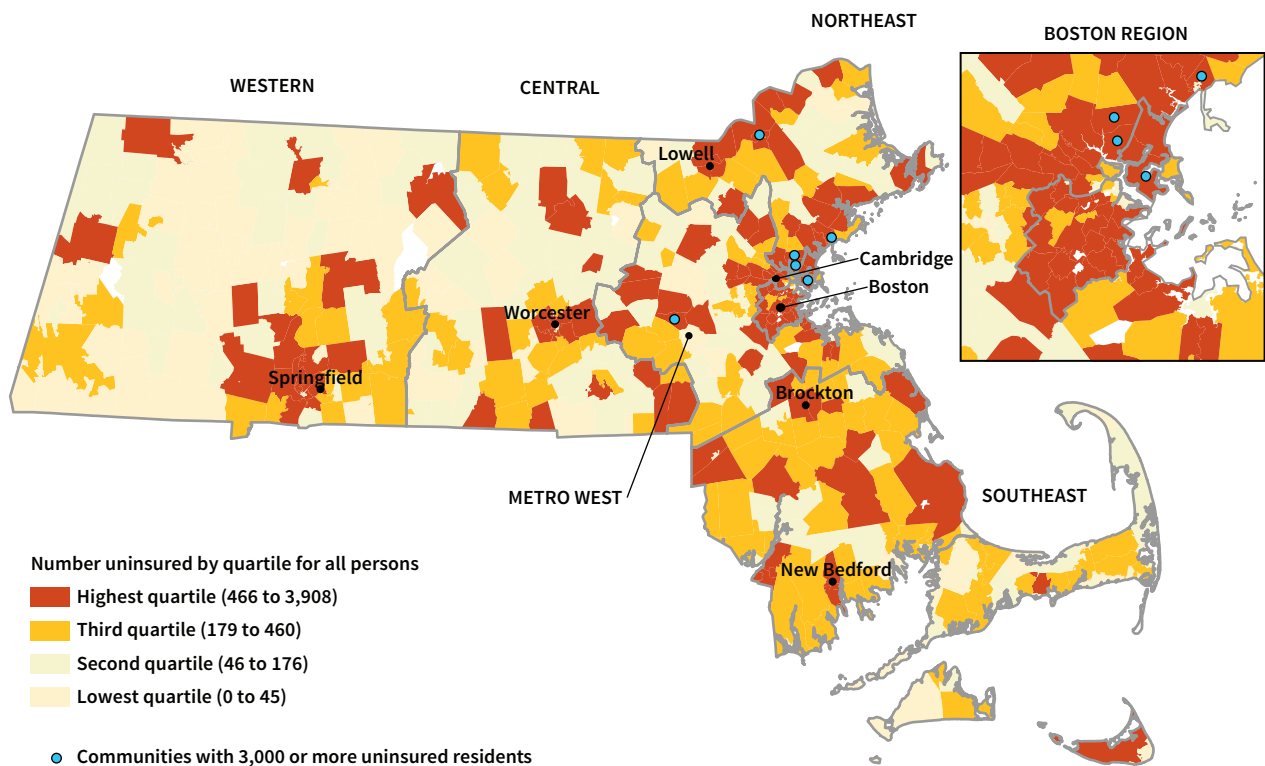**MAP 1.** UNINSURANCE RATE IN MASSACHUSETTS COMMUNITIES, 2013–2017 AVERAGE
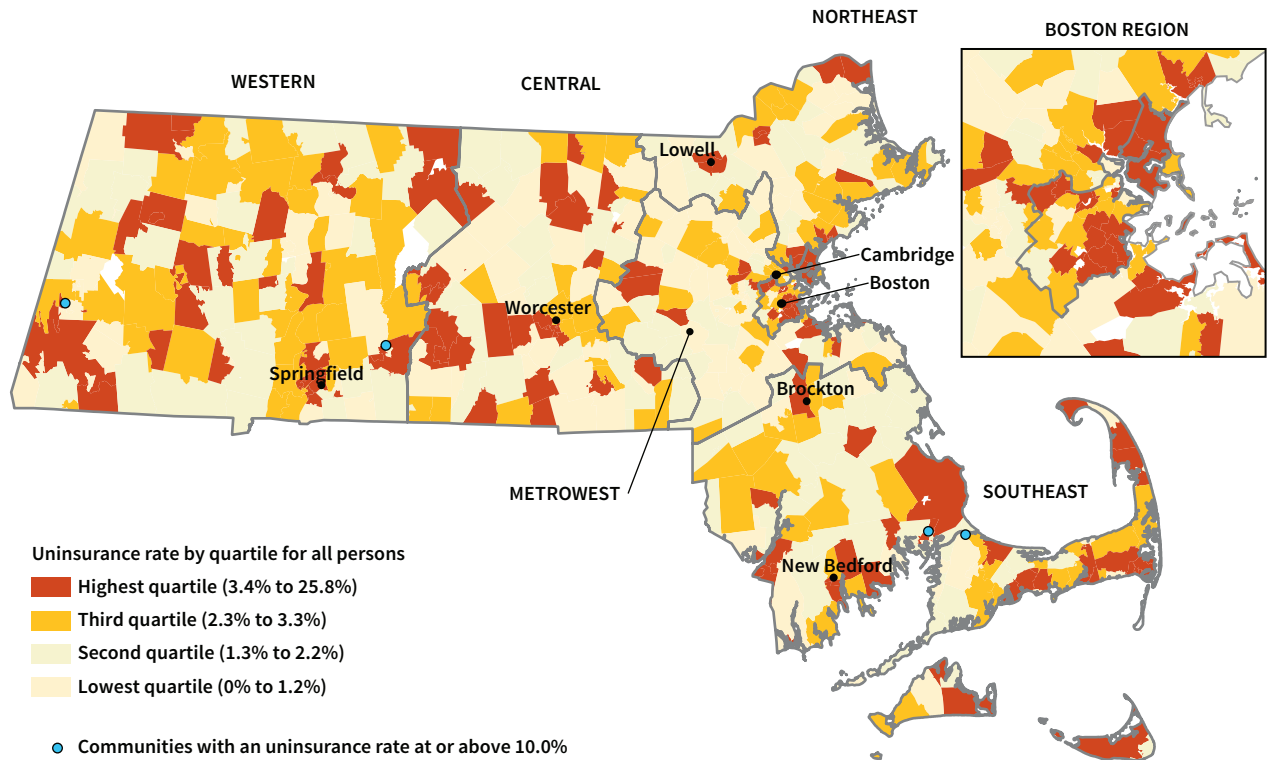


Source: 2013–2017 American Community Survey 5-Year Estimates.

Notes: Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). They are shown within the six Massachusetts Executive Office of Health and Human Services regions (Boston, MetroWest, Northeast, Southeast, Central, and Western). Estimates are for the civilian noninstitutionalized population. White areas in the map are bodies of water, largely unpopulated areas of land, or the communities excluded from the analysis. More information about communities with the highest uninsurance rates can be found in supplemental table F1.

## NUMBER OF UNINSURED

While the uninsurance rate identifies areas where a large share of the population is uninsured, it does not necessarily identify places with large numbers of uninsured residents. On average, there are 381 uninsured residents in a Massachusetts community, with the highest number of uninsured residents (3,908) in one community in the Northeast region. Communities in the highest quartile of number of uninsured residents (indicated by dark orange in map 2) are concentrated in the more urbanized areas of the state and tend to be communities with larger overall populations.[11] The majority (59.8 percent) of communities within the highest quartile have fewer than 1,000 uninsured residents, but six communities have more than 3,000 uninsured residents and four of those communities are in the Northeast region, as shown by the blue dots in map 2. By focusing on communities with the highest numbers of uninsured, we do not face the problem of large margins of error around the estimates, as we did for smaller communities with high uninsurance rates.

**MAP 2.** NUMBER OF UNINSURED RESIDENTS IN MASSACHUSETTS COMMUNITIES, 2013–2017 AVERAGE



Number uninsured by quartile for all persons
- Highest quartile (466 to 3,908)
- Third quartile (179 to 460)
- Second quartile (46 to 176)
- Lowest quartile (0 to 45)

○ Communities with 3,000 or more uninsured residents

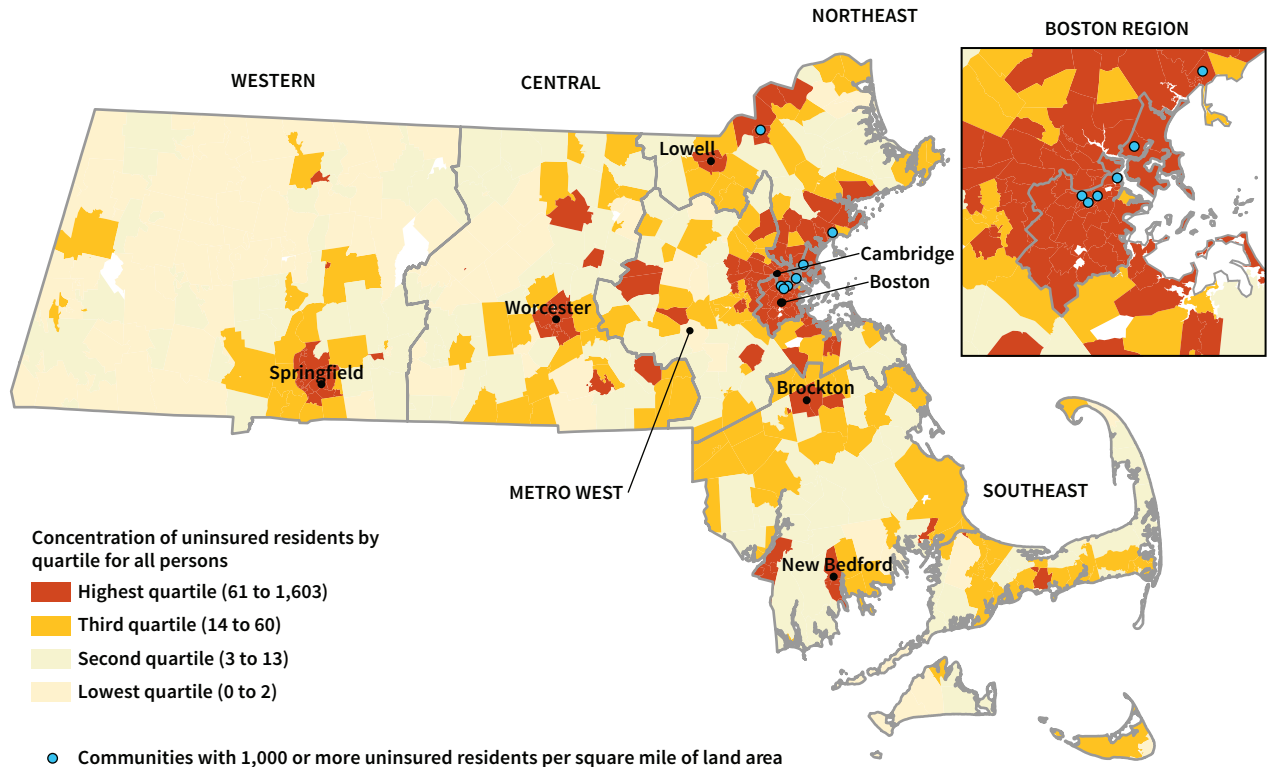Source: 2013–2017 American Community Survey 5-Year Estimates.
Notes: Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). They are shown within the six Massachusetts Executive Office of Health and Human Services regions (Boston, MetroWest, Northeast, Southeast, Central, and Western). Estimates are for the civilian noninstitutionalized population. White areas in the map are bodies of water, largely unpopulated areas of land, or the communities excluded from the analysis. More information about communities with the highest number of uninsured can be found in supplemental table F1.

## CONCENTRATION OF UNINSURED

The uninsured are even more concentrated in urbanized areas of the state when we take into consideration the substantial variation in the land area of Massachusetts communities based on ZCTAs (which, as noted above, range from 0.05 to 95.5 square miles). Using the concentration of uninsured residents per square mile, we find that the average Massachusetts community has 102 uninsured residents per square mile, while the community with the highest concentration of uninsured (in the Boston region) has 1,603 uninsured residents per square mile (map 3). Nearly three-quarters of communities in the highest quartile of the concentration of uninsured

have fewer than 500 uninsured residents per square mile, but seven communities have 1,000 or more uninsured residents per square mile. Five of those communities are in the Boston region, as shown by the blue dots in map 3. As with estimates of communities with the highest number of uninsured, we do not face the problem of large margins of error around estimates of communities with the highest concentrations of uninsured.

**MAP 3.** CONCENTRATION OF UNINSURED RESIDENTS PER SQUARE MILE IN MASSACHUSETTS COMMUNITIES, 2013–2017 AVERAGE



Concentration of uninsured residents by quartile for all persons

- Highest quartile (61 to 1,603)
- Third quartile (14 to 60)
- Second quartile (3 to 13)
- Lowest quartile (0 to 2)

○ Communities with 1,000 or more uninsured residents per square mile of land area

Source: 2013–2017 American Community Survey 5-Year Estimates.
Notes: Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). They are shown within the six Massachusetts Executive Office of Health and Human Services regions (Boston, MetroWest, Northeast, Southeast, Central, and Western). Estimates are for the civilian noninstitutionalized population. White areas in the map are bodies of water, largely unpopulated areas of land, or the communities excluded from the analysis.

While communities in all regions of the state are in the highest quartiles of communities for the uninsurance rate, number of uninsured, and concentration of uninsured, the community averages across regions for the three measures tend to be higher in the Boston region than in the remaining regions (table 2). Among the remaining regions, the average uninsurance rate was highest in the Southeast, while both the average number of uninsured and the average concentration of uninsured were highest in the Northeast. We would expect strategies to reach the remaining uninsured to yield higher numbers of newly insured residents in communities where the uninsurance rate is high and where a large number of uninsured residents are concentrated in a relatively small area.

**Communities with high uninsurance rates—referred to as hot-spot communities—are found across Massachusetts.** As noted above, hot spot communities are defined as those that were in the highest quartile of all Massachusetts communities based on their uninsurance rate. The 137 hot-spot communities are dispersed across the state, with 17 in the Boston region, 12 in MetroWest, 15 in the Northeast, 37 in the Southeast, 25 in the Central region, and 31 in the Western region (table 3 and map 4).[12] The average uninsurance rate for

hot-spot communities in the state was 5.3 percent, more than three times the average uninsurance rate for not-hot-spot communities, which was 1.7 percent (appendix table C1).[13]

**TABLE 3.** NUMBER AND CHARACTERISTICS OF HOT-SPOT COMMUNITIES IN MASSACHUSETTS, OVERALL AND BY REGION, 2013–2017
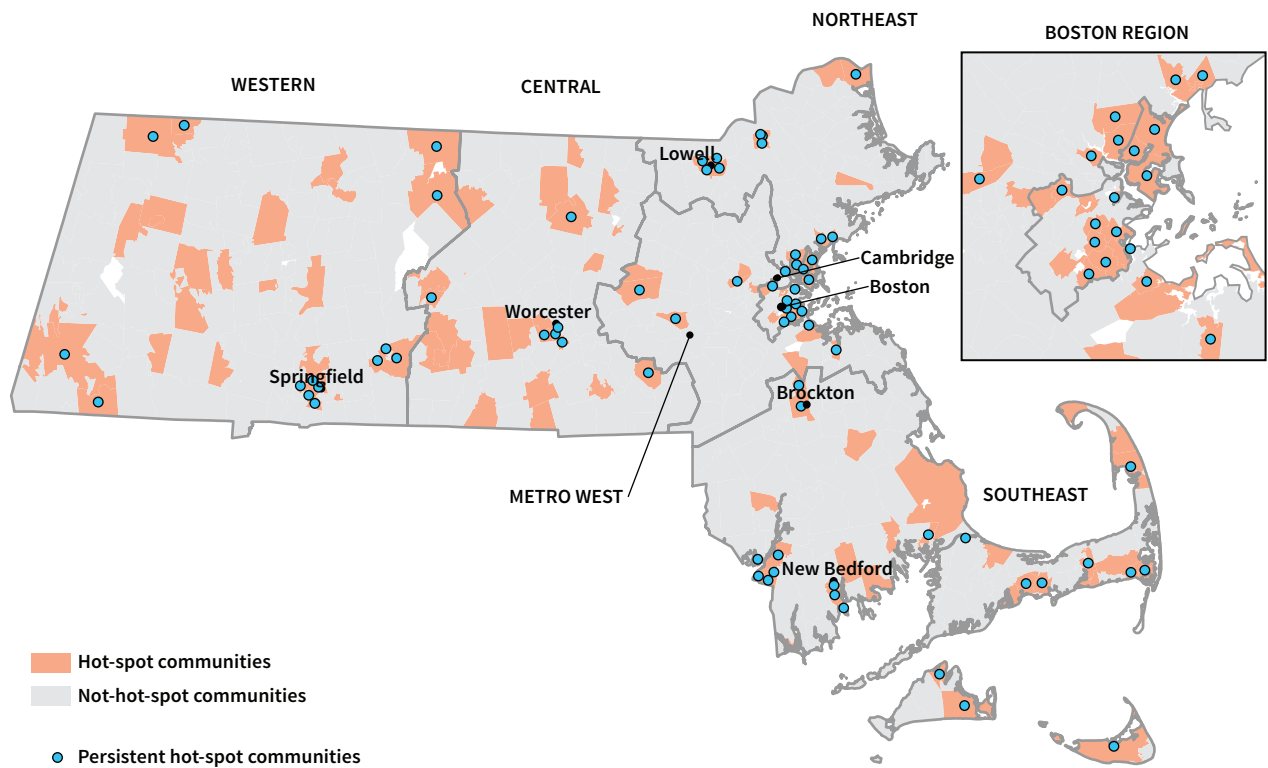
| | NUMBER OF HOT-SPOT COMMUNITIES | AVERAGE UNINSURANCE RATE | AVERAGE CONCENTRATION OF UNINSURED PER SQUARE MILE |
|---|---|---|---|
| Statewide | 137 | 5.3% | 255 |
| By region | | | |
| Boston | 17 | 5.0% | 871 |
| MetroWest | 12 | 4.6% | 282 |
| Northeast | 15 | 5.3% | 511 |
| Southeast | 37 | 5.8% | 115 |
| Central | 25 | 4.8% | 90 |
| Western | 31 | 5.7% | 83 |

Source: 2013–2017 American Community Survey 5-Year Estimates.

