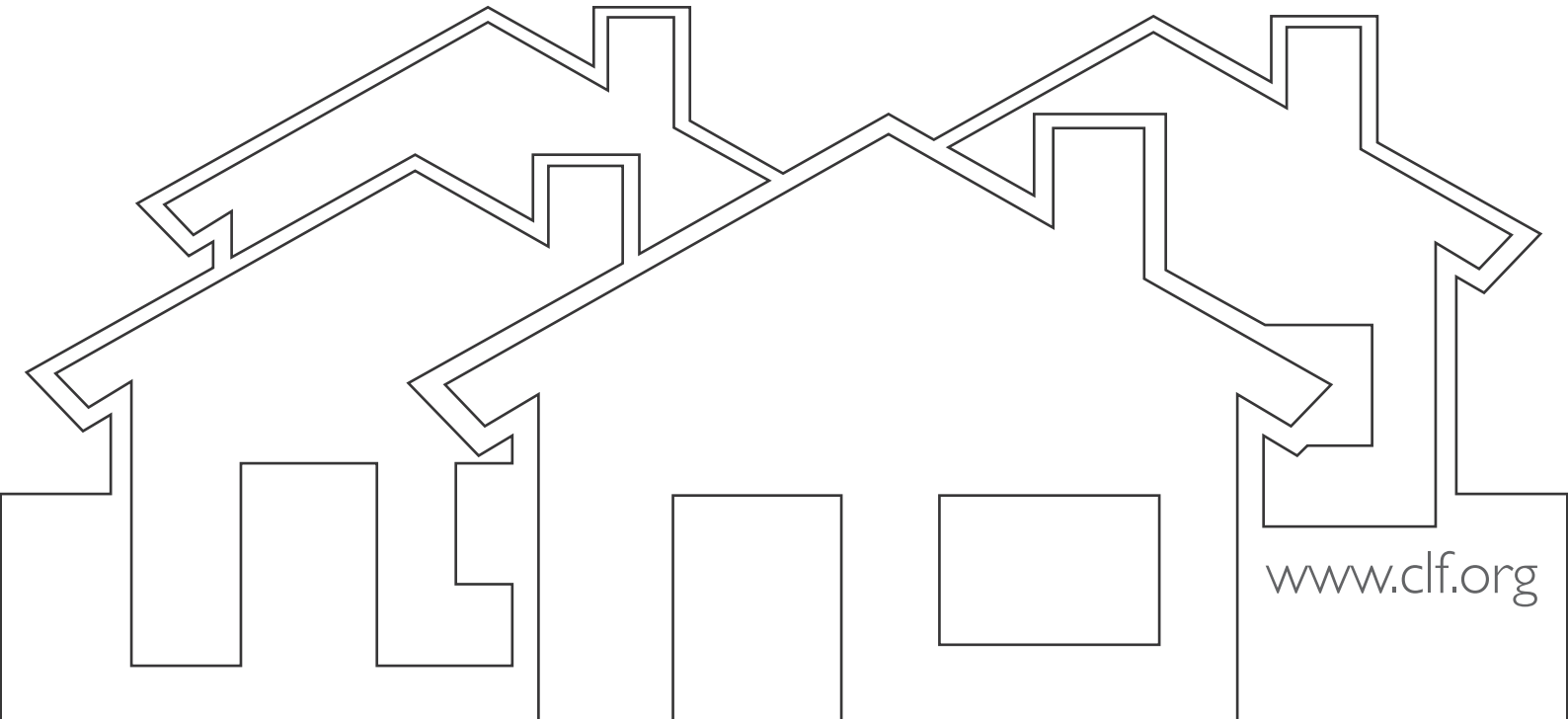
clf

conservation law foundation

HEALTHY NEIGHBORHOOODS RESEARCH STUDY

Indicators Report 2016

A visual report of the relationship between neighborhood development and health in nine Massachusetts communities.



www.clf.org

Table of Contents

THE CONSERVATION LAW FOUNDATION protects New England's environment for the benefit of all people. We use the law, science and the market to create solutions that preserve our natural resources, build healthy communities, and sustain a vibrant economy. CLF has fought for Massachusetts' people and communities for 50 years. We've cleaned up Boston Harbor, shut down dirty coal plants, and forced the Commonwealth to modernize its public transit system. Today we're leading pioneering research with residents and partners around the state. Together, we're developing new knowledge about the connections between neighborhood environments, opportunity, and health, and using what we've learned to "do development differently." We're investing in market solutions and advocating for policies to help build healthy places for all people.

clf
conservation law foundation

Report Authors

Conservation Law Foundation
- Vedette Gavin MPH, MPA – Research Director, Co-Investigator
- Maggie Super-Church MSC, MCP – Co-Investigator
- Bill Coleman, MBA – Co-Investigator
- Shoshanna Levine MPH, CPH – Graduate Research Assistant
- Annika Nielsen BA – Research Assistant

Massachusetts Institute of Technology Department of Urban Studies & Planning
- Mariana Arcaya ScD, MCP – Lead Researcher

Massachusetts Institute of Technology Department of Urban Studies & Planning, Community Innovators Lab
- Andrew Binet MA, MCP – Research Fellow
- Leigh Carroll MCP – Graduate Research Assistant

Data Partners
- Massachusetts Department of Public Health
- Metropolitan Area Planning Council
- Harvard T.H. Chan School of Public Health
- Urban Imprint Inc.

Community Research Partners
- City Life Vida Urbana
- Codman Square Neighborhood Development Corporation
- Dudley Street Neighborhood Initiative
- Everett Community Health Partnership
- GreenRoots
- Lynn United for Change
- Voices for a Healthy Southcoast, Southcoast YMCA
- Redefining Our Community

2016

EXECUTIVE SUMMARY

In 2015, Conservation Law Foundation (CLF) partnered with the Massachusetts Institute of Technology Department of Urban Studies and Planning (MIT DUSP) and the Community Innovators Lab (MIT CoLab) to launch the Healthy Neighborhoods Study (HNS) – a research project to better understand the relationship between urban development, neighborhoods and population health.

GOOD HEALTH begins at home, in neighborhoods - the places people live, work, play, learn and grow. Years of research have proven that neighborhood environments can help or harm residents' health. Some neighborhoods have been well resourced and developed to have features and amenities that are proven to support good health like clean air, water and soil, quality housing, healthy food, and walkable streets.[1] At the same time, other communities have gone decades without significant investments in development, and lack many of those same health-promoting features.

Today, investing in building healthy places is one of the most significant ways to transform neighborhood conditions and improve population health. Specifically, Transit-Oriented Development (TOD) – defined as higher-density development with a mix of uses (i.e. housing, commercial, retail or green space) that is located within walking distance of transit – is one of the most promising development practices to improve neighborhood conditions. CLF invests in building healthy places through the Healthy Neighborhood Equity Fund (HNEF) – a $30 million private real-estate fund that invests in TOD projects that create housing, retail and amenities for people with a mix of incomes in communities across Massachusetts.[2]

While it is well proven that healthy neighborhoods support healthier people, far less is known about how to ensure all people are able to live in them. Over the years, many promising practices were launched and evaluated. Some programs moved families from low-income neighborhoods with poor physical, environmental and social conditions to wealthier neighborhoods with better conditions. These programs have proven that "moving to opportunity" can significantly improve health.[3] Rather than moving people, other initiatives rebuilt neighborhoods while families remained in place. In these instances, redevelopment can change more than the physical environment. Improving conditions can also affect affordability, housing stability, population mobility and culture. Many of these factors can also influence health, making the relationship between development and health complex and challenging to understand.

The Healthy Neighborhoods Study (HNS) aims to better understand the relationship between development (particularly TOD-related developments such as those supported by HNEF), neighborhood conditions, and health. HNS is a partnership between communities and institutions invested in building healthy places. The study tracks measures in health, development, neighborhood conditions and resident experiences in nine Massachusetts communities over 8–10 years to learn how places, people, and health change over time as development unfolds.

The baseline phase of the HNS was completed in 2016. The goal of this phase was to select a cohort of research neighborhoods, measure current conditions, and compare them to ensure that population demographics, neighborhood characteristics, development contexts and health outcomes were as similar to one another as possible at the start of the study. Indicators from large public and private datasets such as the US Census, All Payer Claims Database (Massachusetts Center for Health Information Analysis), and Deed of Sale real estate data (Warren Group) were used to measure neighborhood conditions, current and projected development, population demographics and health outcomes. Resident experiences were measured through a community-engaged research process led by MIT CoLab. A team of 45 residents spanning the nine research communities developed a survey and interviewed 450) residents (50 from each research community) to learn what matters most for health where they live.

This report provides a visual display of the baseline data indicators collected for all nine communities. (Report does not include data from the resident experiences survey.) The maps, charts and graphics make it easy to compact compare conditions from one research community to another, and to the average for the state of Massachusetts.