Notes: *Hot-spot communities* are those in the highest quartile of all Massachusetts communities based on the uninsurance rate. Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). They are grouped according to the six Massachusetts Executive Office of Health and Human Services regions. Estimates are for residents of all ages in the civilian noninstitutionalized population.

The majority of the hot-spot communities in 2013–2017 were also hot-spot communities in 2008–2012 (i.e., persistent hot-spot communities), with uninsurance rates in the highest quartile of all Massachusetts communities in both periods (appendix table C1), as shown by the blue dots in map 4.

**MAP 4.** HOT-SPOT COMMUNITIES IN MASSACHUSETTS, 2013–2017

**While there are hot-spot communities with high uninsurance rates across the state, uninsured residents are concentrated within a relatively small number of hot-spot communities, primarily in and around Boston.** Hot-spot communities overall have an average of 255 uninsured residents per square mile, but the average varies by region, with a low of 83 uninsured per square mile in the Western region to a high of 871 uninsured per square mile in the Boston region (table 3). To determine where uninsured residents are most geographically concentrated—and therefore where outreach efforts are likely to be most effective in maximizing coverage gains—we identified hot-spot communities with the highest concentration of uninsured residents per square mile so as to identify the smallest geographic area that captures 25 percent of the state's total uninsured population. These "priority" hot-spot communities constitute 31 of the 137 hot-spot communities, and are primarily concentrated in Boston and areas around Boston (table 4 and map 5).

Fifteen of the 31 priority hot-spot communities in Massachusetts are in the Boston region. Another seven are in the Northeast region, with two or three priority hot-spot communities in each of the other four regions. Priority hot-spot communities are typically found in more populated areas: 13 are within Boston city limits, and other priority hot-spot communities are found in cities such as Worcester, Springfield, Lowell, and New Bedford (see appendix table D1 for the full list of priority hot-spot communities). Only one priority hot-spot community (the town of Barre in the Central region) was not located in an urbanized area.

The average uninsurance rate in priority hot-spot communities statewide was 5.8 percent, with an average concentration of 799 uninsured residents per square mile. The uninsured are most concentrated in priority hot-spot communities in Boston, with 929 uninsured residents per square mile on average, and least concentrated in priority hot-spot communities in Central Massachusetts, with 476 uninsured residents per square mile on average.

**TABLE 4.** NUMBER AND CHARACTERISTICS OF PRIORITY HOT-SPOT COMMUNITIES IN MASSACHUSETTS, OVERALL AND BY REGION, 2013–2017

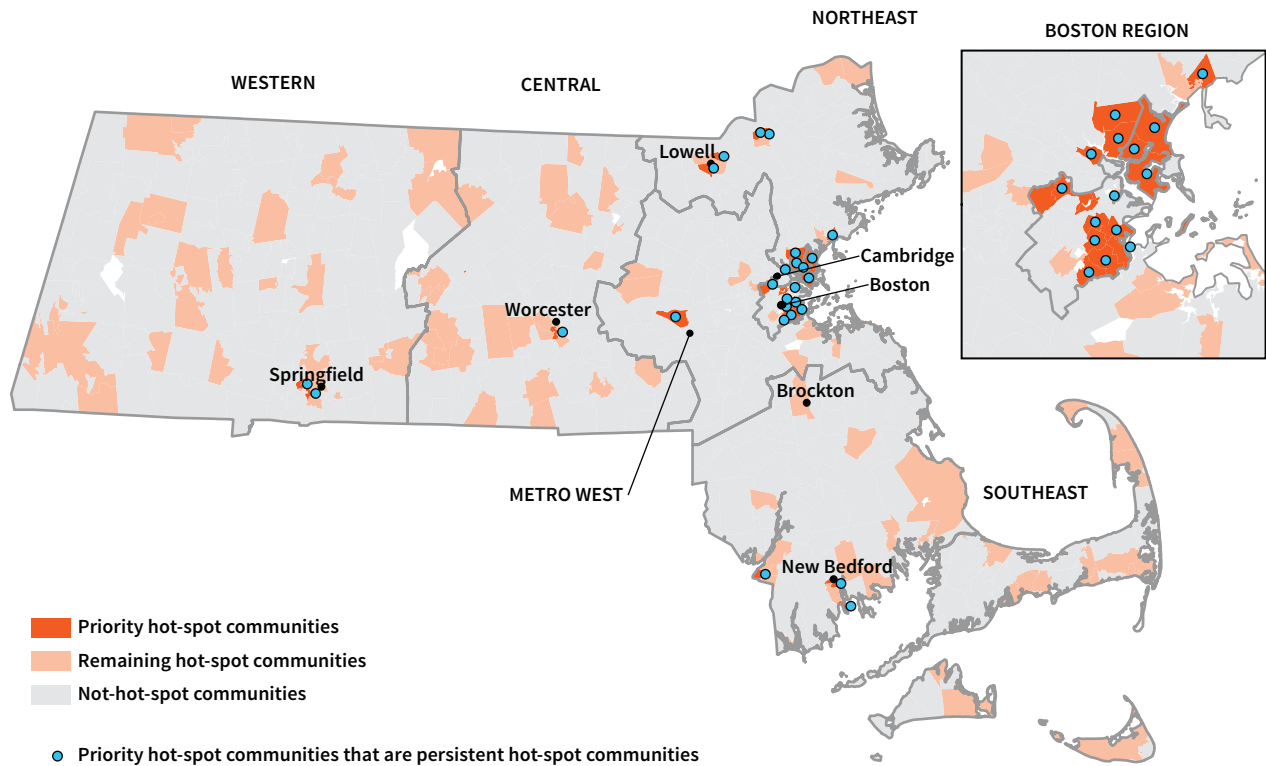| | NUMBER OF PRIORITY HOT-SPOT COMMUNITIES | AVERAGE UNINSURANCE RATE | AVERAGE CONCENTRATION OF UNINSURED PER SQUARE MILE |
|---|---|---|---|
| Statewide | 31 | 5.8% | 799 |
| By region | | | |
| Boston | 15 | 5.2% | 929 |
| MetroWest | 2 | 7.4% | 715 |
| Northeast | 7 | 5.9% | 805 |
| Southeast | 3 | 7.1% | 594 |
| Central | 2 | 6.4% | 476 |
| Western | 2 | 6.4% | 522 |

Twenty-six of the 31 priority hot-spot communities in 2013–2017 were also hot-spot communities in 2008–2012 (i.e., persistent hot-spot communities), with uninsurance rates in the highest quartile of all Massachusetts communities in both periods (appendix table E1), as indicated by the blue dots in map 5.

**MAP 5.** PRIORITY HOT-SPOT COMMUNITIES: HOT-SPOT COMMUNITIES WITH A HIGH CONCENTRATION OF UNINSURED RESIDENTS IN MASSACHUSETTS, 2013–2017



■ Priority hot-spot communities
■ Remaining hot-spot communities
■ Not-hot-spot communities

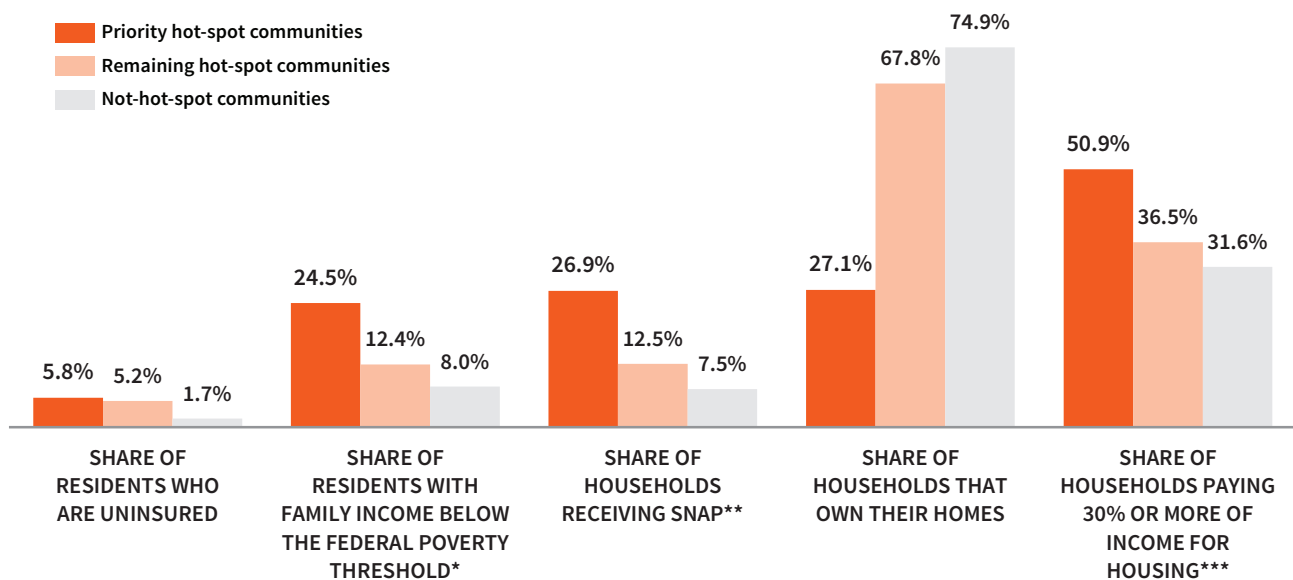◉ Priority hot-spot communities that are persistent hot-spot communities

Source: 2013–2017 and 2008–2012 American Community Survey 5-Year Estimates.

Notes: *Hot-spot communities* are those in the highest quartile of all Massachusetts communities based on the uninsurance rate. *Priority hot-spot communities* are the 31 hot-spot communities with the highest concentration of uninsured residents per square mile that capture 25 percent of the state's total uninsured population. *Persistent hot-spot communities* are those that were hot-spot communities in both 2008–2012 and 2013–2017. Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). They are shown within the six Massachusetts Executive Office of Health and Human Services regions (Boston, MetroWest, Northeast, Southeast, Central, and Western). Estimates are for residents of all ages in the civilian noninstitutionalized population. White areas in the map are bodies of water, largely unpopulated areas of land, or the communities excluded from the analysis.

**Priority hot-spot communities are disadvantaged—with high uninsurance, poverty, and housing costs.** Priority hot-spot communities face many challenges based on the socioeconomic characteristics of their residents and households (appendix tables E2 and E3). The average uninsurance rate in priority hot-spot communities (5.8 percent) is not only higher than the average for the remaining hot-spot communities (5.2 percent) but is also more than three times as high as the average for not-hot-spot communities (1.7 percent; figure 2). Other characteristics of priority hot-spot communities—such as high poverty—are associated with high uninsurance and may negatively affect residents' health independently of their effect on health insurance coverage and health care access. An average of nearly one-quarter (24.5 percent) of residents in priority hot-spot communities have family incomes below the federal poverty threshold[14]—almost twice as high as the poverty rate in the remaining hot-spot communities and three times as high as the poverty rate in not-hot-spot communities. As would be expected, household participation in the Supplemental Nutrition Assistance Program (SNAP) follows a similar pattern as the difference in poverty rates across these types of communities.

Priority hot-spot communities largely consist of renters, many of whom face a housing cost burden. Only about one-quarter of households, on average, in priority hot-spot communities own their homes, compared with over two-thirds of households in the remaining hot-spot communities and three-quarters in not-hot-spot communities. On average, more than half of households in priority hot-spot communities pay more than 30 percent of their income toward housing costs. These housing cost burdens may affect health through multiple pathways, including residential instability, substandard housing conditions, and constraints on the ability to afford health care and other basic needs.[15]

**FIGURE 2.** SOCIOECONOMIC CHARACTERISTICS OF RESIDENTS AND HOUSEHOLDS IN PRIORITY HOT-SPOT COMMUNITIES, REMAINING HOT-SPOT COMMUNITIES, AND NOT-HOT-SPOT COMMUNITIES IN MASSACHUSETTS, 2013–2017 AVERAGE



Legend:
- Priority hot-spot communities
- Remaining hot-spot communities
- Not-hot-spot communities

| | SHARE OF RESIDENTS WHO ARE UNINSURED | SHARE OF RESIDENTS WITH FAMILY INCOME BELOW THE FEDERAL POVERTY THRESHOLD* | SHARE OF HOUSEHOLDS RECEIVING SNAP** | SHARE OF HOUSEHOLDS THAT OWN THEIR HOMES | SHARE OF HOUSEHOLDS PAYING 30% OR MORE OF INCOME FOR HOUSING*** |
|---|---|---|---|---|---|
| Priority hot-spot communities | 5.8% | 24.5% | 26.9% | 27.1% | 50.9% |
| Remaining hot-spot communities | 5.2% | 12.4% | 12.5% | 67.8% | 36.5% |
| Not-hot-spot communities | 1.7% | 8.0% | 7.5% | 74.9% | 31.6% |

Source: 2013–2017 American Community Survey 5-Year Estimates.

Notes: *Hot-spot communities* are those in the highest quartile of all Massachusetts communities based on the uninsurance rate. *Priority hot-spot communities* are the 31 hot-spot communities with the highest concentration of uninsured residents per square mile that capture 25 percent of the state's total uninsured population. Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). Estimates are for residents of all ages in the civilian noninstitutionalized population.
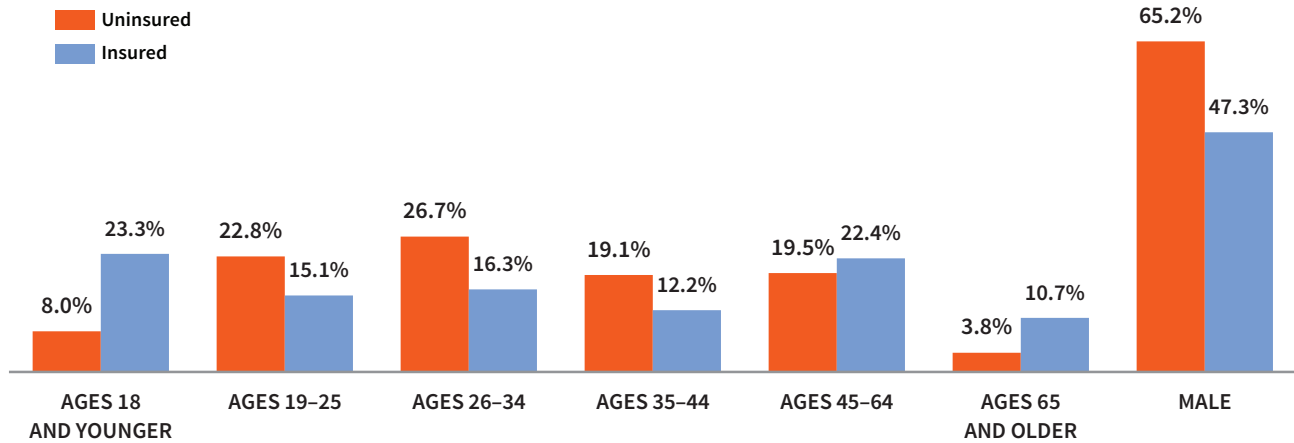
  * Households are defined as all persons living in a housing unit. Family is defined as all related persons in the household. Federal poverty thresholds are used for calculating official poverty statistics for the population. Within the civilian noninstitutionalized population, poverty status is not defined for people in living situations without conventional housing (and who are not in shelters), for people living in college dormitories, or for children under age 15 who are not living with a relative (e.g., children in foster care). Poverty status is not determined for 2.0 percent of residents across communities on average.

 ** SNAP is the Supplemental Nutrition Assistance Program.

*** Households that pay 30 percent or more for housing include households with zero or negative net income. Renter-occupied households that have "no cash rent" are assumed to pay less than 30 percent of income for housing.

**As has long been true in Massachusetts, many of the remaining uninsured within priority hot-spot communities are young adults and the majority are male.** On average, roughly half of the remaining uninsured within the priority hot-spot communities are between ages 19 and 34, with nearly one in four (22.8 percent) ages 19 to 25 and more than one in four (26.7 percent) ages 26 to 34 (figure 3). In contrast, an average of fewer than one-third of insured residents within priority hot-spot communities are between ages 19 and 34, with 15.1 percent ages 19 to 25 and 16.3 percent ages 26 to 34. On average, nearly two-thirds (65.2 percent) of uninsured residents are male, compared with 47.3 percent of insured residents who are male. These age and gender characteristics are consistent with historic patterns in the composition of Massachusetts' uninsured population,[16] indicating that young men continue to be among the most difficult groups to enroll in the wake of state and federal coverage expansions.

**FIGURE 3.** AGE AND GENDER OF UNINSURED AND INSURED RESIDENTS IN PRIORITY HOT-SPOT COMMUNITIES IN MASSACHUSETTS, 2013–2017 AVERAGE

■ Uninsured
■ Insured

| | AGES 18 AND YOUNGER | AGES 19–25 | AGES 26–34 | AGES 35–44 | AGES 45–64 | AGES 65 AND OLDER | MALE |
|---|---|---|---|---|---|---|---|
| Uninsured | 8.0% | 22.8% | 26.7% | 19.1% | 19.5% | 3.8% | 65.2% |
| Insured | 23.3% | 15.1% | 16.3% | 12.2% | 22.4% | 10.7% | 47.3% |

Source: 2013–2017 American Community Survey 5-Year Estimates.

Notes: *Hot-spot communities* are those in the highest quartile of all Massachusetts communities based on the uninsurance rate. *Priority hot-spot communities* are the 31 hot-spot communities with the highest concentration of uninsured residents per square mile that capture 25 percent of the state's total uninsured population. Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). Estimates are for residents of all ages in the civilian noninstitutionalized population.

**Reaching the remaining uninsured within priority hot-spot communities will be challenging, since many face significant barriers to obtaining health insurance coverage.** The remaining uninsured in priority hot-spot communities have characteristics that can make it difficult to purchase private coverage on their own (either through an employer or as direct purchase), to qualify for financial assistance in purchasing private coverage, or to qualify for public coverage. An average of 42.5 percent of these uninsured are noncitizens (table 5), compared with only 16.3 percent of insured residents in these communities. As in the federal and other state health insurance marketplaces, noncitizens' eligibility to purchase coverage through the Massachusetts Health Connector, with or without premium tax credits, depends on whether they are lawfully present.[17] Of particular relevance in Massachusetts, their eligibility for comprehensive MassHealth benefits or limited MassHealth coverage (i.e., for emergency services only) depends on whether they are lawfully present and have qualified status under the 1996 welfare reform law, and also on whether they meet other eligibility criteria such as age, income, disability status, pregnancy, and parental status.[18]

The income and employment characteristics of uninsured residents in priority hot-spot communities suggest that many of them would find it difficult to purchase private health insurance without financial assistance. On average, 30 percent have incomes below the federal poverty threshold, and most either did not work in the past year (26 percent) or only worked part-time or part-year (37.3 percent), making it unlikely they would be eligible for coverage through an employer or, if they were eligible, would be able to afford to pay premiums.

Some uninsured residents in priority hot-spot communities may also have difficulty determining whether they are eligible for coverage, navigating the health insurance options available to them, and completing the application process. An average of more than one in four (27.3 percent) uninsured adults ages 26 and older in priority hot-spot communities did not complete high school and an additional 29.9 percent did not attend college, suggesting many of these adults would have difficulty with enrollment without help from navigators or other assisters. Moreover, low educational attainment and limited work experience can limit future opportunities to secure high-quality jobs that offer employer-based coverage. Other characteristics of priority hot-spot communities that may present barriers to insurance coverage include relatively high shares of residents with limited English proficiency (appendix table E2) and many households' lack of internet access at home (appendix table E3).

**TABLE 5.** CHARACTERISTICS ASSOCIATED WITH BARRIERS TO COVERAGE AMONG UNINSURED AND INSURED RESIDENTS IN PRIORITY HOT-SPOT COMMUNITIES IN MASSACHUSETTS, 2013–2017 AVERAGE

| | UNINSURED | INSURED | DIFFERENCE |
|---|---|---|---|
| Noncitizen | 42.5% | 16.3% | 26.1 |
| Educational attainment (26 years and older) | | | |
| Less than high school graduate | 27.3% | 22.2% | 5.1 |
| High school diploma (includes equivalency) | 29.9% | 28.8% | 1.2 |
| Some college or associate's degree | 18.3% | 19.8% | -1.5 |
| Bachelor's degree or higher | 24.5% | 29.2% | -4.7 |
| Work experience over the past 12 months (19–64 years) | | | |
| Worked full-time for the full year * | 36.7% | 45.6% | -9.0 |
| Worked part-time or part-year | 37.3% | 30.5% | 6.8 |
| Did not work | 26.0% | 23.8% | 2.2 |
| Annual family income below federal poverty threshold** | 30.0% | 24.1% | 5.9 |

Source: 2013–2017 American Community Survey 5-Year Estimates.

Notes: *Hot-spot communities* are those in the highest quartile of all Massachusetts communities based on the uninsurance rate. *Priority hot-spot communities* are the 31 hot-spot communities with the highest concentration of uninsured residents per square mile that capture 25 percent of the state's total uninsured population. Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). Estimates are for residents of all ages in the civilian noninstitutionalized population, unless otherwise noted.

 *Full-time is defined as usually working 35 or more hours per week. Full-year is defined as working 50–52 weeks in the past year.
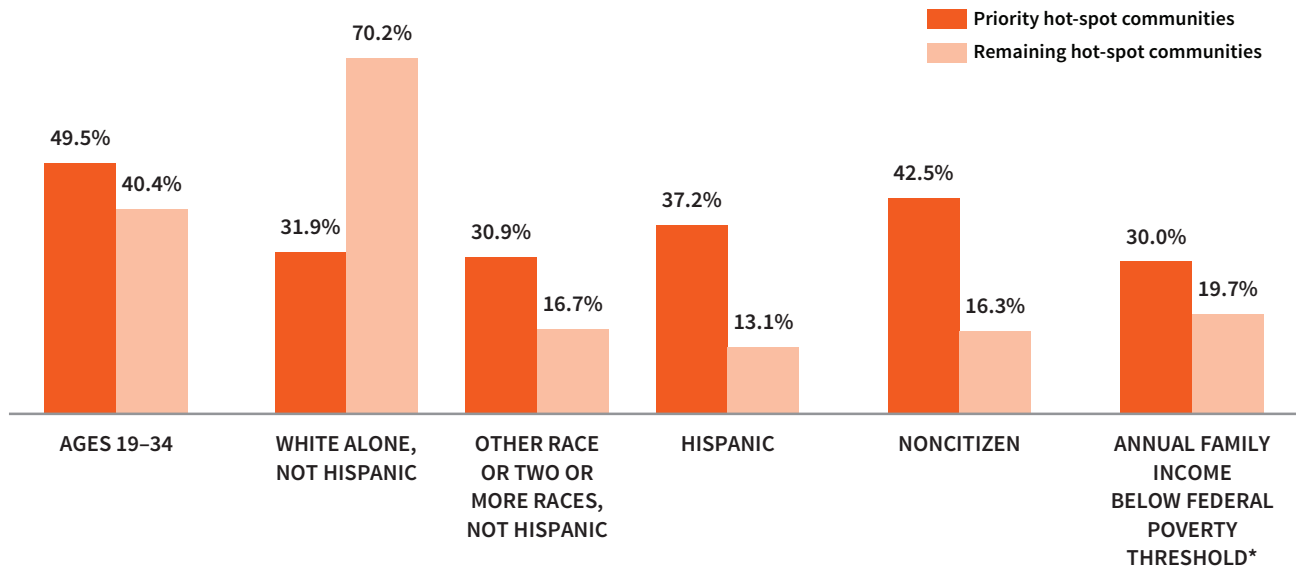
**Family is defined as all related persons in the household. Federal poverty thresholds are used for calculating official poverty statistics for the population. In 2017, the poverty threshold for a single nonelderly adult living alone was $12,752. The poverty threshold for a three-person family that includes one related child under 18 was $19,730. Within the civilian noninstitutionalized population, poverty status is not defined for people in living situations without conventional housing (and who are not in shelters), for people living in college dormitories, or for children under age 15 who are not living with a relative (e.g., children in foster care). Poverty status is not determined for 2.0 percent of residents across communities on average.

**Outreach strategies in priority hot-spot communities may need to be more targeted than outreach in the remaining hot-spot communities.** While the uninsured in priority hot-spot communities are more likely than the uninsured in the remaining hot-spot communities to be younger adults and to have incomes below the poverty threshold, the larger differences between the two groups of communities are in race/ethnicity and citizenship status (figure 4). On average, only 32 percent of uninsured residents in priority hot-spot communities are non-Hispanic white, compared with more than 70 percent of uninsured residents in remaining hot-spot communities. Within priority hot-spot communities, an average of nearly one-third of uninsured residents are non-Hispanic and are of a race other than white or multiple races, and over one-third are Hispanic. The average share of uninsured residents who are noncitizens in priority hot-spot communities is more than twice as high as in the remaining hot-spot communities (42.5 percent versus 16.3 percent). And within the group of priority hot-spot communities, the share of uninsured residents who are nonwhite or Hispanic was as high as 100 percent in one community in Boston, and the share of uninsured residents who are noncitizens was as high as 87.7 percent in another Boston community. Moreover, while the priority hot-spot communities have many characteristics in common, they also differ. Of particular relevance for outreach efforts, the most common places of birth among foreign-born residents in priority hot-spot communities were Dominican Republic (7 communities), China (6 communities), El Salvador and Portugal (3 communities each), and Brazil and Haiti (2 communities each; data not shown).[19]

Reaching uninsured adults within those groups may require tailoring culturally competent messages and strategies toward the specific population groups in each priority hot-spot community. For instance, drawing on feedback from focus groups on effective messaging strategies and current barriers to enrollment, the Massachusetts Health Connector recently enhanced its efforts to reach the remaining uninsured through ethnic media outlets and found that significant enrollment gains were made in communities targeted by these efforts.[20]

Source: 2013–2017 American Community Survey 5-Year Estimates.

Notes: *Hot-spot communities* are those in the highest quartile of all Massachusetts communities based on the uninsurance rate. *Priority hot-spot communities* are the 31 hot-spot communities with the highest concentration of uninsured residents per square mile that capture 25 percent of the state's total uninsured population. Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). Estimates are for residents of all ages in the civilian noninstitutionalized population.

\* Family is defined as all related persons in the household. Federal poverty thresholds are used for calculating official poverty statistics for the population. In 2017, the poverty threshold for a single nonelderly adult living alone was $12,752. The poverty threshold for a three-person family that includes one related child under 18 was $19,730. Within the civilian noninstitutionalized population, poverty status is not defined for people in living situations without conventional housing (and who are not in shelters), for people living in college dormitories, or for children under age 15 who are not living with a relative (e.g., children in foster care). Poverty status is not determined for 2.0 percent of residents across communities on average.

# DISCUSSION

Though Massachusetts has come closer than any other state to achieving universal coverage, there remain pockets of relatively high uninsurance in 137 hot-spot communities throughout the state. The state's uninsured population is most highly concentrated in 31 of these hot-spots that we refer to as priority hot-spot communities. Nearly half of the priority hot-spot communities are located in the Boston region, but some are also found in MetroWest, Northeast, Southeast, Central, and Western Massachusetts. The 31 priority hot-spot communities face socioeconomic disadvantages that are associated with both high uninsurance and poor health. The uninsured residents in these communities are among the most difficult segments of the population to reach: On average, nearly half are young adults, almost two-thirds are male, many have limited educational attainment, and over 40 percent are noncitizens. Many are also poor, with limited employment, making it unlikely they will be eligible for or able to afford employer-based coverage.

These findings have several implications for outreach strategies to reach the remaining uninsured in Massachusetts. First, the concentration of uninsured in a relatively small number of communities based on the number of uninsured residents per square mile offers guidance for where to target scarce resources for marketing, outreach, and enrollment assistance in order to have the greatest chance of reaching large segments of the uninsured population. Most of these priority hot-spot communities are in the cities and towns that are currently among the target communities for outreach identified by the state.[21] ZCTA-level information can enhance these efforts by focusing attention toward communities in those cities and towns with the greatest need. Evidence from other studies shows that television advertising and other marketing efforts are associated with increased shopping and enrollment through the health insurance marketplaces.[22] This suggests that marketing and outreach directed toward the characteristics of the uninsured populations in priority hot-spot communities (e.g., young, male, foreign-born) have the potential to improve coverage in areas with the largest concentrations of uninsured residents.

Second, because large shares of uninsured individuals in priority hot-spot communities are foreign-born, expanding coverage to the remaining uninsured will likely require strong partnerships between state agencies and immigrant-serving organizations within each community. Such partnerships will be needed to reach uninsured foreign-born adults who are eligible for MassHealth, ConnectorCare, or other subsidized or unsubsidized coverage through the Massachusetts Health Connector. For noncitizens, eligibility for these coverage options depends on whether they are lawfully present and have qualified status, among other factors. Outreach to immigrant communities is also needed to protect the coverage gains that have occurred in recent years, as federal agencies consider a new proposed "public charge" rule that could make it more difficult for immigrants to enter the country or establish permanent residency if they participate in certain noncash benefit programs, including Medicaid. There is some evidence that the proposed rule is already having a chilling effect on immigrant families' participation in Medicaid and other public programs, even before the rule has been finalized.[23,24] State policymakers can work with municipal leaders, legal assistance providers, and community-based organizations to disseminate accurate information about new regulations and try to mitigate the effects of this rule on access to care.

Third, characteristics of the uninsured residents of priority hot-spot communities have implications for other strategies for targeting outreach. The demographic diversity of uninsured residents underscores the importance of partnerships with trusted local organizations (e.g., faith communities, nonprofits, health clinics) that have strong connections to residents of different races, ethnicities, and nationalities within the priority hot-spot communities.[25] Furthermore, outreach efforts in priority hot-spot communities should continue to focus on the state's target populations of young adults, men, and those with low incomes.[26] Although most uninsured

adults do not work full-time year-round, an average of nearly three in four uninsured adults in priority hot-spot communities worked at some point during the year, suggesting employers may be able to help disseminate messages about low-cost coverage options. With an average of nearly three-quarters of households in priority hot-spot communities renting their homes, collaboration with rental property management companies and local housing authorities may provide additional opportunities to reach the uninsured. There may also be opportunities to connect uninsured residents to coverage when they interact with other state programs. For instance, households with uninsured residents in priority hot-spot communities may benefit from efforts to further streamline eligibility and enrollment systems across state programs[27,28] and to target SNAP households for health insurance coverage and enrollment assistance.

It is also important to consider ways to help uninsured residents in priority hot-spot communities overcome the barriers they face to understanding their coverage options and how to enroll. Some uninsured residents may have difficulty navigating complex eligibility rules, may not speak English proficiently, and/or may not have internet access at home, and therefore may need assistance with applying for coverage. Interviews with uninsured individuals in Massachusetts have found that they place a high value on access to enrollment assistance from people who speak their native language.[29]

Finally, beyond their implications for outreach efforts to increase health insurance coverage, the socioeconomic characteristics of priority hot-spot communities highlight broader challenges related to the social determinants of health that are likely to affect both insured and uninsured residents of those communities. These are factors outside the health care system that affect health status, such as stable and safe housing, access to adequate nutrition, educational opportunities, and exposure to environmental pollutants[30] and toxic stress.[31] Improving health outcomes for residents of these communities will not only require ensuring health insurance coverage and health care access but also depend on efforts to address broader economic and social factors that present barriers to healthy living.

# APPENDICES

This brief includes a number of appendices. Appendix A provides an overview of the American Community Survey data and the geographic units of analysis. Appendix B provides supplemental maps for uninsurance for children ages 0 to 18 and adults ages 19 to 64. Appendices C–E provide supplemental tables and maps with more detailed information about the characteristics of residents in hot-spot communities and not-hot-spot communities, the location of priority hot-spot communities and remaining hot-spot communities, and the characteristics of residents of priority hot-spot communities and remaining hot-spot communities. Supplemental tables F–N (available here) provide detailed tables for different geographic units, including ZCTAs in table F. The full list of appendices is as follows:

**A.**  Overview of the American Community Survey and the Geographic Units Relevant to this Study

**B.**  Supplemental Maps of Uninsurance for Children and Nonelderly Adults, 2013–2017 Averages

**C.**  Supplemental Tables Describing Hot-Spot Communities and Not-Hot-Spot Communities in Massachusetts, 2013–2017 Averages

**D.**  Supplemental Tables and Maps of the Location of Priority Hot-Spot Communities and Remaining Hot-Spot Communities in Massachusetts, by Region, 2013–2017 Averages

**E.**  Supplemental Tables Describing Priority Hot-Spot Communities and Remaining Hot-Spot Communities in Massachusetts, 2013–2017 Averages

## APPENDIX A. OVERVIEW OF THE AMERICAN COMMUNITY SURVEY AND THE GEOGRAPHIC UNITS RELEVANT TO THIS STUDY

Our analysis of the geography of uninsurance in Massachusetts draws on data from the American Community Survey (ACS), a nationally representative, annual survey conducted by the Census Bureau. Launched in 2005, the ACS replaced the long form of the census and collects social, economic, housing, and demographic data on the U.S. population. More than 3.5 million housing units and group quarters addresses are sampled each year, and more than 2 million households complete the survey. In Massachusetts, approximately 40,000 housing units and 4,000 group quarters residents complete the survey annually.[32] The ACS is fielded continuously throughout the year and is administered by internet, mail, telephone, and in person, with a language assistance program for households with limited English proficiency.[33]

The ACS provides detailed information for a large number of geographic areas, including the nine kinds of areas included in these appendices (appendix table A1). We use 2013–2017 ACS 5-year estimates from the American FactFinder tables developed by the Census Bureau to obtain five-year average estimates of uninsurance and other measures for the 2013–2017 period for those geographic areas in Massachusetts. We also use the 2008–2012 ACS 5-year estimates to obtain five-year averages for uninsurance estimates in the 2008–2012 period.