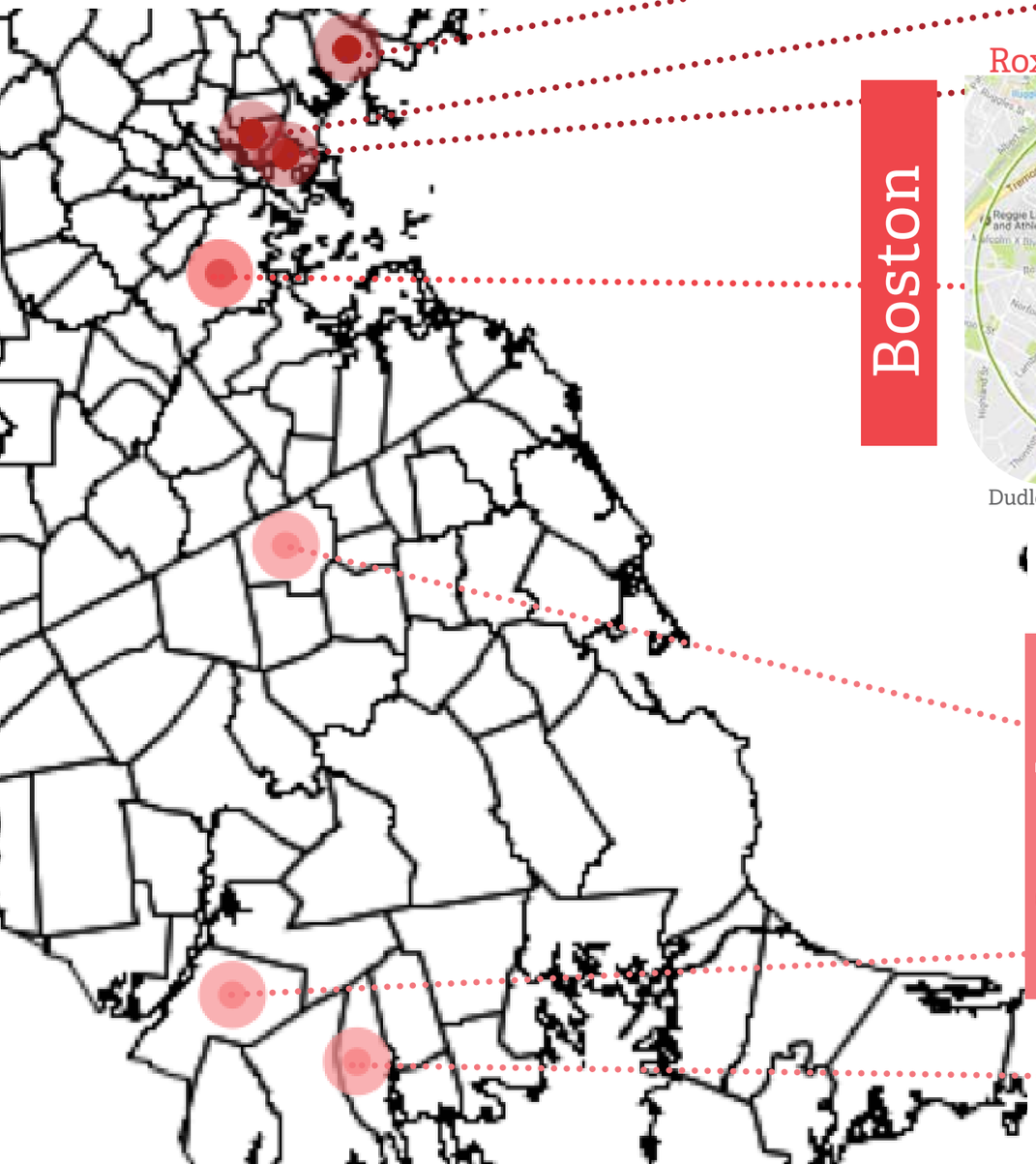
The study was funded by the Robert Wood Johnson Foundation.

Healthy Neighborhood Research Team Members

• Dina Abreau • Tatiana Abreu • Trena Ambroise • Eric Andrade • Mariana Arcaya • Eduardo Barrientos • Arnetta Baty • Carl Baty • Katrina Benner • Clifton Bennett • Amy Bianchette • Andrew Binet • Roseann Bongiovanni • Rob Call • Olivia Cardile • Leigh Caroll • Cristian Corchado • Caleb Dixon • Crystal Dodson • Juan Dominguez • Mytha Durena • Yrma Fiestas • Jose Figueroa • Josee Genty • Nicole Graffam • Adela Gonzalez • Emma Grigsby • Patricia Hayden • Stephanie Hernandez Alvado • Zuleyka Hernandez • Isaac Hodes • Jarred Johnson • Alexandra Kahveci • Kathryn Keefe • Barry Keppard • Krystle Latimer • Shoshanna Levine • Christina Logg • Nelson Martinez • Khadijah Mboup • Doug McPhersen • Steve Meacham • Daynaba Mohammed • Emily Moss • Annika Nielsen • Kathleen O'Brien • Lisa Owens • Jessie Partridge • Lillie Pearl Johnson • Maria Belen Power • Taylee Rebelo • Halley Reeves • Ronel Remy • Gail Roderigues • Qamar Sabtow • Clarisa Sanchez • Alina Schnake Mahl • Andrew Seeder • Ramon Sepulveda • Shannon Simpson • Noemie Sportiche • Sanouri Ursprung • Emma West • Leah Winters • Ben Wood • Tremayne Youmans •

RESEARCH COMMUNITIES

NINE MASSACHUSETTS NEIGHBORHOODS owere selected for the study. These neighborhoods are places where large investments in TOD are likely to occur, and where the need to improve population health and economic growth is greatest. To select neighborhoods, all towns in the state were rated on four key criteria in comparison to the state average: 1. walkability, 2. proximity to a well-used public transportation hub 3. health disparities, and 4. economic growth. Communities rated in the bottom quartile were then rated on population characteristics, neighborhood conditions, current and planned development t, and trends in gentrification. The communities where these conditions were the most similar to one another were selected for the study. The final nine communities were grouped into three geographic regions to account for policies and conditions unique to that region (ie. casinos, zoning designations etc.) One neighborhood and a research site were selected in each community. The research site is a ½ mile around the most used transit hub (train, commuter rail, or bus). One neighborhood in each region is a "high development neighborhood" (indicated by an * below), and is expected to have a higher level of development. The other two serve as graduated controls, and are expected to have low to moderate levels of respectively.



North

Lynn

Central Square Commuter Rail Station

Everett

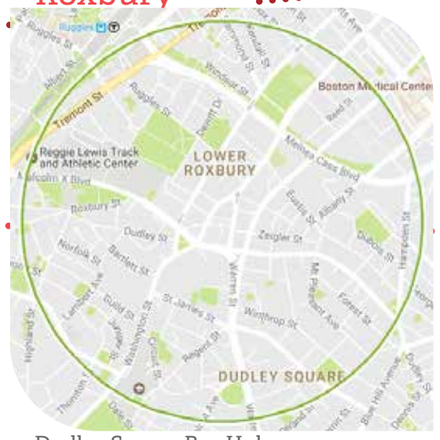
Summer G. Whitter School

Chelsea*

Chelsea Commuter Rail Station

Boston

Roxbury*



Dudley Square Bus Hub

Dorchester

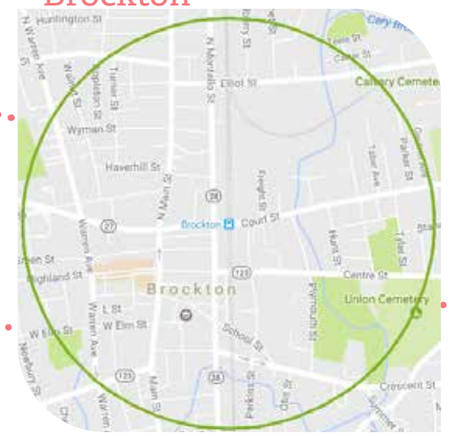
Fields Corner Red Line Station

Mattapan

Morton Street Commuter Rail Station

South

Brockton*



Brockton Commuter Rail Station

Fall River

Pleasant Street & Boutwell Street

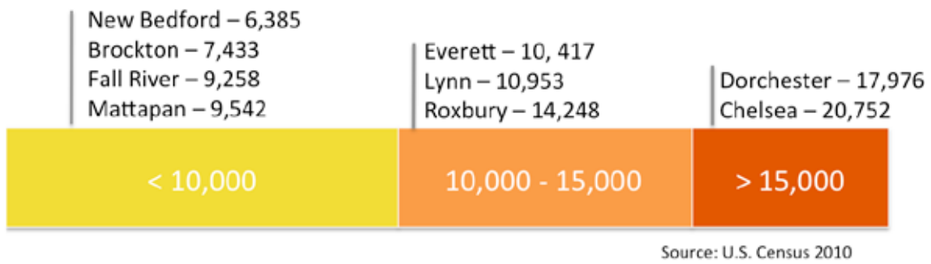
New Bedford

Union Street between Pleasant Street & Purchase Street

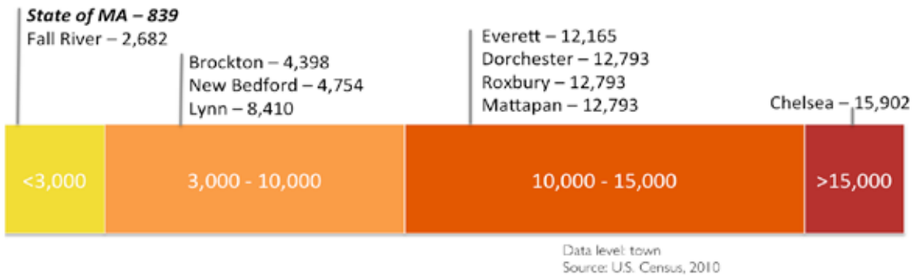
POPULATION

COMPARING the the characteristics and sizes of neighborhood populations can highlight similarities and differences between them. There are several ways to describe a neighborhood's population: size, density, age gender, diversity, and socioeconomic status. All of these provide some insight into who lives there and the condition of their neighborhoods.