For this brief, our primary geographic unit of analysis is the zip code tabulation area (ZCTA), which approximates the zip codes used by the U.S. Postal Service for mail delivery. ZCTAs are non-overlapping geographic units that cover all areas of the state and are the closest unit to communities in Massachusetts. There are 538 ZCTAs in Massachusetts. We exclude 12 ZCTAs from our uninsurance analysis, three of which are unpopulated, eight of which have a large share of residents for whom poverty status cannot be determined (e.g., because many residents live in college dormitories or institutional settings), and one in which the majority of the population lives in Rhode Island.[34] Supplemental table F provides detailed tables on uninsurance for all Massachusetts ZCTAs. Supplemental tables G–N provide detailed tables on uninsurance for other kinds of geographic areas: Congressional districts, state senate and house districts, counties, county subdivisions (which in Massachusetts are cities and towns), places, school districts, and census tracts.

We focus on the civilian noninstitutionalized population, which excludes adults on active duty in the Armed Forces and people who live in institutions, such as correctional facilities and nursing homes. Appendix B and supplemental tables F–N include tables and maps for children ages 0 to 18 and nonelderly adults ages 19 to 64. We do not provide separate estimates for adults ages 65 and older, since nearly all elderly adults are enrolled in Medicare. When comparing uninsurance between 2008–2012 and 2013–2017 for children and nonelderly adults, it is important to note that in 2015, the Census Bureau modified the age groups in its five-year estimate tables to better align with the current health insurance landscape. The 2008–2012 tables provide estimates for children ages 0–17 and adults ages 18–64, and the 2013–2017 tables provide estimates for children ages 0–18 and adults ages 19–64. Shifting 18-year-olds from being counted as adults in 2008–2012 to being counted as children in 2013–2017 leads to a small increase in the estimated uninsurance rate for both children and adults, since 18-year-olds have relatively high uninsurance rate as children and relatively low uninsurance rate as adults.
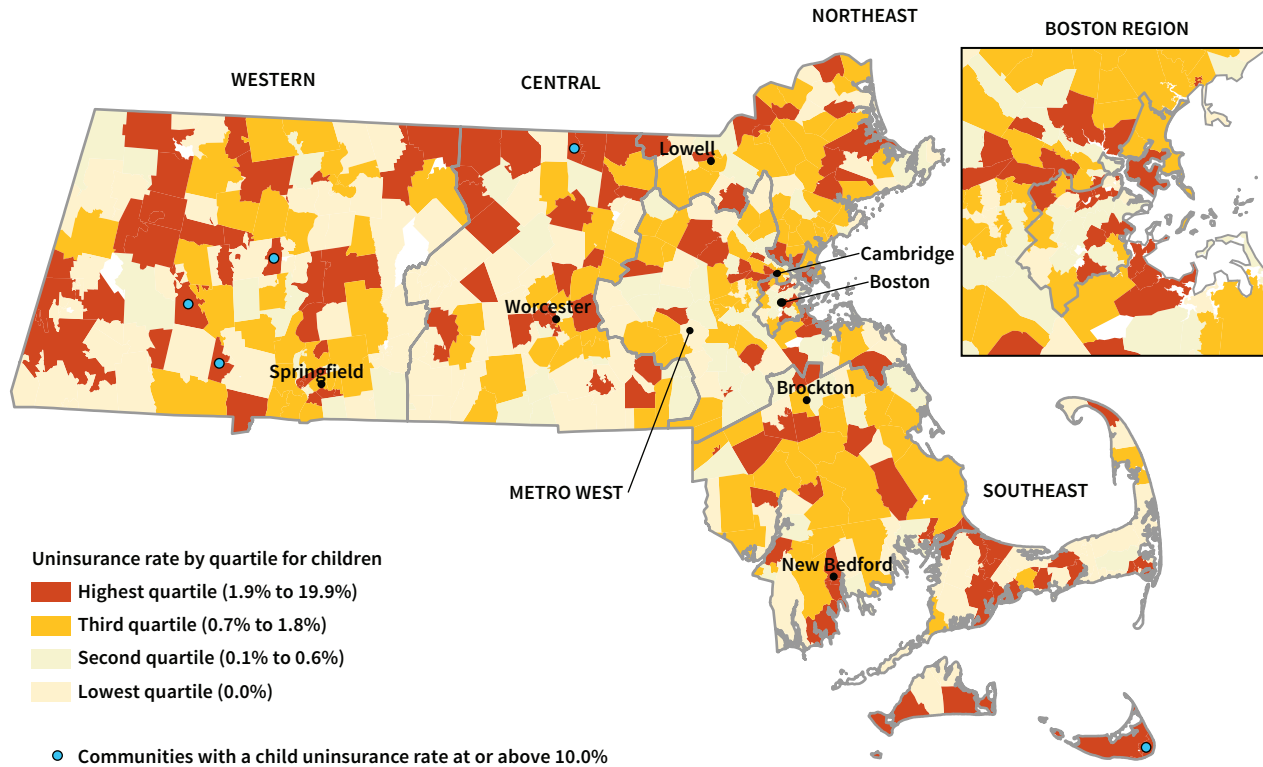
## APPENDIX TABLE A1. SUMMARY OF GEOGRAPHIC UNITS IN THE 2013–2017 AMERICAN COMMUNITY SURVEY

| UNIT | DESCRIPTION |
|---|---|
| Zip Code Tabulation Areas | Zip Code Tabulation Areas (ZCTAs) are approximate area representations of U.S. Postal Service five-digit zip code service areas that the Census Bureau creates, using whole tabulation blocks to present statistical data from censuses and surveys. The Census Bureau defines ZCTAs by allocating each block that contains addresses to a single ZCTA, usually to the ZCTA that reflects the zip code most frequently occurring for the addresses within that tabulation block. ZCTAs are non-overlapping and cover the entire state. There are 538 ZCTAs in Massachusetts. One ZCTA (02861) has a very small share of its population residing in Massachusetts, with the remaining population residing in Rhode Island. |
| Congressional Districts | Congressional districts are the 435 areas in the nation from which people are elected to the U.S. House of Representatives. Massachusetts congressional districts are non-overlapping areas that cover the entire state. Beginning with the 113th Congress (January 2013–January 2015), Massachusetts had nine congressional districts as a result of reapportionment based on the 2010 census. The tabulations here use the congressional districts for the 115th Congress (January 2017–January 2019). |
| State Legislative (Senate and House) Districts | State legislative districts (SLDs) are the areas from which members are elected to state legislatures. SLDs pertain to the upper (senate) and lower (house) chambers of the state legislature. SLDs are non-overlapping and cover the entire state. There are 40 state senate districts and 160 state house districts in Massachusetts. |
| Counties | Counties or county equivalents are the primary legal divisions of most states. There are 14 counties in Massachusetts. Berkshire, Essex, Franklin, Hampden, Hampshire, Middlesex, and Worcester counties are no longer legal governmental units; however, the Census Bureau continues to present data for these historical entities in order to provide comparable geographic units at the county level of the geographic hierarchy, and it represents them as nonfunctioning legal entities in data products. |
| County Subdivisions | County subdivisions are the primary divisions of counties. Minor civil divisions (MCDs) are the primary governmental or administrative divisions of a county in many states. In some states, all or some incorporated places are not part of any MCD; these places are termed independent places. County subdivisions are non-overlapping and cover the entire state. There are 357 MCDs in Massachusetts. There are 298 towns with functioning, but not necessarily active, governments. The 53 incorporated places (see below) are independent of MCDs and serve as county subdivisions. In addition, there are six MCDs that consist entirely of water area within the territorial limits of Massachusetts, and these are excluded from tabulations for county subdivisions. |
| Places | Places include incorporated places and census-designated places (CDPs). An incorporated place is established to provide governmental functions for a concentration of people, whereas a minor civil division generally is created to provide services or administer an area without regard, necessarily, to population. An incorporated place usually is a city, town, village, or borough but can have other legal descriptions. For Census Bureau data tabulation and presentation purposes, incorporated places exclude towns in Massachusetts. CDPs are the statistical counterparts of incorporated places and are delineated to provide data for settled concentrations of population that are identifiable by name but are not legally incorporated. There are no population size requirements for CDPs. Places are non-overlapping but do not necessarily cover the entire state. Massachusetts has 246 places: 53 incorporated places and 193 CDPs. The incorporated places are all cities. |
| School Districts | School districts are geographic entities that provide public educational services for the area's residents. The Census Bureau obtains the boundaries, names, local education agency codes, and school district levels for school districts from state and local school officials. School district boundaries are updated every two years. Massachusetts has 67 elementary school districts, 31 secondary school districts, and 209 unified school districts. |
| Census Tracts | Census tracts are small, relatively permanent statistical subdivisions of a county. Census tracts generally have a population size between 1,200 and 8,000 people, with an optimum size of 4,000 people. Census tracts are non-overlapping areas that cover the entire state. Massachusetts has 1,478 census tracts. |

Note: While these areas are similar to the areas used in the previous brief (Skopec, Laura, and Lea Bart. 2017. *The Geography of Uninsurance In Massachusetts, 2011–2015*. Boston, MA: Blue Cross Blue Shield of Massachusetts Foundation), we have updated information for 2013–2017. For more information on geographic areas, see the Census Bureau's Geographic Areas Reference Manual: https://www.census.gov/programs-surveys/geography/guidance/geographic-areas-reference-manual.html.

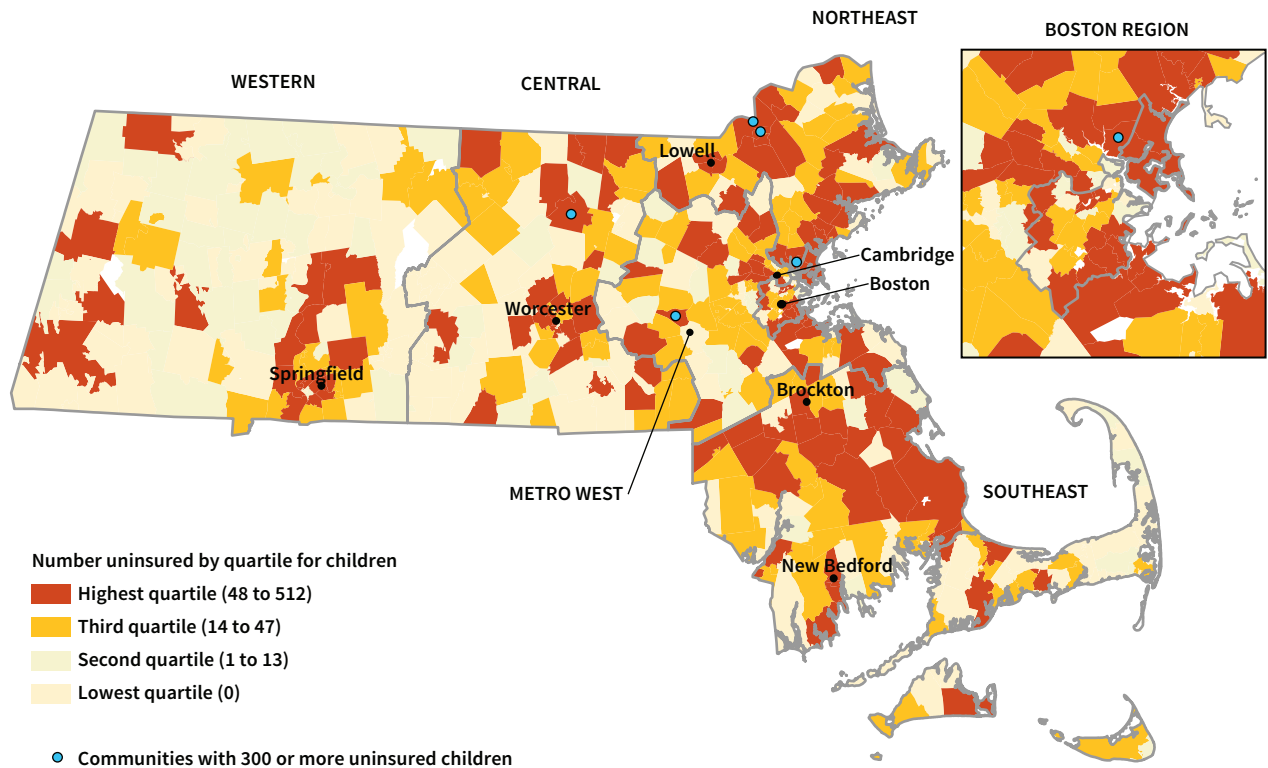# APPENDIX B. SUPPLEMENTAL MAPS OF UNINSURANCE FOR CHILDREN AND NONELDERLY ADULTS, 2013–2017 AVERAGES

**APPENDIX MAP B1.** UNINSURANCE RATE FOR CHILDREN AGES 0 TO 18 IN MASSACHUSETTS COMMUNITIES, 2013–2017 AVERAGE



**Uninsurance rate by quartile for children**

- Highest quartile (1.9% to 19.9%)
- Third quartile (0.7% to 1.8%)
- Second quartile (0.1% to 0.6%)
- Lowest quartile (0.0%)

● Communities with a child uninsurance rate at or above 10.0%

Source: 2013–2017 American Community Survey 5-Year Estimates.

Notes: Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). They are shown within the six Massachusetts Executive Office of Health and Human Services regions (Boston, MetroWest, Northeast, Southeast, Central, and Western). Estimates are for the civilian noninstitutionalized population. White areas in the map are bodies of water, largely unpopulated areas of land, areas with no children, or the communities excluded from the analysis. More information about communities with the highest uninsurance rates for children can be found in supplemental table F2.
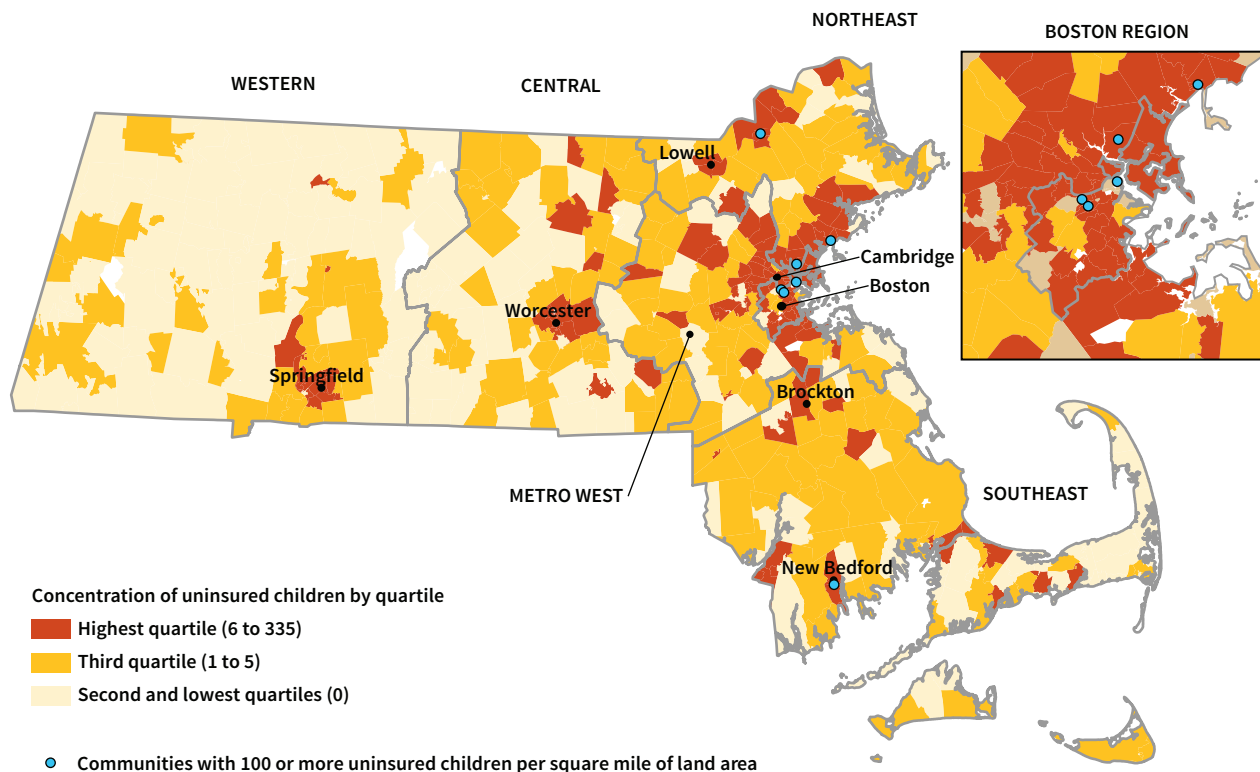
**APPENDIX MAP B2.** NUMBER OF UNINSURED CHILDREN AGES 0 TO 18 IN MASSACHUSETTS COMMUNITIES, 2013–2017 AVERAGE



**Number uninsured by quartile for children**
- Highest quartile (48 to 512)
- Third quartile (14 to 47)
- Second quartile (1 to 13)
- Lowest quartile (0)

● Communities with 300 or more uninsured children

Source: 2013–2017 American Community Survey 5-Year Estimates.