Total Population

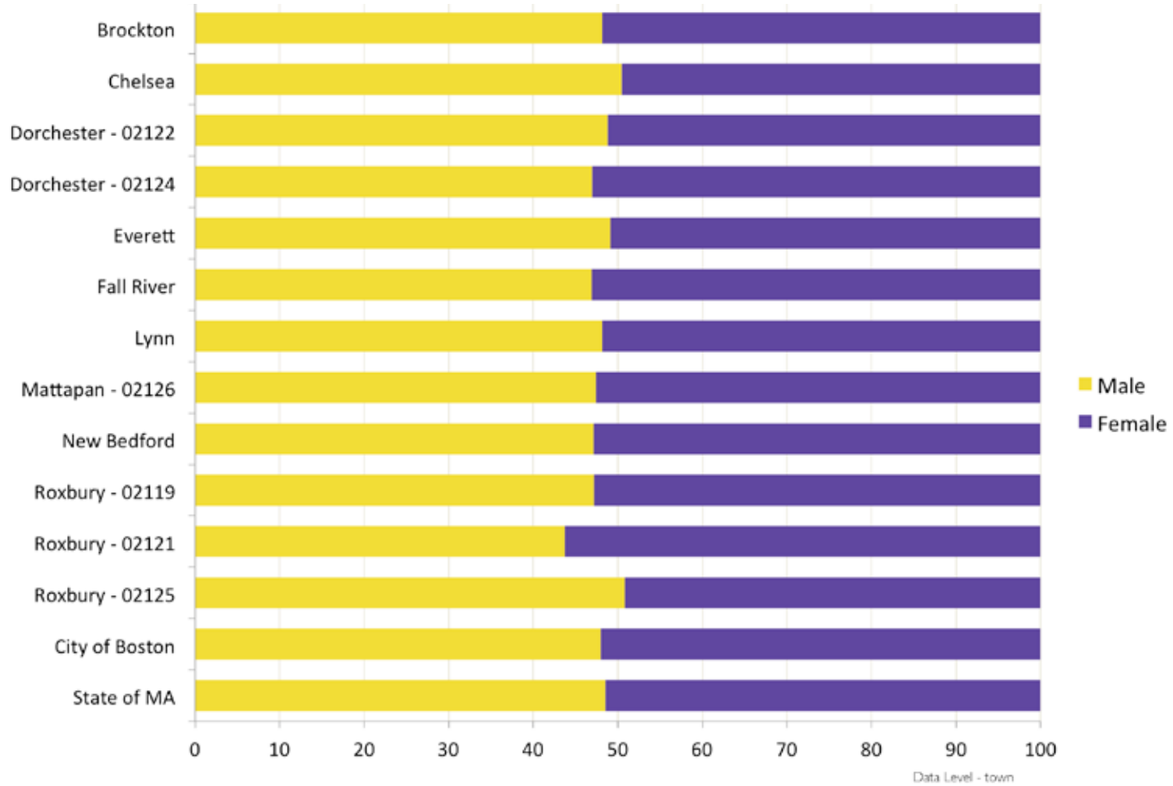


Population Density

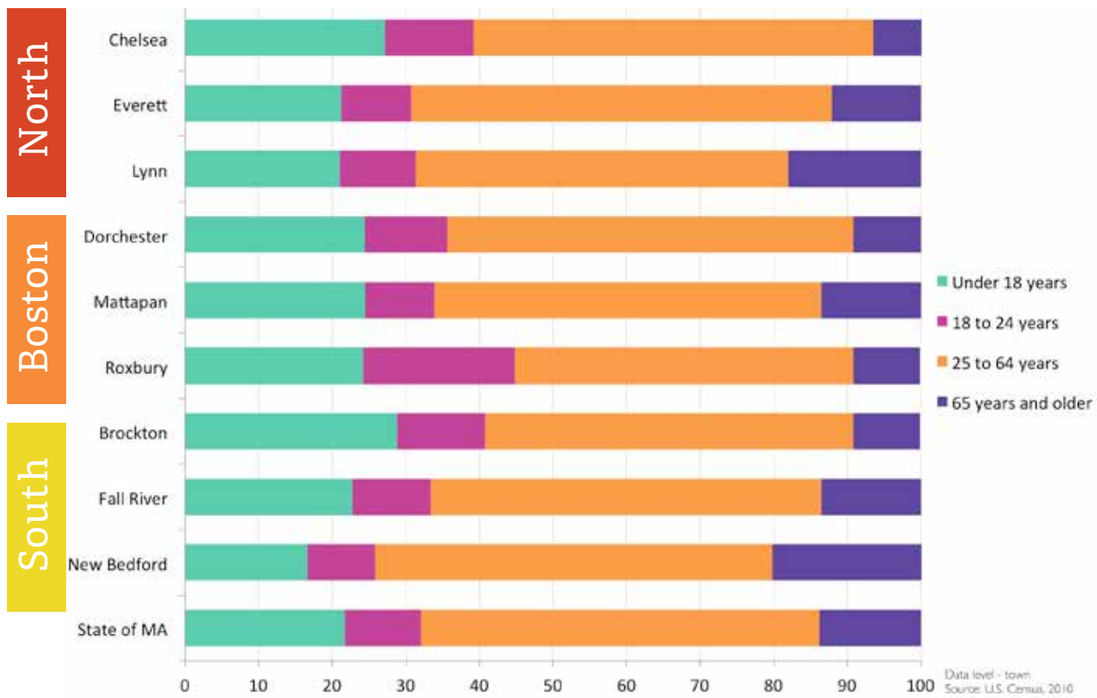


Population density measures the number of people per square mile. Across much of the state, population density is relatively low, with people living in rural areas or small towns. All of the neighborhoods in this study are more densely populated than the state overall. Six the research neighborhoods have population densities more than 10 times the state.

Population by Gender



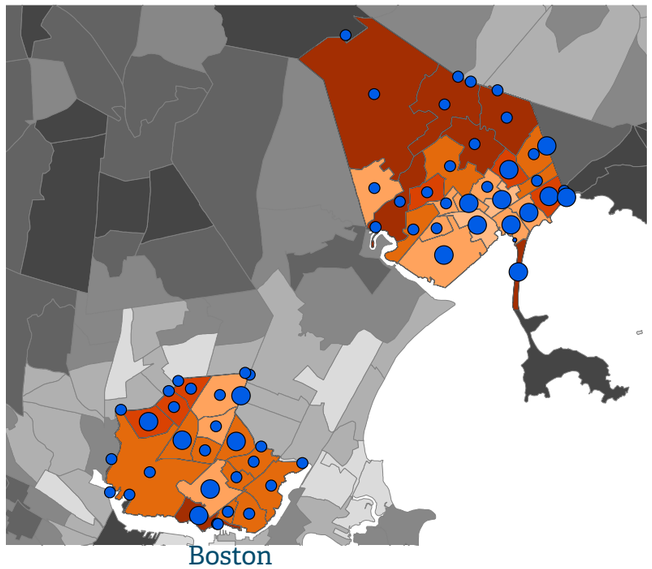
Population by Age



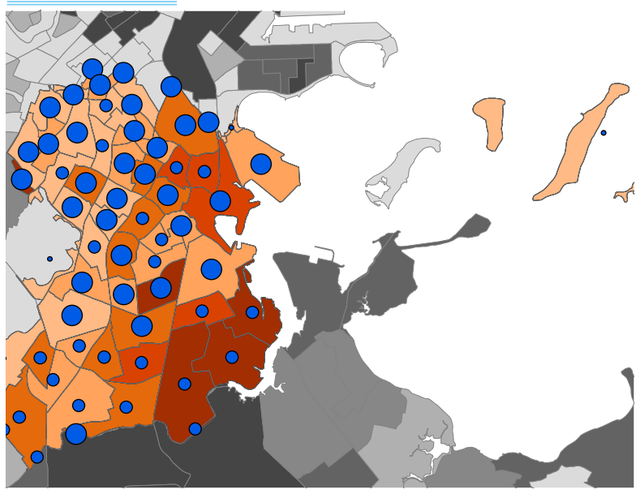
Socioeconomic Status

Median Household Income & Inequality

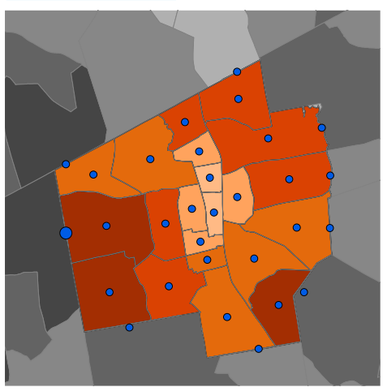
North Cluster



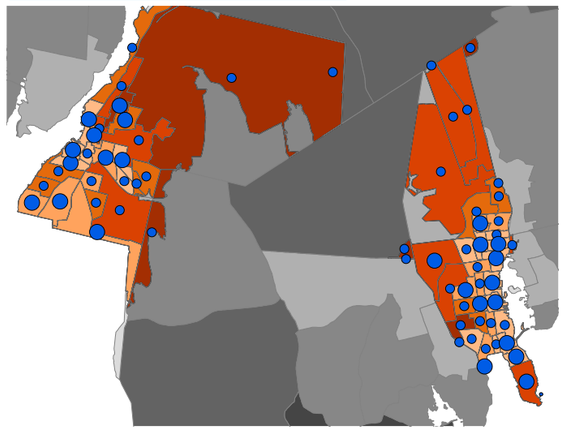
Boston



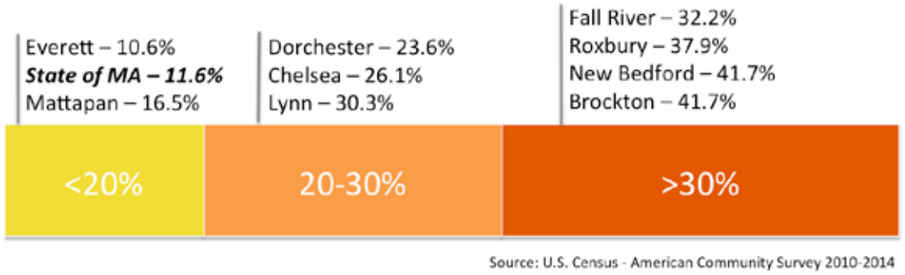
Brockton



Fall River & New Bedford



Poverty Rate

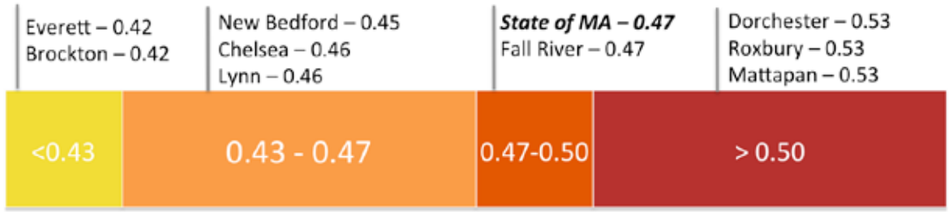


Source: U.S. Census - American Community Survey 2010-2014

People who live in high poverty areas are more likely to have poor health. Likewise, having poor health can make it harder to get out of poverty.[4]

Eight of the nine research neighborhoods have higher poverty rates than the state, with many of them more than 2 or 3 times higher.

Gini Index of Income Inequality
(0=equality; 1=inequality)



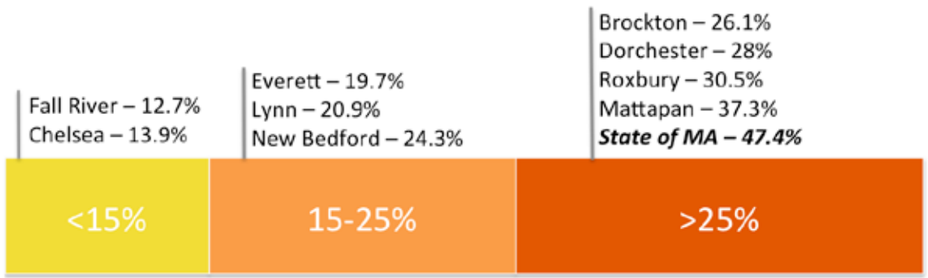
Data level: reserach site
Source: U.S. Census - American Community Survey 2009-2013

While the level of wealth in a community matters for health, how wealth is distributed is important too.

The Gini Index measures inequality. Where income inequality is high (gini=1), wealth is shared between a few people, leaving the majority of people with very little. When income inequality is low (gini=0), wealth is spread more equally among people.

High levels of inequality, can lead to poorer health in a community. Inequality lowers social cohesion and increases feelings of stress, fear, and insecurity. Inequality also leads to lower access to important resources like transportation, social services and education.[5]

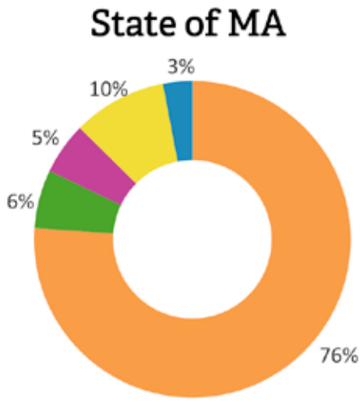
Educational Attainment
Associates Degree or Higher



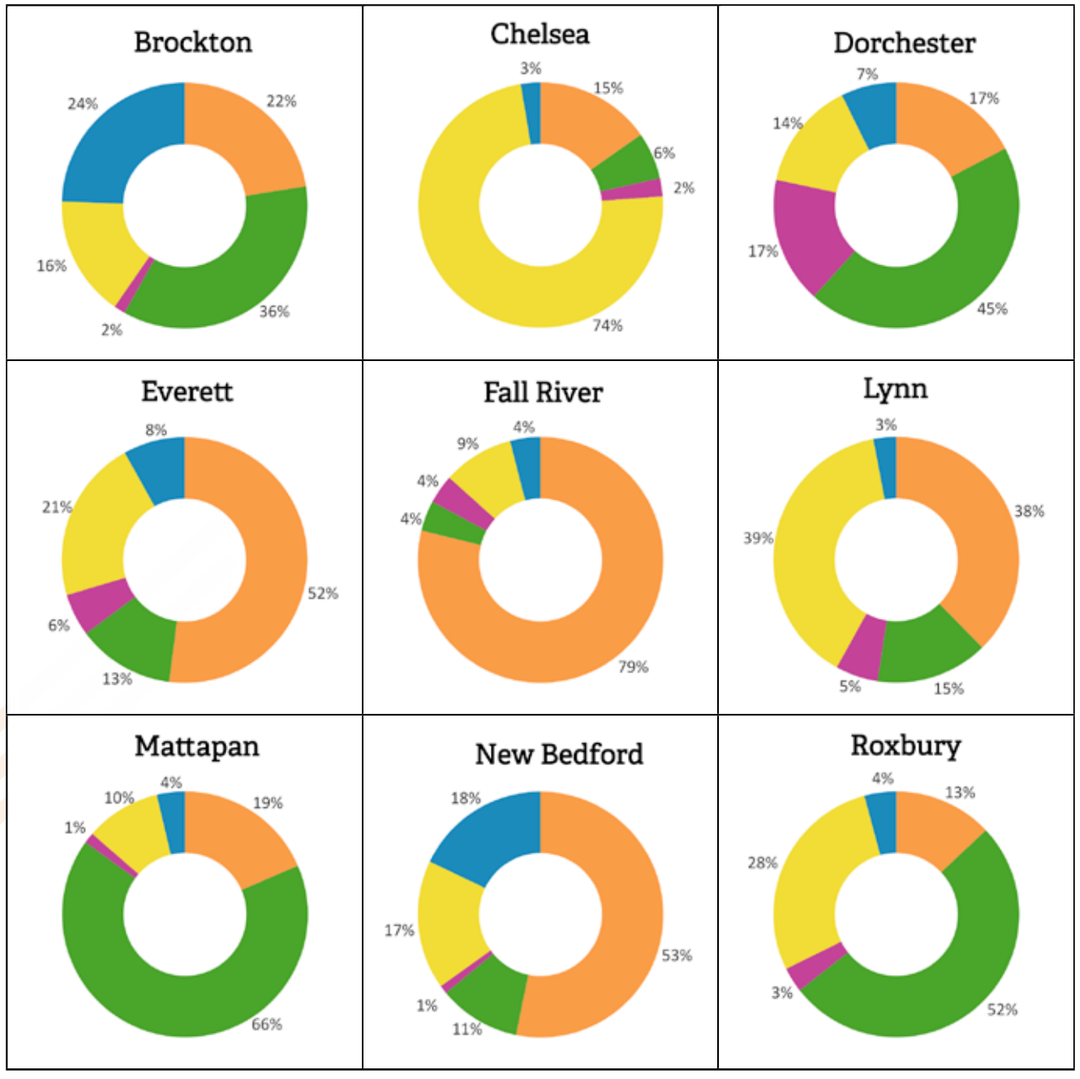
Data level: research site
Source: U.S. Census - American Community Survey 2010-2014

People with more education tend to live longer, healthier lives. More education leads to better jobs, higher earnings and greater access to resources that support good health like healthy food, reliable transportation and more time for physical activity. People with more education also pass down these health benefits to their children.[6] **All nine research neighborhoods have less college education than the state of Massachusetts on average.**

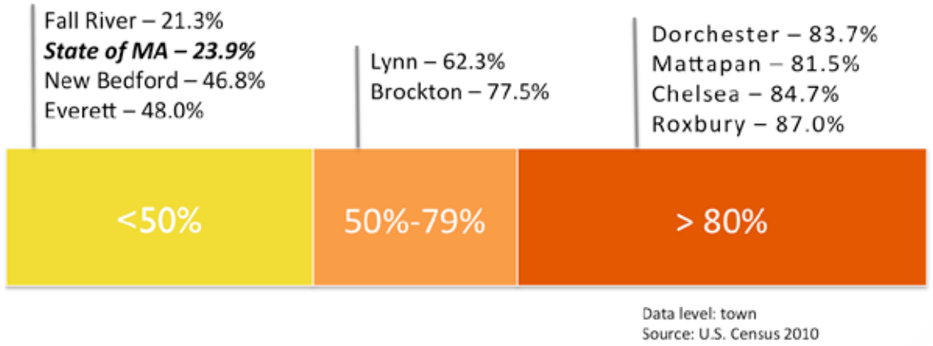
Diversity



Racial Makeup

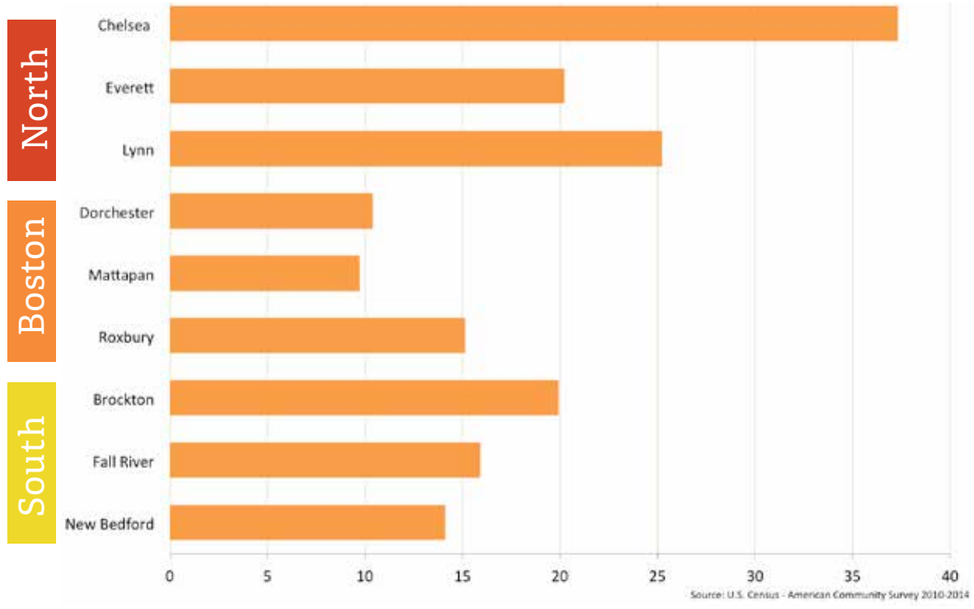


Percent Persons of Color



Place maters for health, and by the same token race matters – a lot. Race, and the structures of racism – many of them rooted in land use and zoning policies of the past – affect where and how people live today. Communities of color, especially at the lowest income levels, have the worst health outcomes in our society. Neighborhoods of color have the highest pollution levels; the fewest basic services, amenities, and support structures; the most limited access to fresh foods, park space, and other resources for health; and the most entrenched obstacles to economic and social opportunities.[7] **While the state overall is mostly non-Latino White, 2/3 of study areas are majority persons of color.**

Linguistic Isolation



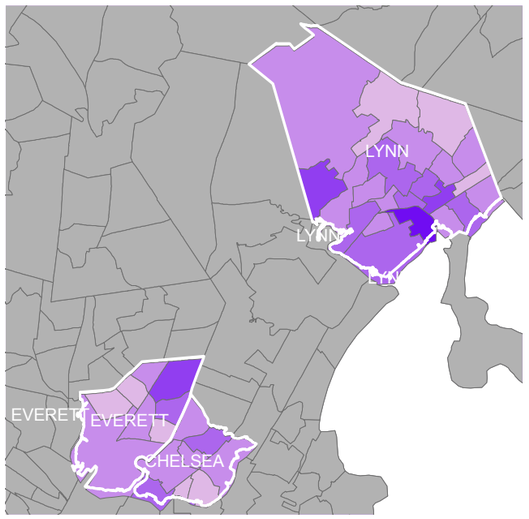
Linguistic isolation shows the percentage of households where everyone above the age of 14 has some difficulty speaking English. These households may have difficulty accessing services that are available to fluent English speakers. The language barrier may prevent such households from receiving transportation, medical, and social services, as well as limit employment and schooling opportunities. Linguistic isolation is highest in the north cluster.