Notes: Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). They are shown within the six Massachusetts Executive Office of Health and Human Services regions (Boston, MetroWest, Northeast, Southeast, Central, and Western). Estimates are for the civilian noninstitutionalized population. White areas in the map are bodies of water, largely unpopulated areas of land, areas with no children, or the communities excluded from the analysis. More information about communities with the highest number of uninsured children can be found in supplemental table F2.

**Concentration of uninsured children by quartile**

- Highest quartile (6 to 335)
- Third quartile (1 to 5)
- Second and lowest quartiles (0)

- Communities with 100 or more uninsured children per square mile of land area

Source: 2013–2017 American Community Survey 5-Year Estimates.

Notes: Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). They are shown within the six Massachusetts Executive Office of Health and Human Services regions (Boston, MetroWest, Northeast, Southeast, Central, and Western). Estimates are for the civilian noninstitutionalized population. White areas in the map are bodies of water, largely unpopulated areas of land, areas with no children, or the communities excluded from the analysis.

**APPENDIX MAP B4.** UNINSURANCE RATE FOR ADULTS AGES 19 TO 64 IN MASSACHUSETTS COMMUNITIES, 2013–2017 AVERAGE
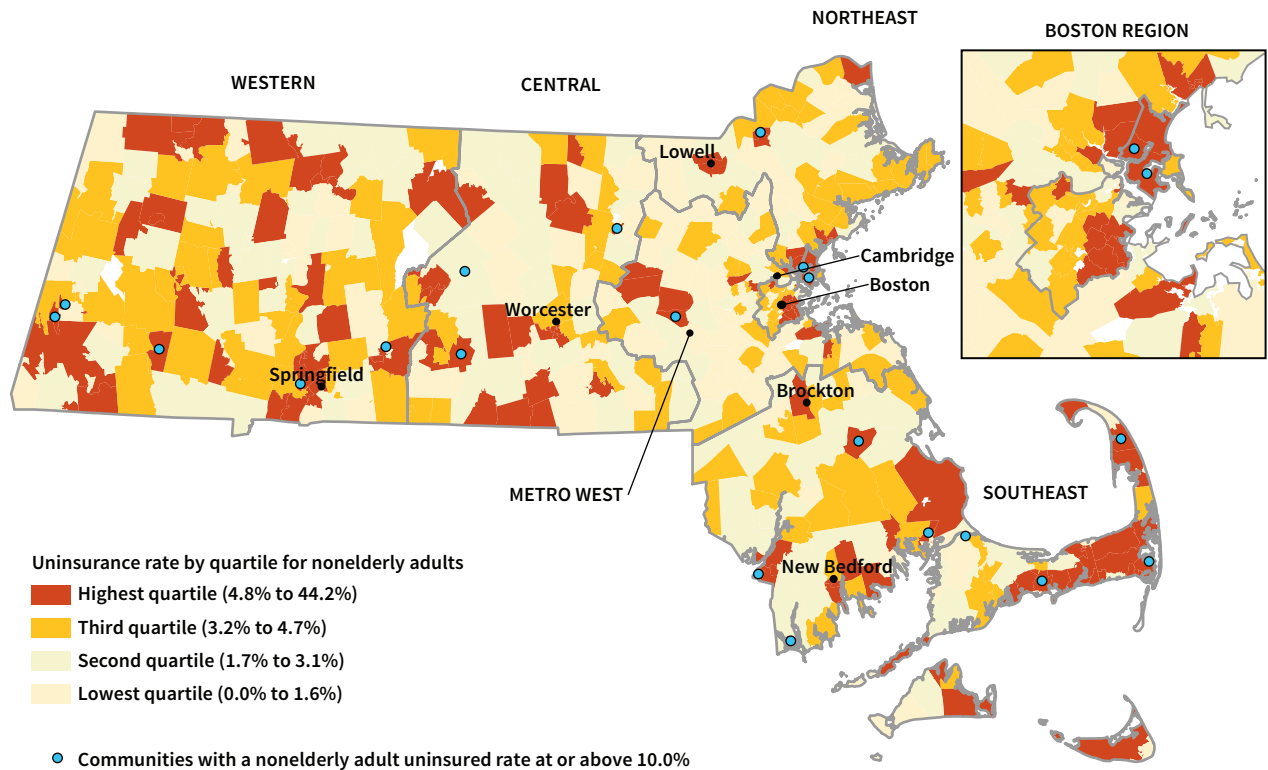


Uninsurance rate by quartile for nonelderly adults

■ Highest quartile (4.8% to 44.2%)
■ Third quartile (3.2% to 4.7%)
■ Second quartile (1.7% to 3.1%)
■ Lowest quartile (0.0% to 1.6%)

● Communities with a nonelderly adult uninsured rate at or above 10.0%

Source: 2013–2017 American Community Survey 5-Year Estimates.

Notes: Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). They are shown within the six Massachusetts Executive Office of Health and Human Services regions (Boston, MetroWest, Northeast, Southeast, Central, and Western). Estimates are for the civilian noninstitutionalized population. White areas in the map are bodies of water, largely unpopulated areas of land, or the communities excluded from the analysis. More information about communities with the highest uninsurance rates for nonelderly adults can be found in supplemental table F3.
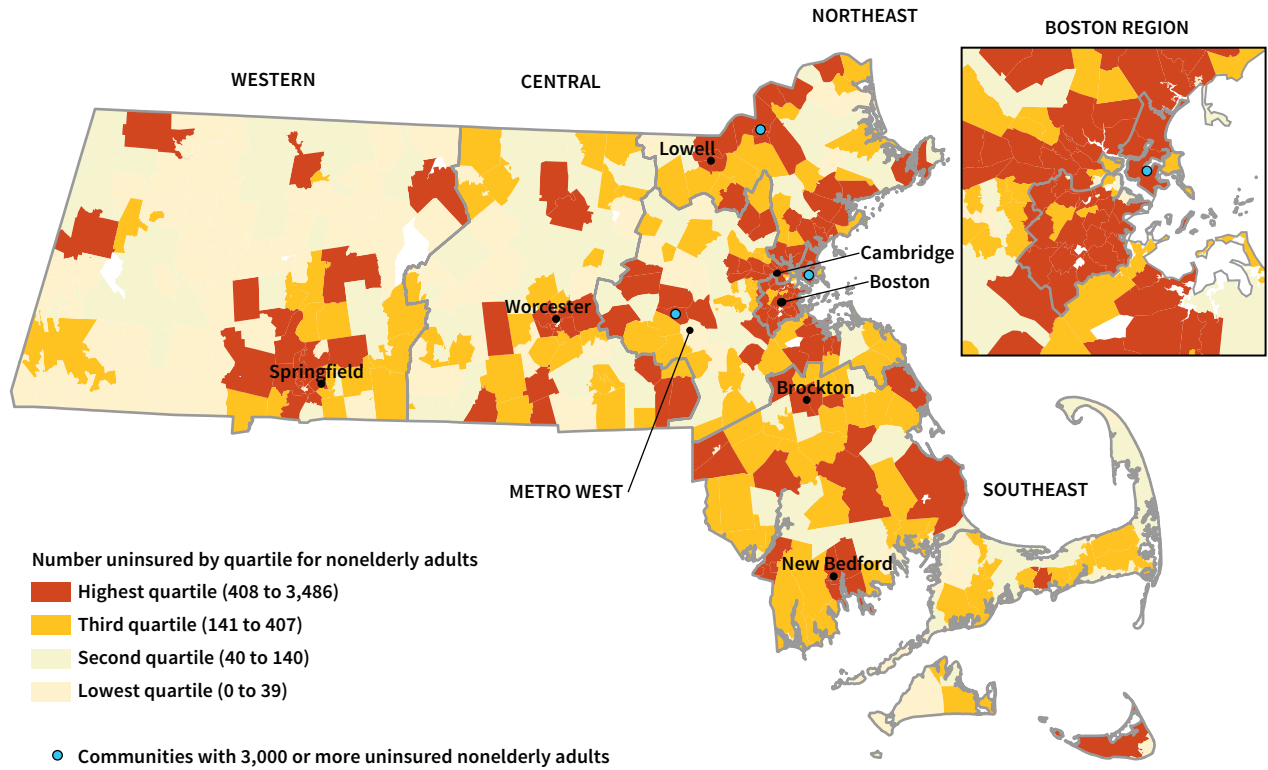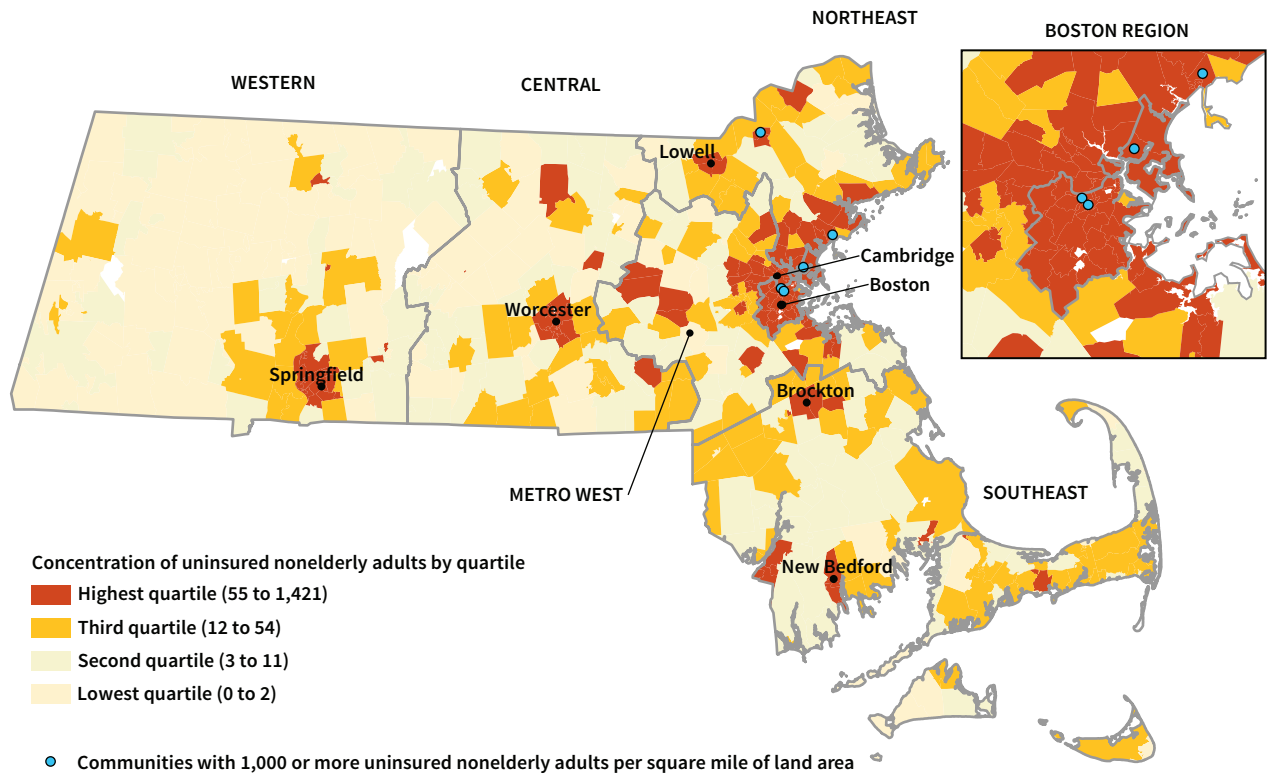
**APPENDIX MAP B5.** NUMBER OF UNINSURED ADULTS AGES 19 TO 64 IN MASSACHUSETTS COMMUNITIES, 2013–2017 AVERAGE



Number uninsured by quartile for nonelderly adults

- Highest quartile (408 to 3,486)
- Third quartile (141 to 407)
- Second quartile (40 to 140)
- Lowest quartile (0 to 39)

- Communities with 3,000 or more uninsured nonelderly adults

Source: 2013–2017 American Community Survey 5-Year Estimates.

Notes: Notes: Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). They are shown within the six Massachusetts Executive Office of Health and Human Services regions (Boston, MetroWest, Northeast, Southeast, Central, and Western). Estimates are for the civilian noninstitutionalized population. White areas in the map are bodies of water, largely unpopulated areas of land, or the communities excluded from the analysis. More information about communities with the highest number of uninsured nonelderly adults can be found in supplemental table F3.

**CONCENTRATION OF UNINSURED ADULTS AGES 19 TO 64 PER SQUARE MILE IN MASSACHUSETTS COMMUNITIES, 2013–2017 AVERAGE**



**Concentration of uninsured nonelderly adults by quartile**

- Highest quartile (55 to 1,421)
- Third quartile (12 to 54)
- Second quartile (3 to 11)
- Lowest quartile (0 to 2)

○ **Communities with 1,000 or more uninsured nonelderly adults per square mile of land area**

Source: 2013–2017 American Community Survey 5-Year Estimates.

Notes: Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). They are shown within the six Massachusetts Executive Office of Health and Human Services regions (Boston, MetroWest, Northeast, Southeast, Central, and Western). Estimates are for the civilian noninstitutionalized population. White areas in the map are bodies of water, largely unpopulated areas of land, or the communities excluded from the analysis.

## APPENDIX C. SUPPLEMENTAL TABLES DESCRIBING HOT-SPOT COMMUNITIES AND NOT-HOT-SPOT COMMUNITIES IN MASSACHUSETTS, 2013–2017 AVERAGES

**APPENDIX TABLE C1.** CHARACTERISTICS OF HOT-SPOT COMMUNITIES AND NOT-HOT-SPOT COMMUNITIES IN MASSACHUSETTS, 2013–2017 AVERAGE

|  | HOT-SPOT COMMUNITIES | NOT-HOT-SPOT COMMUNITIES | DIFFERENCE |
|---|---|---|---|
| Number of communities | 137 | 389 | -252 |
| Percent of communities in each region |  |  |  |
| Boston | 12.4% | 3.9% | 8.5 |
| MetroWest | 8.8% | 21.3% | -12.5 |
| Northeast | 11.0% | 12.6% | -1.6 |
| Southeast | 27.0% | 21.3% | 5.7 |
| Central | 18.3% | 17.2% | 1.1 |
| Western | 22.6% | 23.7% | -1.1 |
| Percent of communities that are persistent hot-spot communities | 51.8% | n/a | n/a |
| Percent of communities in urbanized areas* | 78.8% | 82.0% | -3.2 |
| Distribution of communities by population density** |  |  |  |
| Less than 500 residents per square mile | 31.4% | 38.8% | -7.4 |
| 500 to less than 1,000 | 13.1% | 24.2% | -11.0 |
| 1,000 to less than 5,000 | 21.9% | 27.0% | -5.1 |
| 5,000 to less than 10,000 | 18.2% | 4.9% | 13.4 |
| 10,000 or more | 15.3% | 5.1% | 10.2 |
| Number of residents in communities (mean) | 15,609 | 11,754 | 3,855 |
| Number of households in communities (mean) | 5,977 | 4,542 | 1,435 |
| Measures of uninsurance in communities (mean) |  |  |  |
| Uninsurance rate | 5.3% | 1.7% | 3.6 |
| Number of uninsured residents | 786 | 238 | 549 |
| Concentration of uninsured residents per square mile | 255 | 48 | 207 |

Source: 2013–2017 and 2008–2012 American Community Survey 5-Year Estimates.

Notes: *Hot-spot communities* are those in the highest quartile of all Massachusetts communities based on the uninsurance rate. *Persistent hot-spot communities* are those that were hot-spot communities in both 2008–2012 and 2013–2017. Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). Uninsurance estimates are for residents of all ages in the civilian noninstitutionalized population.

*Urbanized areas are defined as a densely developed territory with 50,000 people or more. Communities are counted as being in an urbanized area if any portion of the community's population lives in an urbanized area.