EMPLOYMENT & LABOR FORCE

HAVING A STEADY JOB provides steady income, benefits and more stability in life, all of which can support better health. People with stable jobs can more easily buy nutritious food and afford quality childcare, education, and housing. Likewise, unemployment can have a negative affect physical and mental health. But, simply having a job is not enough. Earning a living wage, working in a safe and healthy environment, and achieving a balanced work load are also important for health.[8]

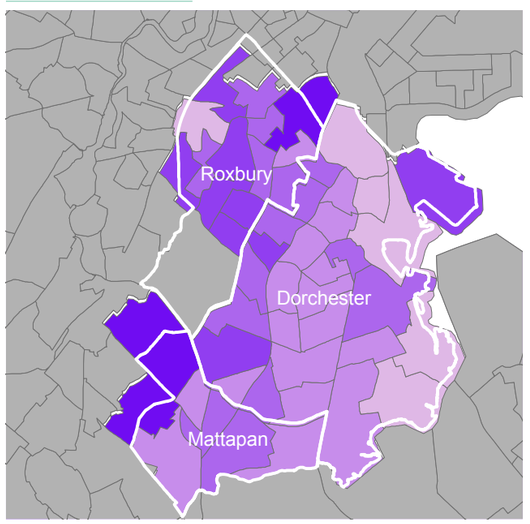
Unemployment Rate

North Cluster

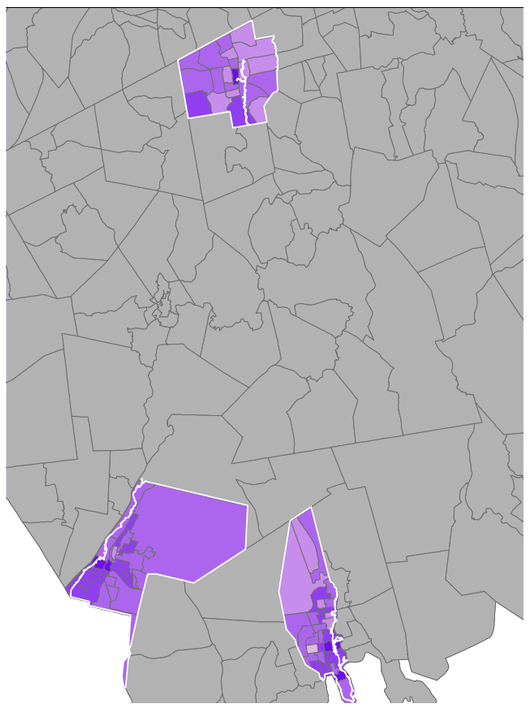


Source: American Community Survey, (US Census) 2010-2014

Boston

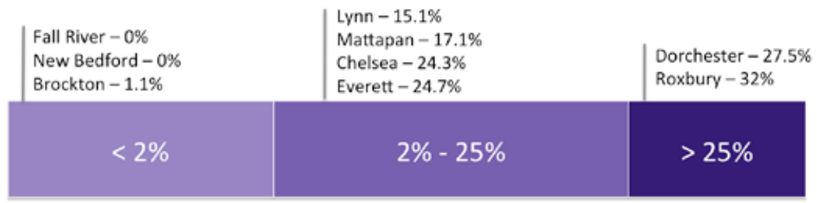


South Cluster



Access to Regional Jobs

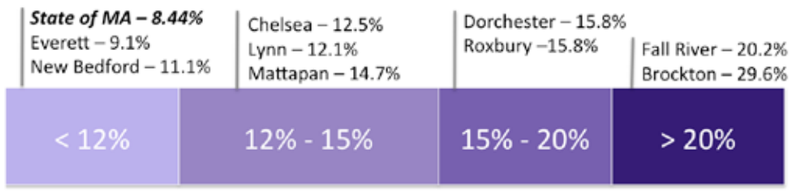
(Percent of regional jobs within 45 min commute)



Data level: Research site
Source: U.S. Census, 2015 American Community Survey 5-Year Estimates

Steady employment also depends on the number and types of jobs people can access. Employment access measures the percent of jobs in the region that can be reached in less than a 45minutes commute. **The South cluster has the least access to jobs in the Boston metro region because people in Fall River and New Bedford cannot access them in under 45 minutes. There is no rail transportation and the commute by car is more than 45 minutes. People living in Brockton, which has commuter rail transit, can only access 1.1% of the region's jobs within a 45 minute commute.**

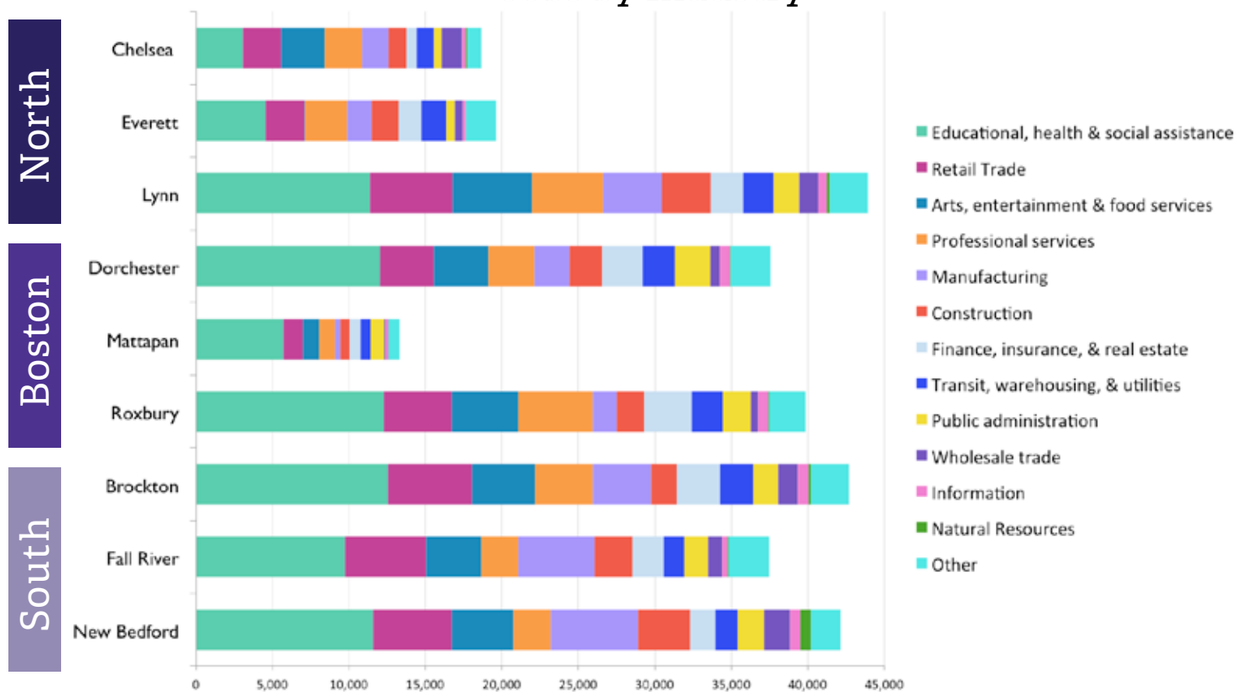
Unemployment Rate



Data level: research site
Source: U.S. Census Bureau, 2015 American Community Survey 5-Year Estimates

The unemployment rate is higher than the state average in all nine research neighborhoods. In Dorchester and Roxbury the rate is nearly double the state average. **In Fall River - 2.5 times the state average, and in Brockton - more than 3.5 times the state average.**

Jobs by Industry



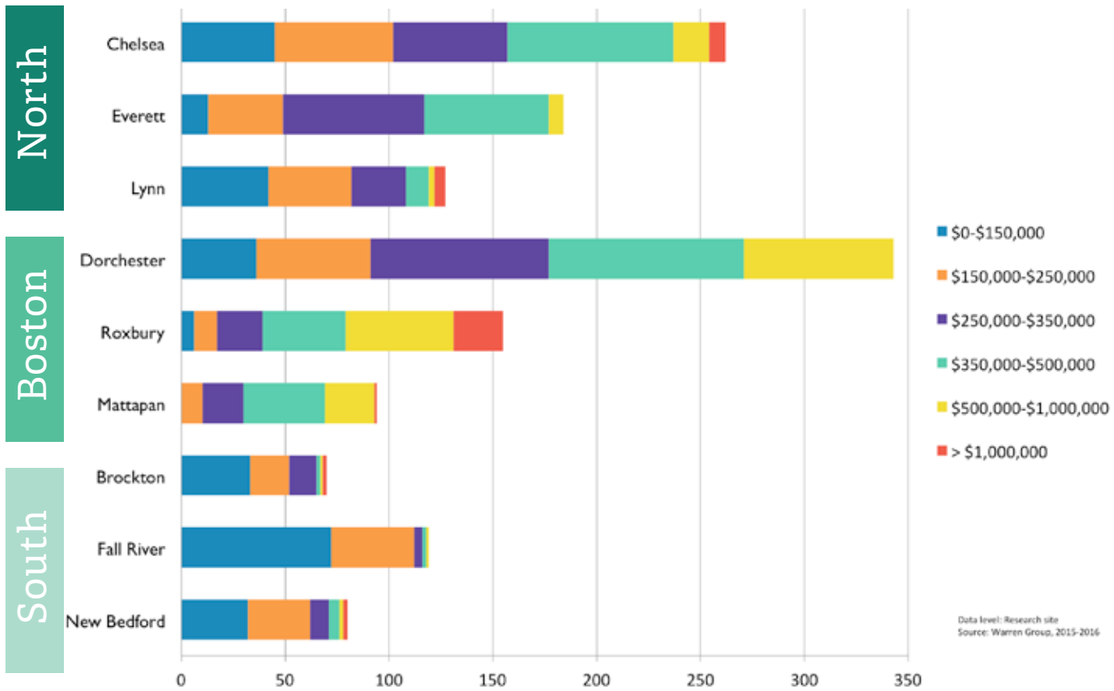
HOUSING & REAL ESTATE

As neighborhoods are redeveloped, rent and mortgage rates can increase. More expensive housing leaves lower-income and working families vulnerable to displacement and lacking access to resources for healthy choices.

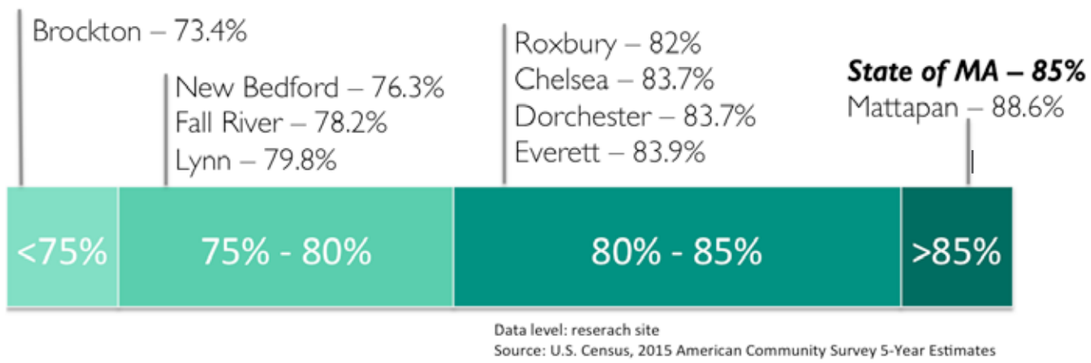
ACCESS to stable, quality, affordable housing is an important building block for healthy communities. Families who spend more than 30% of their household income on housing-related costs are "cost burdened" and may have trouble covering other basic needs.[9] Lower housing costs allows families to use more of their money to pay for things like healthy food, transportation, and health care.[10] Reducing the cost of housing also makes families more stable preventing evictions, foreclosures, frequent moves, and overcrowded homes.[9]

Together, these things are proven to reduce stress levels, depression, and feelings of hopelessness, which is good for physical and mental well-being.[11] Locating affordable housing in mixed-income neighborhoods is also important for health. When located in high-poverty neighborhoods, people experience more stress, exposure to pollution, violent events, and have poorer health. When located in communities with less poverty, overall mental and physical health are better.[3]

Number of Real Estate Transactions by Price Bracket



Geographic Mobility
(Same House One Year Ago)



The number price of residential and commercial property sales in a neighborhood can provide important information about how property values, rents and mortgages might change in a community. Between 2015 and 2016, the most properties were sold in Dorchester (340) and Chelsea (270). The highest priced sales took place in Roxbury, with 24 sales priced over $1,000,000. Dorchester and Chelsea had the next highest priced sales with Dorchester having 166 sales over $350,000, and Chelsea having 97 sales over $350,000.

Churn

Churn measures how often people move. Changing residences within the same neighborhood or relocating to a new community can shape people's opportunities, access to resources and overall health. Low-income households, renters, and younger families tend to move more often, both for voluntary or involuntary reasons. While renters with more income may move to improve their housing or neighborhood conditions, lower-income households, are more likely to make frequent moves because of economic or social distress. High churn rates can also affect the strength of communities. When large numbers of people make frequent moves into and out of neighborhoods, relationships, social ties and community-connectedness can weaken. Strong social relationships and sense of connection to a community are associated with better health.[12]

Same House 1 Year Ago

- 29% - 80%
- 81% - 86%
- 87% - 90%
- 91% - 93%
- 94% - 100%
- No households

Public Transit

- Blue
- Green
- Orange
- Red
- Silver
- Operational
- Proposed
- Special Events
- Bus Routes

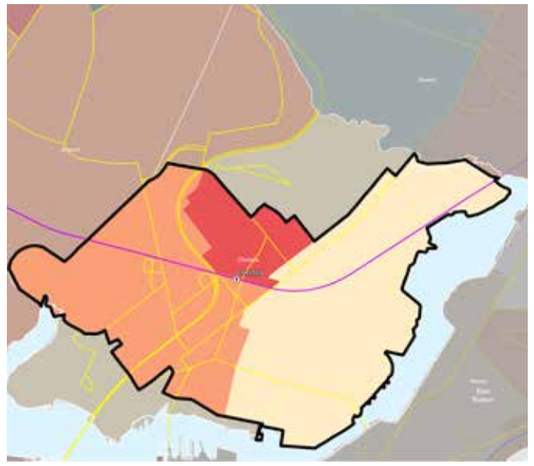
The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analyses.

Produced by:
Metropolitan Area Planning Council
60 Temple Place, Boston, MA 02111 | (617) 933-0700

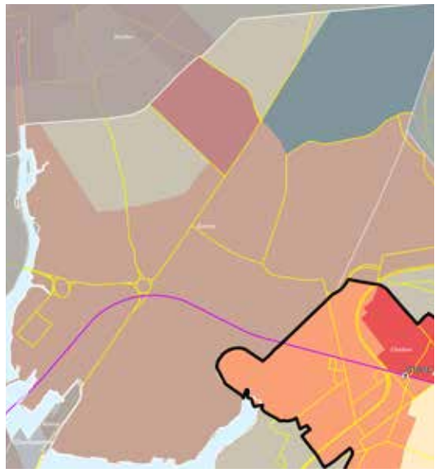
Data Sources:
Metropolitan Area Planning Council (MAPC)
Massachusetts Geographic Information System (MassGIS)
Massachusetts Department of Transportation (MassDOT)
U.S. Census 2010
American Community Survey 2009-2013 5-Year Estimates