**Population density is based on number of residents per square mile of land area, excluding bodies of water.

**APPENDIX TABLE C2.** CHARACTERISTICS OF RESIDENTS IN HOT-SPOT COMMUNITIES AND NOT-HOT-SPOT COMMUNITIES IN MASSACHUSETTS, 2013–2017 AVERAGE

| | HOT-SPOT COMMUNITIES | NOT-HOT-SPOT COMMUNITIES | DIFFERENCE |
|---|---|---|---|
| Age distribution (years) | | | |
| 0–18 | 20.2% | 21.3% | -1.1 |
| 19–64 | 62.5% | 60.1% | 2.4 |
| 65 and older | 17.3% | 18.6% | -1.3 |
| Male | 48.9% | 48.6% | 0.3 |
| Race/ethnicity | | | |
| White alone, not Hispanic | 71.4% | 86.2% | -14.8 |
| Other race or two or more races, not Hispanic | 15.1% | 9.2% | 5.9 |
| Hispanic | 13.5% | 4.6% | 8.9 |
| Nativity and citizenship | | | |
| Born in U.S. | 83.9% | 90.7% | -6.8 |
| Naturalized citizen | 8.0% | 5.4% | 2.6 |
| Noncitizen | 8.1% | 3.9% | 4.1 |
| Speaks English less than very well (5 years and older)* | 10.5% | 3.5% | 7.0 |
| Married (15 years and older)* | 42.6% | 52.8% | -10.2 |
| Educational attainment (26 years and older) | | | |
| Less than high school graduate | 12.9% | 5.9% | 7.0 |
| High school diploma (includes equivalency) | 29.1% | 22.5% | 6.6 |
| Some college or associate's degree | 24.9% | 24.2% | 0.7 |
| Bachelor's degree or higher | 33.1% | 47.3% | -14.2 |
| Disabled (all ages) | 13.8% | 11.6% | 2.2 |
| Work experience over the past 12 months (19–64 years) | | | |
| Worked full-time for the full year** | 49.6% | 54.6% | -5.0 |
| Worked part-time or part-year | 30.1% | 29.5% | 0.7 |
| Did not work | 20.3% | 16.0% | 4.3 |
| Ratio of annual family income to federal poverty threshold*** | | | |
| Less than 138% | 21.4% | 11.6% | 9.8 |
| Less than 100% | 15.2% | 8.0% | 7.1 |
| 138% to less than 200% | 9.9% | 6.5% | 3.4 |
| 200% to less than 400% | 28.7% | 24.0% | 4.6 |
| At or above 400% | 40.0% | 57.8% | -17.9 |
| Median earnings (workers 16 years and older) | $37,474 | $50,510 | -$13,036 |
| Sample size | 137 | 389 | |

Source: 2013–2017 American Community Survey 5-Year Estimates.

Notes: *Hot-spot communities* are those in the highest quartile of all Massachusetts communities based on the uninsurance rate. Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). Estimates are for residents of all ages in the civilian noninstitutionalized population, unless otherwise noted.

 * Estimate is based on the total population rather than the civilian noninstitutionalized population.

 ** Full-time is defined as usually working 35 or more hours per week. Full-year is defined as working 50–52 weeks in the past year. Family is defined as all related persons in the household.

*** Within the civilian noninstitutionalized population, poverty status is not defined for people in living situations without conventional housing (and who are not in shelters), for people living in college dormitories, or for children under age 15 who are not living with a relative (e.g., children in foster care).

**APPENDIX TABLE C3.** CHARACTERISTICS OF HOUSEHOLDS IN HOT-SPOT COMMUNITIES AND NOT-HOT-SPOT COMMUNITIES IN MASSACHUSETTS, 2013–2017 AVERAGE

| | HOT-SPOT COMMUNITIES | NOT-HOT-SPOT COMMUNITIES | DIFFERENCE |
|---|---|---|---|
| Composition of household | | | |
| With any person under age 18 | 26.8% | 29.0% | -2.2 |
| With any person age 60 or older | 41.2% | 44.1% | -2.9 |
| Household structure* | | | |
| Married-couple family household | 41.1% | 54.3% | -13.2 |
| Other family household | 19.2% | 12.7% | 6.5 |
| Nonfamily household | 39.7% | 33.0% | 6.7 |
| Household size | 2.4 | 2.5 | -0.1 |
| Household has moved in past 12 months | 12.7% | 11.0% | 1.8 |
| Household members have one or more computing devices (includes smartphones) | 86.2% | 90.7% | -4.5 |
| Household members have internet access | 79.0% | 85.5% | -6.5 |
| Household members received income support in past 12 months | | | |
| Received Supplemental Security Income (SSI) | 7.9% | 4.8% | 3.1 |
| Received cash assistance | 3.6% | 1.9% | 1.6 |
| Received Supplemental Nutrition Assistance Program (SNAP) benefits | 15.7% | 7.5% | 8.2 |
| Housing unit is a single-unit structure | 57.0% | 74.5% | -17.5 |
| Housing unit is owner-occupied | 58.5% | 74.9% | -16.3 |
| Household likely faces burden of high housing costs** | | | |
| Owner-occupied housing units | | | |
| Household has zero or negative income | 0.8% | 0.6% | 0.2 |
| Household pays 30% or more for housing | 31.5% | 26.8% | 4.7 |
| Renter-occupied housing units | | | |
| Household has zero or negative income | 1.8% | 1.4% | 0.4 |
| Household pays 30% or more for housing | 46.6% | 41.2% | 5.4 |
| Sample size | 137 | 389 | |

Source: 2013–2017 American Community Survey 5-Year Estimates.

Notes: *Hot-spot communities* are those in the highest quartile of all Massachusetts communities based on the uninsurance rate. Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). Estimates are for households, which are defined as all persons living in a housing unit.

\*Household structure is based on the relationship of household members to the householder, who is the person (or one of the persons) in whose name the housing unit is owned or rented or, if there is no such person, an adult who is not a roomer, boarder, or paid employee. Family households are those maintained by a householder who is living with one or more individuals related by birth, adoption or marriage, although they may also live with unrelated individuals. Married-couple family households are those in which the householder is living with a spouse. Other family households are those in which the householder is not living with a spouse but is living with at least one other related individual. Nonfamily households are householders who live alone or share their residence with unrelated individuals.

\*\*Includes households with zero or negative income and households that pay 30% or more of income for housing. Renter-occupied households that have "no cash rent" are assumed to pay less than 30% of income for housing.

# APPENDIX D. SUPPLEMENTAL TABLES AND MAPS OF THE LOCATION OF PRIORITY HOT-SPOT COMMUNITIES AND REMAINING HOT-SPOT COMMUNITIES IN MASSACHUSETTS, BY REGION, 2013–2017 AVERAGES
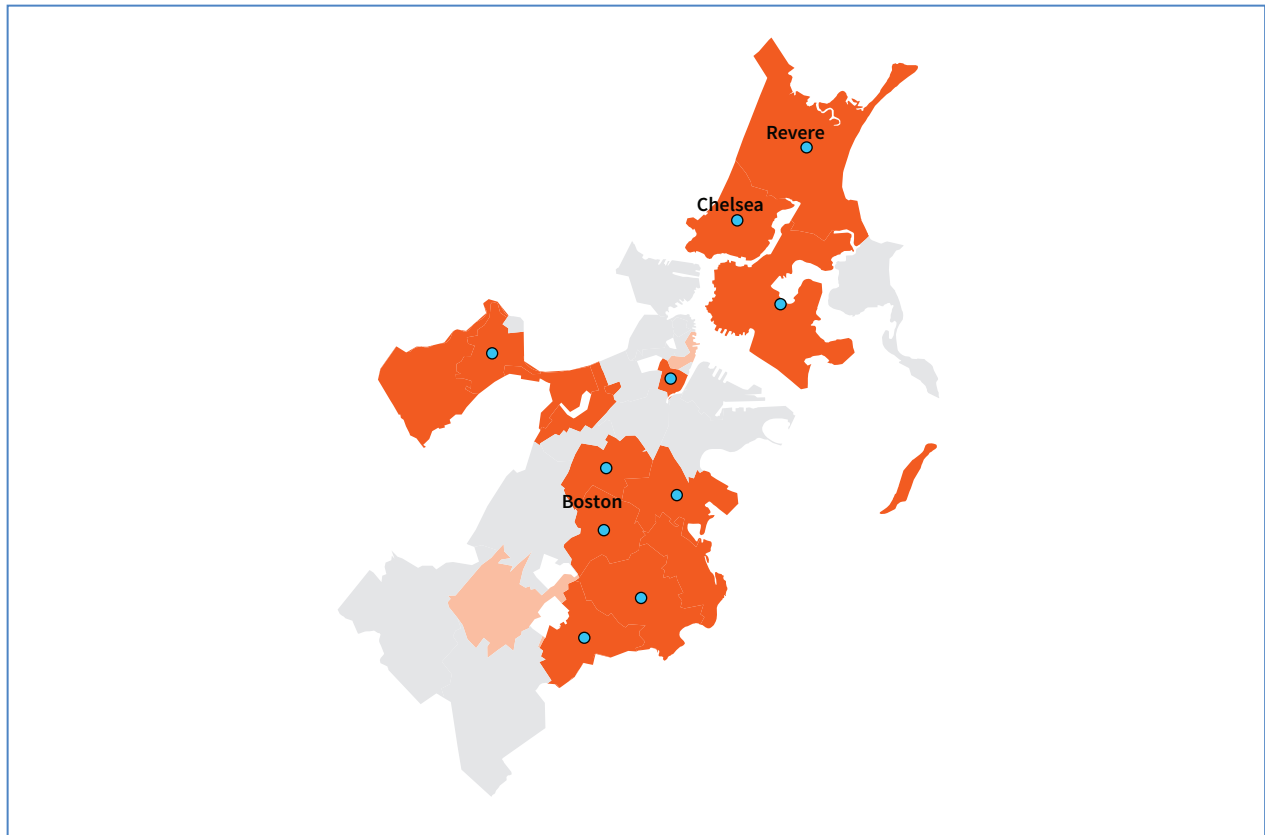
**APPENDIX TABLE D1.** LOCATION OF MASSACHUSETTS PRIORITY HOT-SPOT COMMUNITIES, BY REGION, 2013–2017

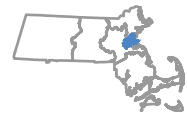| BOSTON | | METROWEST | | NORTHEAST | | SOUTHEAST | | CENTRAL | | WESTERN | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ZCTA | City/Town | ZCTA | City/Town | ZCTA | City/Town | ZCTA | City/Town | ZCTA | City/Town | ZCTA | City/Town |
| 02111 | Boston | 01702 | Framingham | 01840 | Lawrence | 02724 | Fall River | 01074 | Barre | 01105 | Springfield |
| 02115 | Boston | 02145 | Somerville | 01841 | Lawrence | 02744 | New Bedford | 01610 | Worcester | 01107 | Springfield |
| 02119 | Boston | | | 01850 | Lowell | 02746 | New Bedford | | | | |
| 02121 | Boston | | | 01851 | Lowell | | | | | | |
| 02122 | Boston | | | 01902 | Lynn | | | | | | |
| 02124 | Boston | | | 02148 | Malden | | | | | | |
| 02125 | Boston | | | 02149 | Everett | | | | | | |
| 02126 | Boston | | | | | | | | | | |
| 02128 | Boston | | | | | | | | | | |
| 02134 | Boston | | | | | | | | | | |
| 02135 | Boston | | | | | | | | | | |
| 02150 | Chelsea | | | | | | | | | | |
| 02151 | Revere | | | | | | | | | | |
| 02199 | Boston | | | | | | | | | | |
| 02215 | Boston | | | | | | | | | | |

Sources: 2013–2017 American Community Survey 5-Year Estimates.

Note: *Hot-spot communities* are those in the highest quartile of all Massachusetts communities based on the uninsurance rate. *Priority hot-spot communities* are the 31 hot-spot communities with the highest concentration of uninsured residents per square mile that capture 25 percent of the state's total uninsured population. Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). Estimates are for residents of all ages in the civilian noninstitutionalized population. Communities that cross city/town boundaries are assigned to the city/town where a majority of their population resides.

**APPENDIX MAP D1.** PRIORITY HOT-SPOT COMMUNITIES: HOT-SPOT COMMUNITIES WITH A HIGH CONCENTRATION OF UNINSURED RESIDENTS IN MASSACHUSETTS, BOSTON REGION, 2013–2017
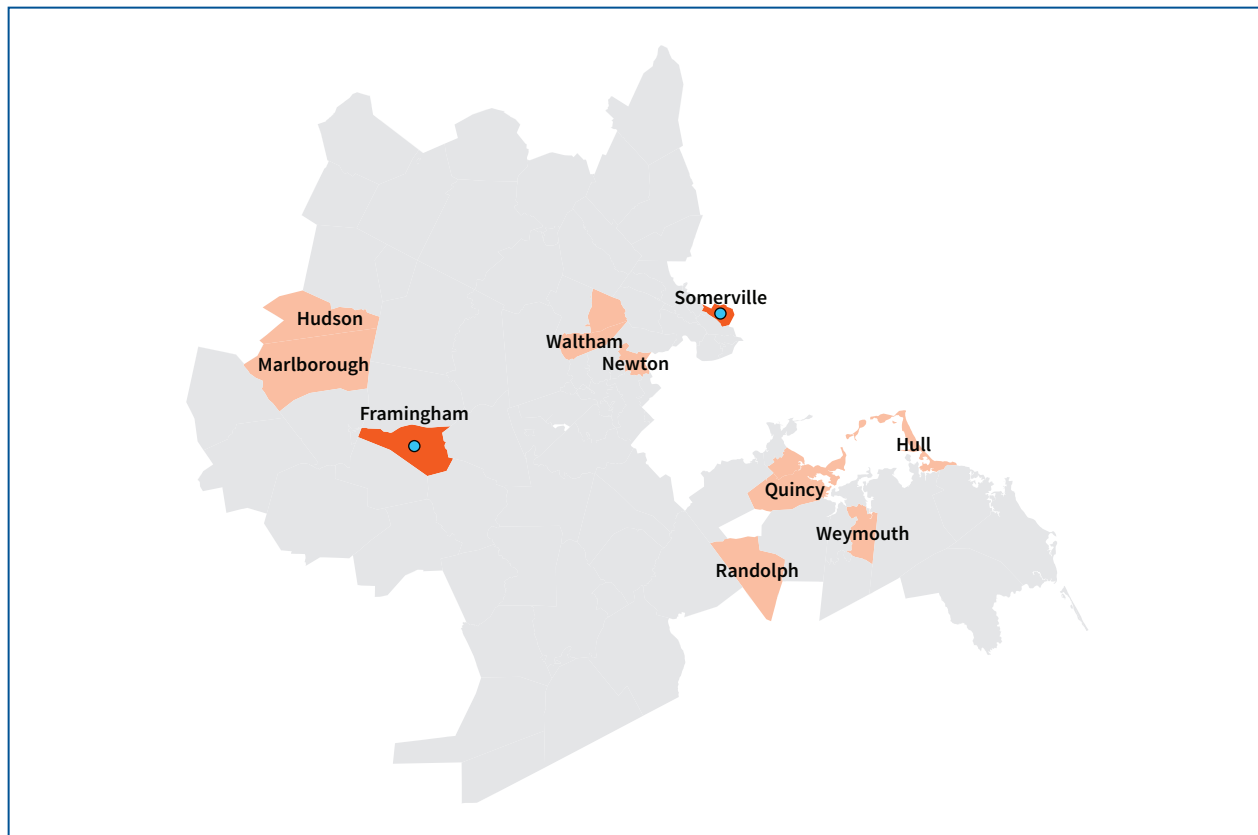


- ■ Priority hot-spot communities
- ■ Remaining hot-spot communities
- ■ Not-hot-spot communities
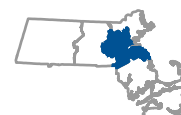- ● Priority communities that are persistent hot-spot communities

Source: 2013–2017 and 2008–2012 American Community Survey 5-Year Estimates.

Notes: *Hot-spot communities* are those in the highest quartile of all Massachusetts communities based on the uninsurance rate. *Priority hot-spot communities* are the 31 hot-spot communities with the highest concentration of uninsured residents per square mile that capture 25 percent of the state's total uninsured population. *Persistent hot-spot communities* are those that were hot-spot communities in both 2008–2012 and 2013–2017. Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). Regions are based on the definition used by the Massachusetts Executive Office of Health and Human Services. Estimates are for residents of all ages in the civilian noninstitutionalized population. White areas in the map are bodies of water, largely unpopulated areas of land, or the communities excluded from the analysis. City or town names are shown for the hot-spot communities based on the city or town where the majority of the community's population resides.