North

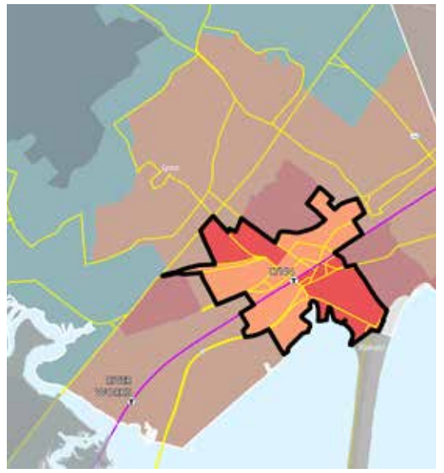
Chelsea



Everett

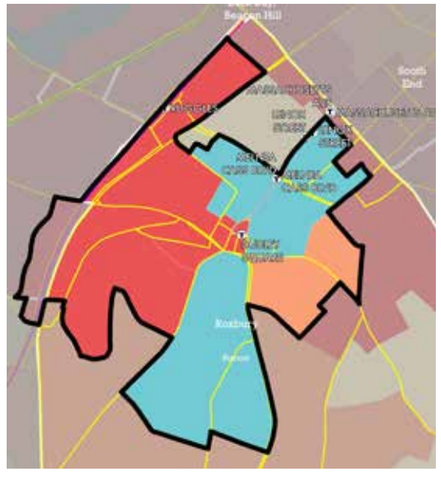


Lynn

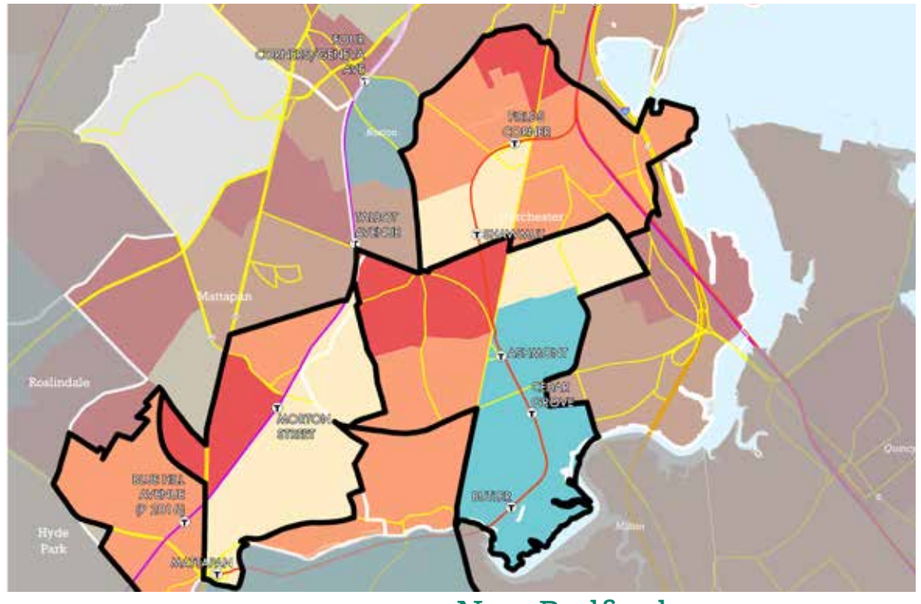


Boston

Roxbury

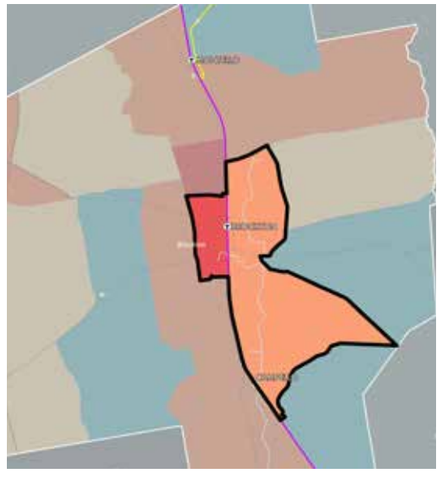


Dorchester & Mattapan

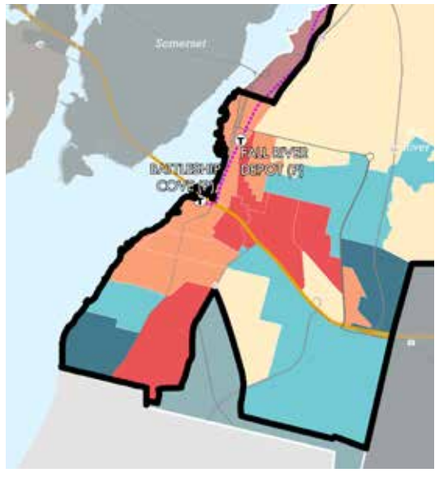


South

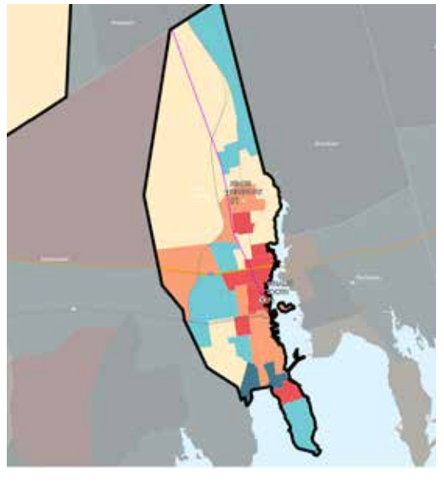
Brockton



Fall River



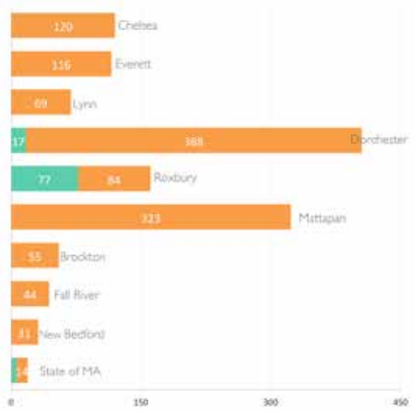
New Bedford



Cost Burdened Households

Households are cost-burdened when 30 percent or more of their monthly gross income is dedicated to housing. When housing costs are more than 30percent, families are likely to struggle to pay for other basic needs and often make difficult trade-offs. Families who are cost-burdened may drop health care coverage, select less expensive child care arrangements, or skip meals in order to make ends meet. These trade-offs may result in poorer health outcomes and overall well-being. **The Boston cluster has the highest number of cost burdened home owners and renters with Dorchester and Mattapan having nearly 3 times the number of cost-burdened home-owners as the other research neighborhoods.**

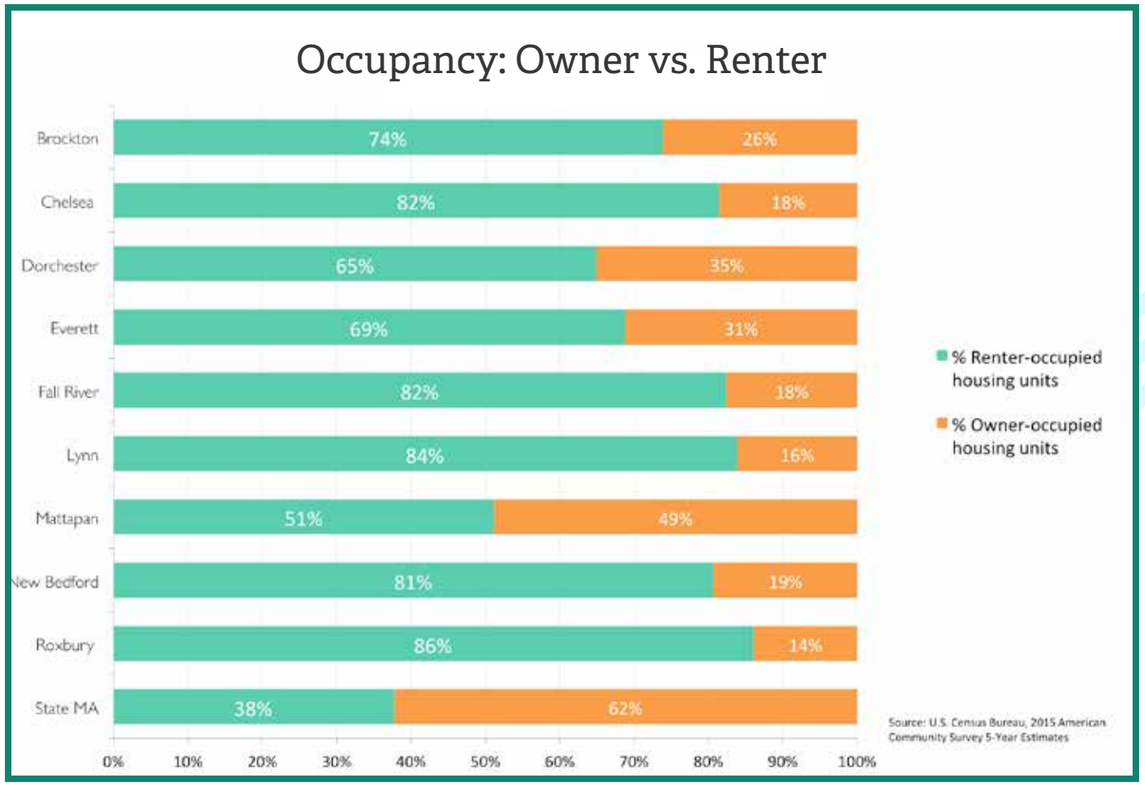
$75K income or higher



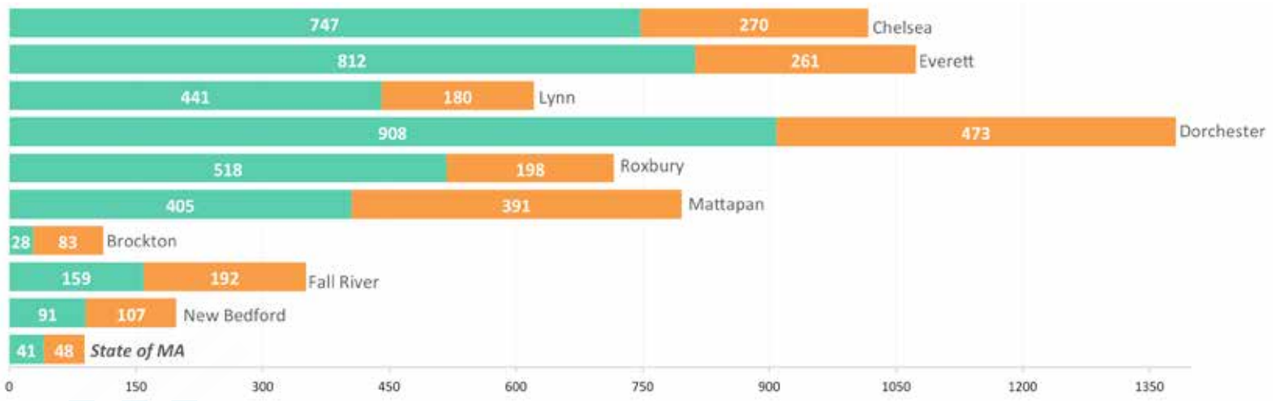
cost burdened owner households

cost burdened renter households

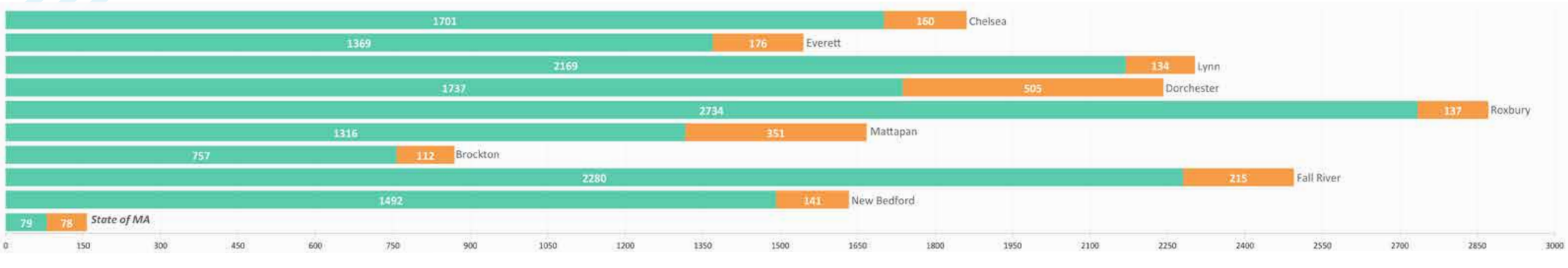
Source: American Community Survey (US Census) 2010 - 2014



$35K - $75K income



$35K income or less



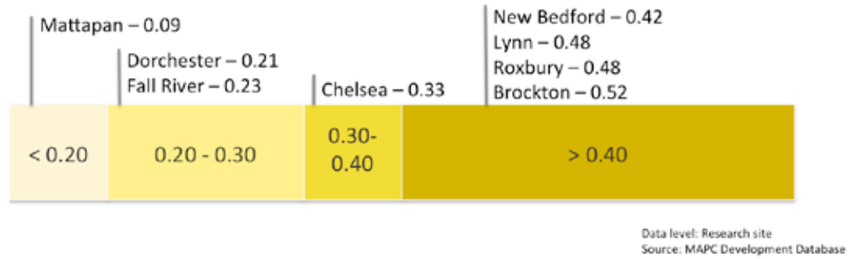
DEVELOPMENT

TRANSIT-ORIENTED DEVELOPMENT to stable, quality, Transit-Oriented Development (TOD) is a type of development that includes a mixture of housing, office, retail, and other amenities integrated into a walkable neighborhood and located within a half-mile of quality public transportation. TOD has been a large part of Boston's growth since the earliest horse-drawn railways. In fact, Boston is a uniquely transit-oriented region, where 25% of housing units and 37% of employment is within a half-mile of a rapid transit or commuter rail station.[13]

TOD has become more popular in recent years because there is an growing trend that people want to live, work, shop, and play in more walkable neighborhoods that also have access to quality public transportation services that can get them where they need to go quickly. More and more people are choosing urban over suburban living, and choosing to rely on public transportation and rather than to drive. Creating these neighborhoods through TOD can bring benefits and challenges for population health.