Priority hot-spot communities

Remaining hot-spot communities

Not-hot-spot communities

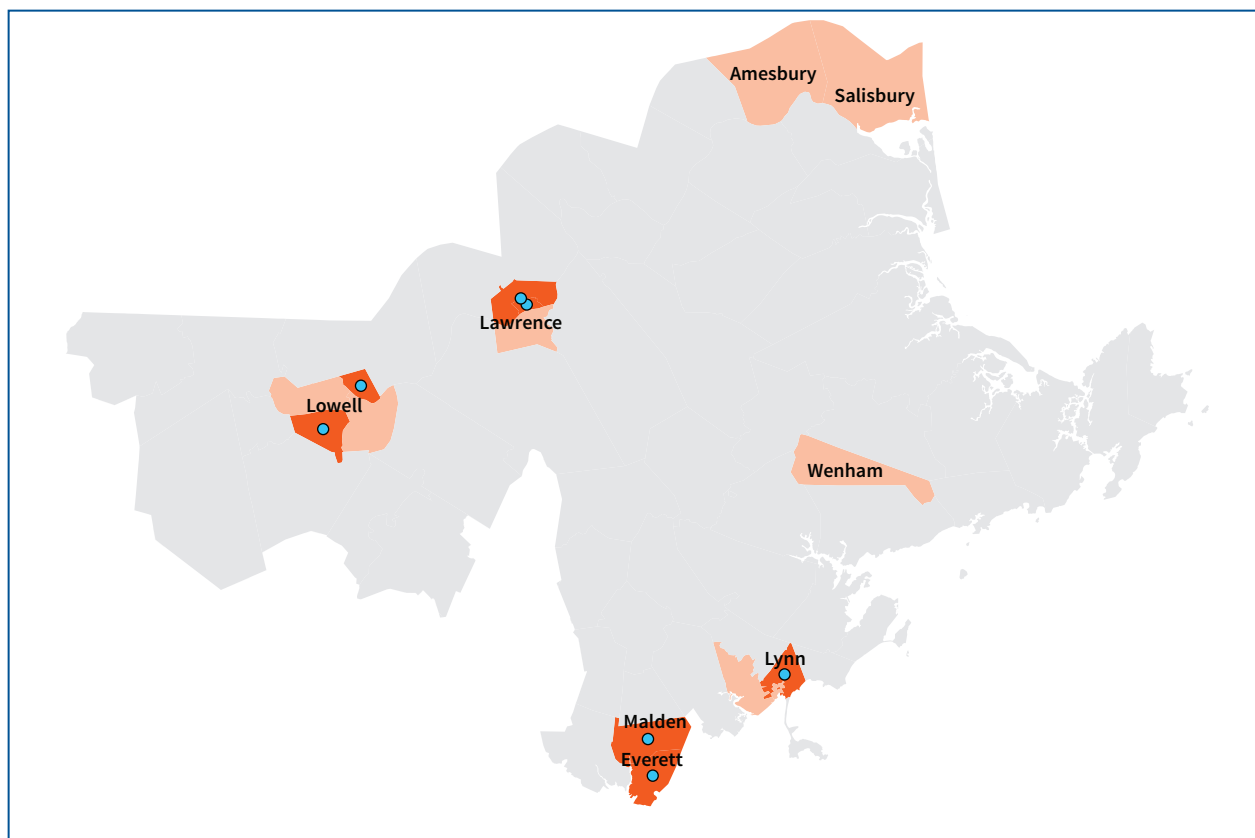● Priority communities that are persistent hot-spot communities

Source: 2013–2017 and 2008–2012 American Community Survey 5-Year Estimates.
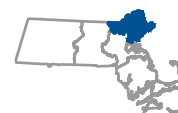
Notes: *Hot-spot communities* are those in the highest quartile of all Massachusetts communities based on the uninsurance rate. *Priority hot-spot communities* are the 31 hot-spot communities with the highest concentration of uninsured residents per square mile that capture 25 percent of the state's total uninsured population. *Persistent hot-spot communities* are those that were hot-spot communities in both 2008–2012 and 2013–2017. Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). Regions are based on the definition used by the Massachusetts Executive Office of Health and Human Services. Estimates are for residents of all ages in the civilian noninstitutionalized population. White areas in the map are bodies of water, largely unpopulated areas of land, or the communities excluded from the analysis. City or town names are shown for the hot-spot communities based on the city or town where the majority of the community's population resides.
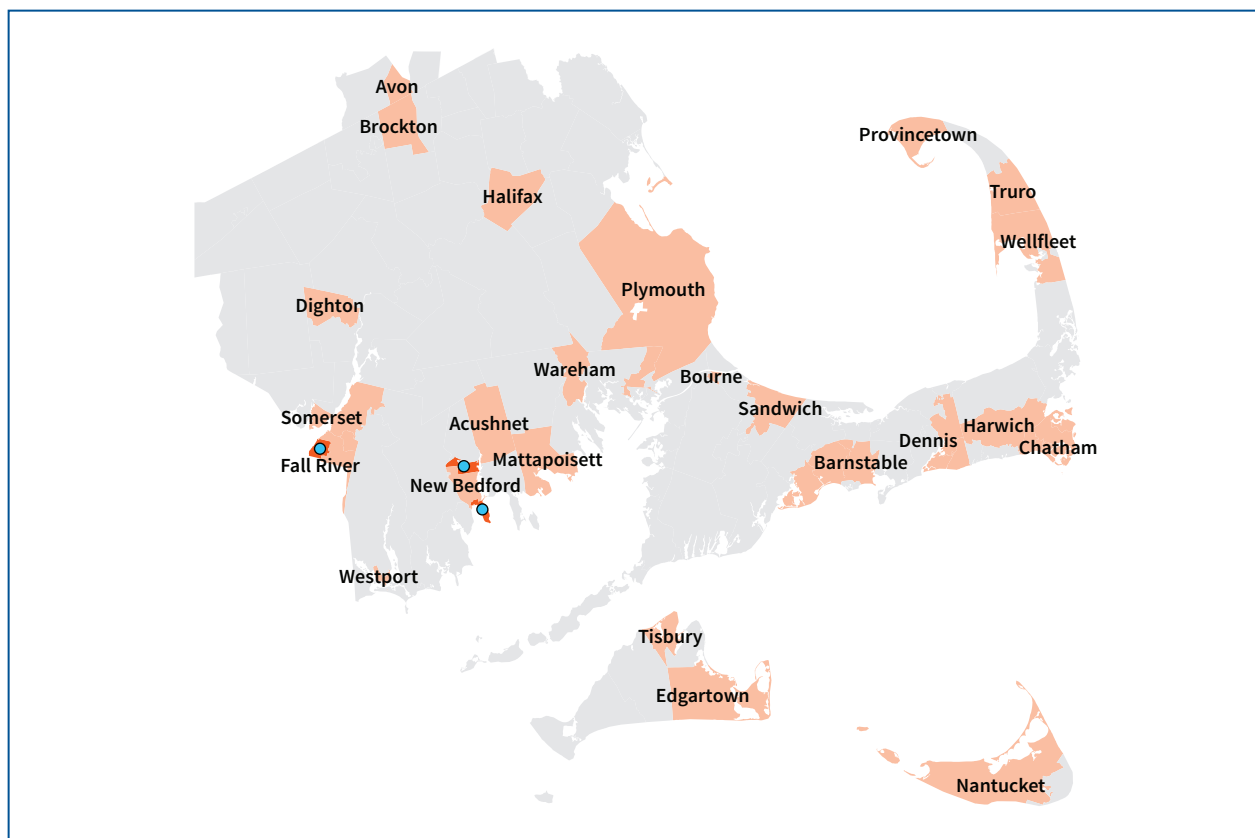
Legend:
- Priority hot-spot communities
- Remaining hot-spot communities
- Not-hot-spot communities
- Priority communities that are persistent hot-spot communities

Source: 2013–2017 and 2008–2012 American Community Survey 5-Year Estimates.

Notes: *Hot-spot communities* are those in the highest quartile of all Massachusetts communities based on the uninsurance rate. *Priority hot-spot communities* are the 31 hot-spot communities with the highest concentration of uninsured residents per square mile that capture 25 percent of the state's total uninsured population. *Persistent hot-spot communities* are those that were hot-spot communities in both 2008–2012 and 2013–2017. Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). Regions are based on the definition used by the Massachusetts Executive Office of Health and Human Services. Estimates are for residents of all ages in the civilian noninstitutionalized population. White areas in the map are bodies of water, largely unpopulated areas of land, or the communities excluded from the analysis. City or town names are shown for the hot-spot communities based on the city or town where the majority of the community's population resides.
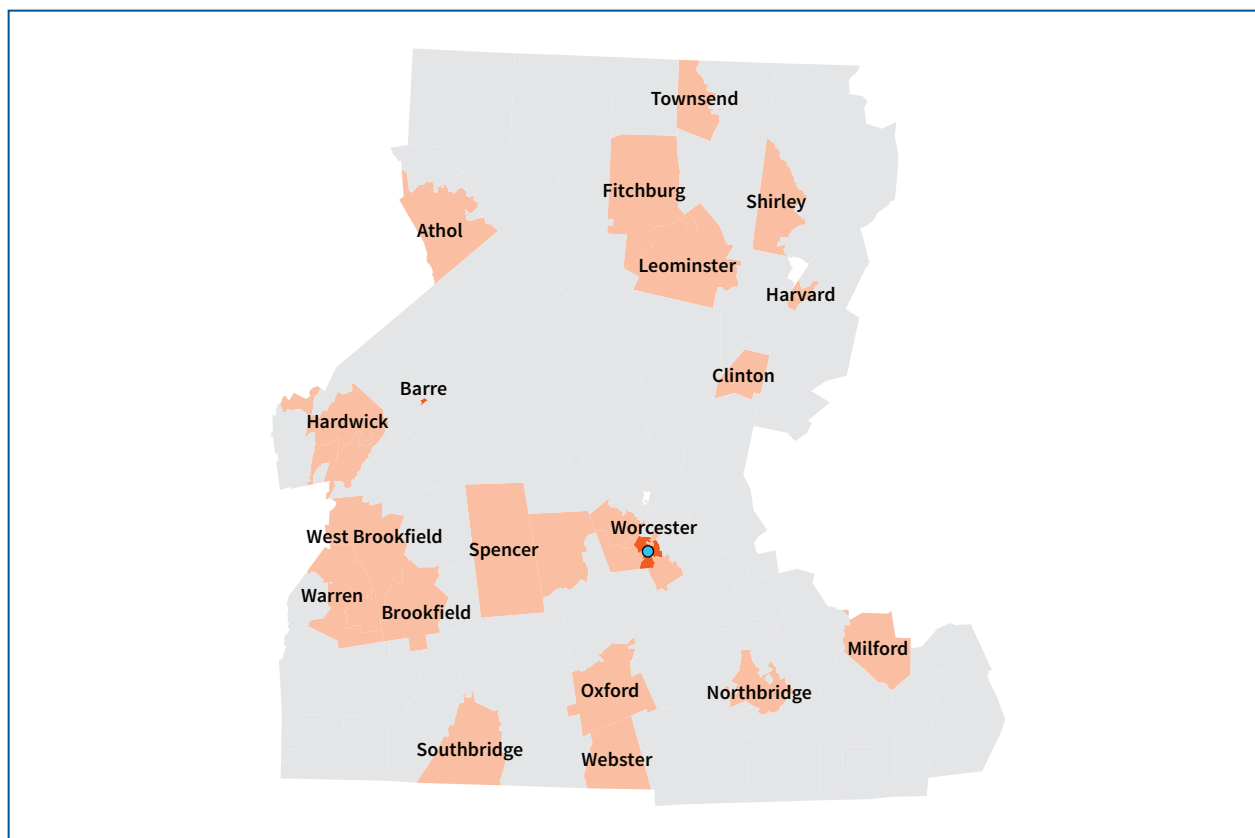
■ Priority hot-spot communities
■ Remaining hot-spot communities
■ Not-hot-spot communities
● Priority communities that are persistent hot-spot communities

Source: 2013–2017 and 2008–2012 American Community Survey 5-Year Estimates.

Notes: *Hot-spot communities* are those in the highest quartile of all Massachusetts communities based on the uninsurance rate. *Priority hot-spot communities* are the 31 hot-spot communities with the highest concentration of uninsured residents per square mile that capture 25 percent of the state's total uninsured population. *Persistent hot-spot communities* are those that were hot-spot communities in both 2008–2012 and 2013–2017. Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). Regions are based on the definition used by the Massachusetts Executive Office of Health and Human Services. Estimates are for residents of all ages in the civilian noninstitutionalized population. White areas in the map are bodies of water, largely unpopulated areas of land, or the communities excluded from the analysis. City or town names are shown for the hot-spot communities based on the city or town where the majority of the community's population resides.

**PRIORITY HOT-SPOT COMMUNITIES: HOT-SPOT COMMUNITIES WITH A HIGH CONCENTRATION OF UNINSURED RESIDENTS IN MASSACHUSETTS, CENTRAL REGION, 2013–2017**



- Priority hot-spot communities
- Remaining hot-spot communities
- Not-hot-spot communities
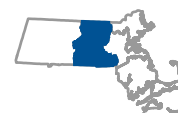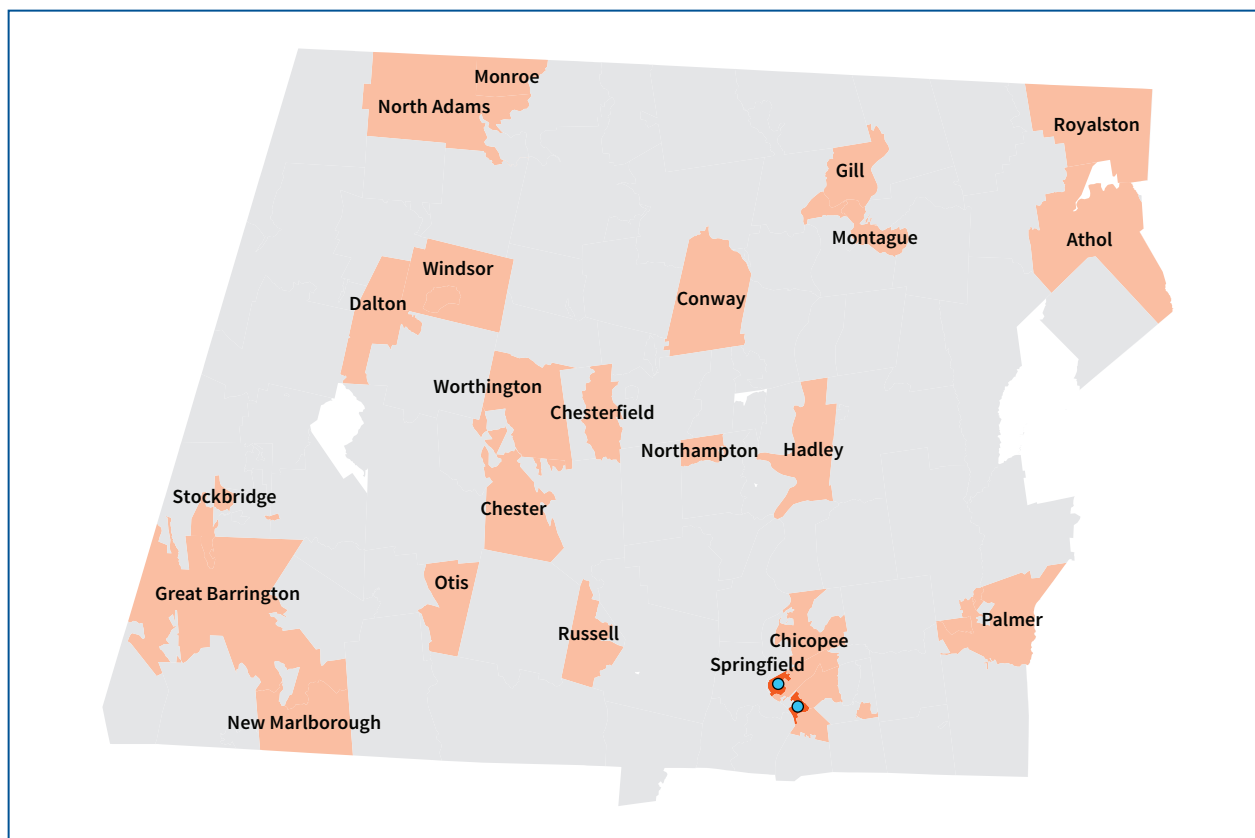- Priority communities that are persistent hot-spot communities

Source: 2013–2017 and 2008–2012 American Community Survey 5-Year Estimates.

Notes: *Hot-spot communities* are those in the highest quartile of all Massachusetts communities based on the uninsurance rate. *Priority hot-spot communities* are the 31 hot-spot communities with the highest concentration of uninsured residents per square mile that capture 25 percent of the state's total uninsured population. *Persistent hot-spot communities* are those that were hot-spot communities in both 2008–2012 and 2013–2017. Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). Regions are based on the definition used by the Massachusetts Executive Office of Health and Human Services. Estimates are for residents of all ages in the civilian noninstitutionalized population. White areas in the map are bodies of water, largely unpopulated areas of land, or the communities excluded from the analysis. City or town names are shown for the hot-spot communities based on the city or town where the majority of the community's population resides.

■ Priority hot-spot communities
■ Remaining hot-spot communities
■ Not-hot-spot communities
● Priority communities that are persistent hot-spot communities

Source: 2013–2017 and 2008–2012 American Community Survey 5-Year Estimates.

Notes: *Hot-spot communities* are those in the highest quartile of all Massachusetts communities based on the uninsurance rate. *Priority hot-spot communities* are the 31 hot-spot communities with the highest concentration of uninsured residents per square mile that capture 25 percent of the state's total uninsured population. *Persistent hot-spot communities* are those that were hot-spot communities in both 2008–2012 and 2013–2017. Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). Regions are based on the definition used by the Massachusetts Executive Office of Health and Human Services. Estimates are for residents of all ages in the civilian noninstitutionalized population. White areas in the map are bodies of water, largely unpopulated areas of land, or the communities excluded from the analysis. City or town names are shown for the hot-spot communities based on the city or town where the majority of the community's population resides.

# APPENDIX E. SUPPLEMENTAL TABLES DESCRIBING PRIORITY HOT-SPOT COMMUNITIES AND REMAINING HOT-SPOT COMMUNITIES IN MASSACHUSETTS, 2013–2017 AVERAGES

**APPENDIX TABLE E1.** CHARACTERISTICS OF PRIORITY HOT-SPOT COMMUNITIES AND REMAINING HOT-SPOT COMMUNITIES IN MASSACHUSETTS, 2013–2017 AVERAGE

|  | PRIORITY HOT-SPOT COMMUNITIES | REMAINING HOT-SPOT COMMUNITIES | DIFFERENCE |
|---|---|---|---|
| Number of communities | 31 | 106 | -75 |
| Percent of communities in each region |  |  |  |
| Boston | 48.4% | 1.9% | 46.5 |
| MetroWest | 6.5% | 9.4% | -2.9 |
| Northeast | 22.6% | 7.6% | 15.0 |
| Southeast | 9.7% | 32.1% | -22.4 |
| Central | 6.5% | 21.7% | -15.2 |
| Western | 6.5% | 27.4% | -20.9 |
| Percent of communities that are persistent hot-spot communities | 83.9% | 42.5% | 41.4 |
| Percent of communities in urbanized areas* | 96.8% | 73.6% | 23.2 |
| Distribution of communities by population density** |  |  |  |
| Less than 500 residents per square mile | 0.0% | 40.6% | -40.6 |
| 500 to less than 1,000 | 0.0% | 17.0% | -17.0 |
| 1,000 to less than 5,000 | 6.5% | 26.4% | -20.0 |
| 5,000 to less than 10,000 | 29.0% | 15.1% | 13.9 |
| 10,000 or more | 64.5% | 0.9% | 63.6 |
| Number of residents in communities (mean) | 28,088 | 11,959 | 16,129 |
| Number of households in communities (mean) | 10,256 | 4,726 | 5,530 |
| Measures of uninsurance in communities (mean) |  |  |  |
| Uninsurance rate | 5.8% | 5.2% | 0.7 |
| Number of uninsured residents | 1,639 | 537 | 1,102 |
| Concentration of uninsured residents per square mile | 799 | 96 | 704 |

Source: 2013–2017 and 2008–2012 American Community Survey 5-Year Estimates.

Notes: *Hot-spot communities* are those in the highest quartile of all Massachusetts communities based on the uninsurance rate. *Priority hot-spot communities* are the 31 hot-spot communities with the highest concentration of uninsured residents per square mile that capture 25 percent of the state's total uninsured population. *Persistent hot-spot communities* are those that were hot-spot communities in both 2008–2012 and 2013–2017. Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). Uninsurance estimates are for residents of all ages in the civilian noninstitutionalized population.

 *Urbanized areas are defined as a densely developed territory with 50,000 people or more. Communities are counted as being in an urbanized area if any portion of the community's population lives in an urbanized area.

**Population density is based on number of residents per square mile of land area, excluding bodies of water.

**APPENDIX TABLE E2.** CHARACTERISTICS OF RESIDENTS IN PRIORITY HOT-SPOT COMMUNITIES AND REMAINING HOT-SPOT COMMUNITIES IN MASSACHUSETTS, 2013–2017 AVERAGE

| | PRIORITY HOT-SPOT COMMUNITIES | REMAINING HOT-SPOT COMMUNITIES | DIFFERENCE |
|---|---|---|---|
| Age distribution (years) | | | |
| 0–18 | 22.4% | 19.6% | 2.7 |
| 19–64 | 67.3% | 61.1% | 6.2 |
| 65 and older | 10.4% | 19.3% | -9.0 |
| Male | 48.5% | 49.1% | -0.6 |
| Race/ethnicity | | | |
| White alone, not Hispanic | 40.7% | 80.4% | -39.7 |
| Other race or two or more races, not Hispanic | 29.3% | 10.9% | 18.4 |
| Hispanic | 30.0% | 8.7% | 21.3 |
| Nativity and citizenship | | | |
| Born in U.S. | 68.0% | 88.6% | -20.6 |
| Naturalized citizen | 14.1% | 6.2% | 7.8 |
| Noncitizen | 17.9% | 5.2% | 12.8 |
| Speaks English less than very well (5 years and older)* | 23.8% | 6.6% | 17.2 |
| Married (15 years and older)* | 32.1% | 45.7% | -13.7 |
| Educational attainment (26 years and older) | | | |
| Less than high school graduate | 22.6% | 10.1% | 12.5 |
| High school diploma (includes equivalency) | 28.7% | 29.2% | -0.5 |
| Some college or associate's degree | 19.6% | 26.5% | -7.0 |
| Bachelor's degree or higher | 29.2% | 34.2% | -5.0 |
| Disabled (all ages) | 13.7% | 13.8% | -0.1 |
| Work experience over the past 12 months (19–64 years) | | | |
| Worked full-time for the full year** | 45.1% | 50.9% | -5.8 |
| Worked part-time or part-year | 31.3% | 29.8% | 1.5 |
| Did not work | 23.6% | 19.3% | 4.3 |
| Ratio of annual family income to federal poverty threshold*** | | | |
| Less than 138% | 33.3% | 18.0% | 15.4 |
| Less than 100% | 24.5% | 12.4% | 12.1 |
| 138% to less than 200% | 11.5% | 9.5% | 2.0 |
| 200% to less than 400% | 28.7% | 28.6% | 0.1 |
| At or above 400% | 26.4% | 43.9% | -17.5 |
| Median earnings (workers 16 years and older) | $32,626 | $38,892 | -$6,266 |
| Sample size | 31 | 106 | |

Source: 2013–2017 American Community Survey 5-Year Estimates

Notes: *Hot-spot communities* are those in the highest quartile of all Massachusetts communities based on the uninsurance rate. *Priority hot-spot communities* are the 31 hot-spot communities with the highest concentration of uninsured residents per square mile that capture 25 percent of the state's total uninsured population. Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). Estimates are for residents of all ages in the civilian noninstitutionalized population, unless otherwise noted.

  * Estimate is based on the total population rather than the civilian noninstitutionalized population.

 ** Full-time is defined as usually working 35 or more hours per week. Full-year is defined as working 50–52 weeks in the past year. Family is defined as all related persons in the household.

*** Within the civilian noninstitutionalized population, poverty status is not defined for people in living situations without conventional housing (and who are not in shelters), for people living in college dormitories, or for children under age 15 who are not living with a relative (e.g., children in foster care).

**APPENDIX TABLE E3.** CHARACTERISTICS OF HOUSEHOLDS IN PRIORITY HOT-SPOT COMMUNITIES AND REMAINING HOT-SPOT COMMUNITIES IN MASSACHUSETTS, 2013–2017 AVERAGE

| | PRIORITY HOT-SPOT COMMUNITIES | REMAINING HOT-SPOT COMMUNITIES | DIFFERENCE |
|---|---|---|---|
| Composition of household | | | |
|   With any person under age 18 | 30.8% | 25.6% | 5.1 |
|   With any person age 60 or older | 29.2% | 44.7% | -15.4 |
| Household structure* | | | |
|   Married-couple family household | 29.2% | 44.6% | -15.5 |
|   Other family household | 27.5% | 16.8% | 10.7 |
|   Nonfamily household | 43.4% | 38.6% | 4.8 |
| Household size | 2.6 | 2.4 | 0.2 |
| Household has moved in past 12 months | 18.3% | 11.1% | 7.2 |
| Household members have one or more computing devices (includes smartphones) | 83.4% | 87.0% | -3.6 |
| Household members have internet access | 75.2% | 80.1% | -4.9 |
| Household members received income support in past 12 months | | | |
|   Received Supplemental Security Income (SSI) | 11.6% | 6.8% | 4.8 |
|   Received cash assistance | 5.8% | 2.9% | 2.9 |
|   Received Supplemental Nutrition Assistance Program (SNAP) benefits | 26.9% | 12.5% | 14.4 |
| Housing unit is a single-unit structure | 19.8% | 67.9% | -48.1 |
| Housing unit is owner-occupied | 27.1% | 67.8% | -40.7 |
| Household likely faces burden of high housing costs** | | | |
|   Owner-occupied housing units | | | |
|     Household has zero or negative income | 0.9% | 0.7% | 0.2 |
|     Household pays 30% or more for housing | 36.0% | 30.2% | 5.8 |
|   Renter-occupied housing units | | | |
|     Household has zero or negative income | 3.9% | 1.2% | 2.6 |
|     Household pays 30% or more for housing | 52.0% | 45.0% | 7.0 |
| Sample size | 31 | 106 | |

Source: 2013–2017 American Community Survey 5-Year Estimates.

Notes: *Hot-spot communities* are those in the highest quartile of all Massachusetts communities based on the uninsurance rate. *Priority hot-spot communities* are the 31 hot-spot communities with the highest concentration of uninsured residents per square mile that capture 25 percent of the state's total uninsured population. Communities are based on 526 of Massachusetts' 538 zip code tabulation areas, or ZCTAs (see Appendix A for a description of excluded ZCTAs). Estimates are for households, which are defined as all persons living in a housing unit.

*Household structure is based on the relationship of household members to the householder, who is the person (or one of the persons) in whose name the housing unit is owned or rented or, if there is no such person, an adult who is not a roomer, boarder, or paid employee. Family households are those maintained by a householder who is living with one or more individuals related by birth, adoption or marriage, although they may also live with unrelated individuals. Married-couple family households are those in which the householder is living with a spouse. Other family households are those in which the householder is not living with a spouse but is living with at least one other related individual. Nonfamily households are householders who live alone or share their residence with unrelated individuals.

**Includes households with zero or negative income and households that pay 30% or more of income for housing. Renter-occupied households that have "no cash rent" are assumed to pay less than 30% of income for housing.

# ENDNOTES

1   Long, Sharon K., Laura Skopec, Audrey Shelto, Katharine Nordahl, and Kaitlyn Kenney Walsh. 2016. "Massachusetts Health Reform at Ten Years: Great Progress, but Coverage Gaps Remain." *Health Affairs* 35(9): 1633–1637.

2   Berchick, Edward R., Emily Hood, and Jessica C. Barnett. 2018. *Health Insurance Coverage in the United States: 2017*. Washington, DC: U.S. Census Bureau.

3   *Ibid.* The next lowest jurisdictions were the District of Columbia and Hawaii, both at 3.8 percent.

4   Skopec, Laura, and Lea Bart. 2017. *The Geography of Uninsurance in Massachusetts, 2011–2015*. Boston, MA: Blue Cross Blue Shield of Massachusetts Foundation.

5   Housing units include houses, apartments, mobile homes, groups of rooms, or single rooms occupied or intended for occupancy as separate living quarters. They include both owner-occupied and renter-occupied units. The ACS also collects data from individuals living in group quarters, such as college dormitories, nursing homes, and temporary shelters. For more information on housing units and group quarters, see "American Community Survey and Puerto Rico Community Survey 2017 Subject Definitions," U.S. Census Bureau.

6   See appendix A for more information about the ACS, including information on the geographic units available in the ACS.

7   Twelve ZCTAs are excluded from our analysis because they have no population, a majority of their population lives in a neighboring state (Rhode Island), or the poverty status of a large share of their residents cannot be determined (e.g., because many residents live in college dormitories or institutional settings). ZCTAs with no population or for which poverty status is not determined include those consisting only of nonresidential buildings (e.g., a hospital), post offices, the area around Boston City Hall, a state forest, and local colleges (Babson College, Smith College, and Westfield State University).

8   ZCTAs that cross regions are assigned to the region where a majority of their population resides.

9   Because nearly all adults 65 and older have Medicare, we do not provide separate tables for elderly adults.

10  Skopec, Laura, and Lea Bart. 2017. *The Geography of Uninsurance in Massachusetts, 2011–2015*.

11  Urbanized areas are defined as a densely developed territory with 50,000 people or more. We define communities as being in an urbanized area if any portion of the community's population lives in an urbanized area.

12  See appendix B for supplemental maps showing hot-spot communities based on the uninsurance rates for children and for nonelderly adults.

13  The hot-spot communities differed from not-hot-spot communities on a variety of other dimensions as well, including characteristics of the residents (appendix table C2) and households (appendix table C3) in the communities.

14  Federal poverty thresholds are used for calculating official poverty statistics for the population. In 2017, the poverty threshold for a single nonelderly adult living alone was $12,752. The poverty threshold for a three-person family that includes one related child under 18 was $19,730. See "Poverty Thresholds," U.S. Census Bureau.

15  Braveman, Paula, Mercedes Decker, Susan Egerter, Tabashir Sadegh-Nobari, and Craig Pollack. 2011. *How Does Housing Affect Health?* Princeton, NJ: Robert Wood Johnson Foundation.

16  Long, Sharon K., Dana Goin, and Victoria Lynch. 2013. *Reaching the Remaining Uninsured in Massachusetts: Challenges and Opportunities.* Boston, MA: Blue Cross Blue Shield of Massachusetts Foundation.

17  Massachusetts Law Reform Institute. 2018. *Understanding the Affordable Care Act: Non-citizens' Eligibility for MassHealth & Other Subsidized Health Benefits.* Boston, MA: Massachusetts Law Reform Institute.

18  Qualified noncitizens are lawfully present immigrants who are legal permanent residents, have paroled status, or are victims of domestic violence who have met or are exempt from the five-year waiting period; refugees and asylees; victims of trafficking; members of the military, veterans, and their spouses and children; and certain other immigrant groups. See Massachusetts Law Reform Institute. 2018. *Understanding the Affordable Care Act: Non-citizens' Eligibility for MassHealth & Other Subsidized Health Benefits.*

19  In other priority hot-spot communities, the most common places of birth among foreign-born residents were Cambodia, Cape Verde, Colombia, Ecuador, Germany, Mexico, Turkey, and Vietnam.

20  Massachusetts Health Connector. 2017. *Report to the Massachusetts Legislature: Implementation of Health Care Reform, Fiscal Year 2017.* Boston, MA: Massachusetts Health Connector.

21  Gasteier, Audrey Morse, and Jason Lefferts. 2018. *Outreach Strategy Update.* Boston, MA: Massachusetts Health Connector.

22  Gollust, Sarah, Andrew Wilcock, Erika Franklin Fowler, Colleen L. Barry, et al. 2018. "TV Advertising Volumes Were Associated with Insurance Marketplace Shopping and Enrollment in 2014." *Health Affairs* 37(6):956–963.

23  Moreschi, John. 2018. *The Proposed Public Charge Rule: An Overview and Implications for Massachusetts.* Boston, MA: Blue Cross Blue Shield Foundation of Massachusetts.

24  Bernstein, Hamutal, Dulce Gonzalez, Michael Karpman, and Stephen Zuckerman. 2019. *One in Seven Adults in Immigrant Families Reported Avoiding Public Benefits in 2018.* Washington, DC: Urban Institute.

25  Raymond, Alan G. 2011. *Lessons from the Implementation of Massachusetts Health Reform.* Boston, MA: Blue Cross Blue Shield of Massachusetts Foundation.

26  Gasteier, Audrey Morse, and Jason Lefferts. 2018. *Outreach Strategy Update.*

27  The FY2020 budget includes a provision that allows the Executive Office of Health and Human Services to establish a pilot program such that MassHealth and Medicare Savings Program applicants and recipients could initiate an application for federally-funded supplemental nutrition assistance program benefits at the same time as their MassHealth or Medicare Savings program application or renewal.

28  Wagner, Jennifer, and Alicia Huguelet. 2016. *Opportunities for States to Coordinate Medicaid and SNAP Renewals.* Washington, DC: Center on Budget and Policy Priorities.

29  Chin, Michael, Deborah Gurewich, Kathy Muhr, Heather Posner, Jennifer Rosinski, and Elise LaFlamme. 2016. *The Remaining Uninsured in Massachusetts: Experiences of Individuals Living Without Health Insurance Coverage.* Boston, MA: Blue Cross Blue Shield of Massachusetts Foundation.

30  "Environmental Conditions," Office of Disease Prevention and Health Promotion, US Department of Health and Human Services.

31  Egerter, Susan, Paula Braveman, and Colleen Barclay. 2011. *Stress and Health.* Princeton, NJ: Robert Wood Johnson Foundation.

32  "American Community Survey: Sample Size and Data Quality." U.S. Census Bureau. Accessed May 9, 2019.

33  "American Community Survey: Design and Methodology Report." U.S. Census Bureau. Accessed May 9, 2019.

34  ZCTAs with no population or for which poverty status is not determined include those consisting only of nonresidential buildings (e.g., a hospital), post offices, the area around Boston City Hall, a state forest, and local colleges (Babson College, Smith College, and Westfield State University).