- Reduced household driving and lowered regional congestion and air pollution, including greenhouse gas emissions (e.g., carbon dioxide, etc.)
- Walkable communities that accommodate healthy and active lifestyles
- Improved access to jobs and economic opportunity for low-income people and working fami¬lies

Development Mix



Employment share of total Development Intensity (population + employment); indicates the balance of residential and commercial uses in a station area. Low values indicate primarily residential areas, and high values (>0.5) indicate station areas where there are more employees than residents.

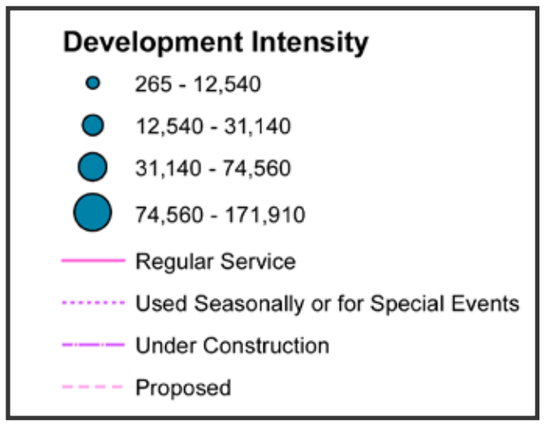
Urban Planning & Policy

See Appendix for definitions of the following planning and policy areas.

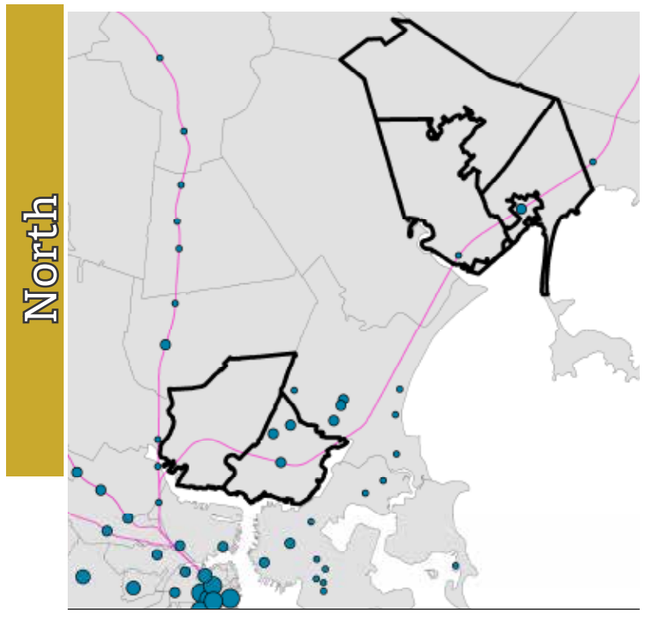
	Community Preservation Act	Community Investment Tax Credit	Casino Zoning and Planning	TDI Districts	Land Banks	40R Districts	Gateway cities	Mass Workforce Housing Fund	Housing Development Incentive Program	MA Green Communitiies Designation
Lynn				Y			Y	Gateway Residences (Washington St)	Y	
Everett			2016	Y			Y			
Chelsea	2016					Garrish Ave	Y			
Roxbury	2016	Madison Park CDC			Dudley Neighbors Inc					Y
Dorchester	2016									Y
Mattapan	2016									Y
Brockton			2015	Y		Downtown	Y		Y	
Fall River	2014								Y	
New Bedford	2014			Y	Buzzard's Bay Coalition				Y	

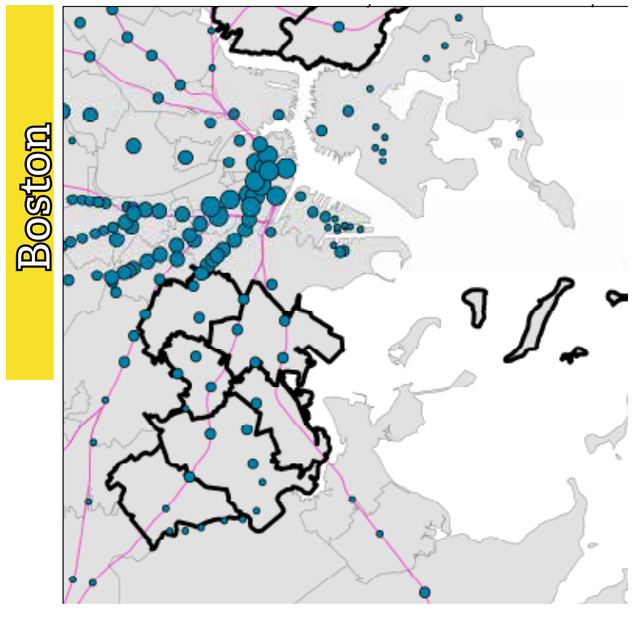
Intensity of Transit-Oriented Development Projects

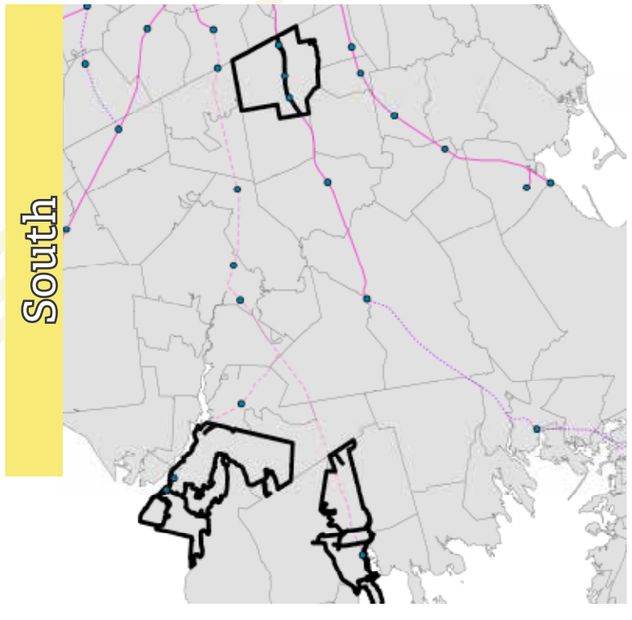
Development intensity is defined as the total number of people living and working near a transportation stop. It is an indicator of how much activity take place around a transit station.[14] The greater the number of residents and workers in the area, the more people may have the opportunity to use retail, public spaces and transportation options located there. Stations with the highest development intensity are typically bustling urban centers.



Source: MAPC Development Database, 2014



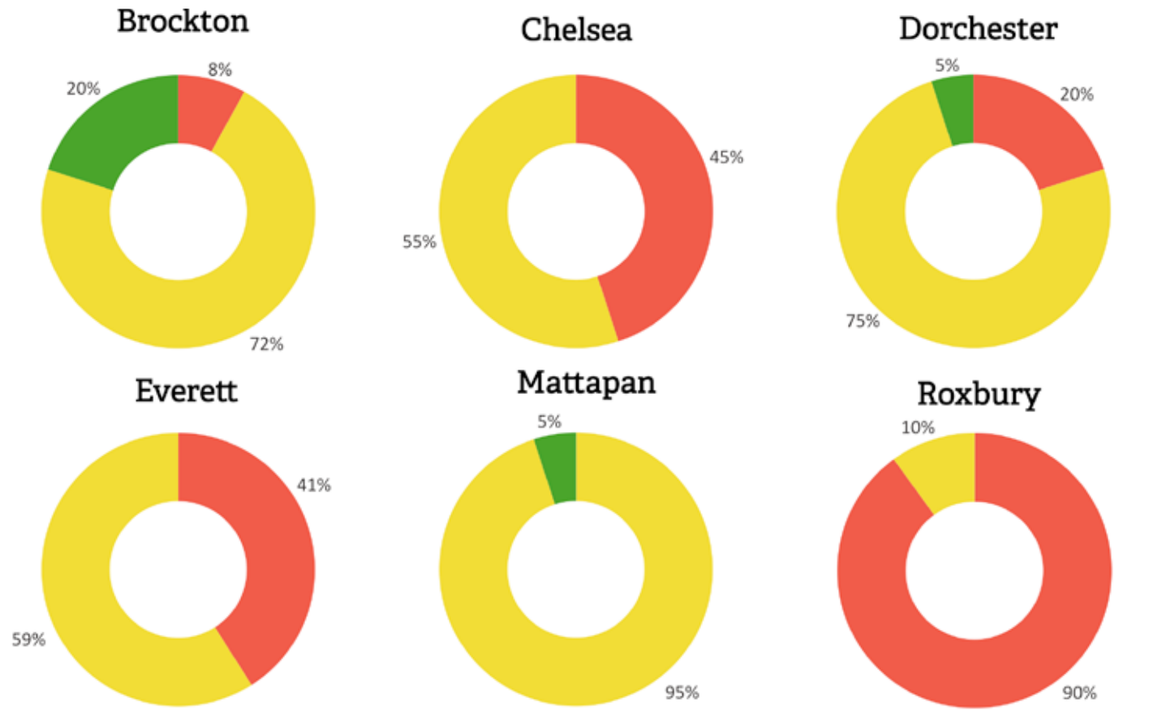




Historical Development

Redlining was a form of structural racism, race based-practices across multiple institutions (banks, real estate, government), that resulted in residential segregation.

People of color are more likely to live in high-poverty neighborhoods because of a host of historical and policies, like redlining, that facilitate segregation. In the late 1930s, the Home Owner's Loan Corporation (HOLC) "graded" neighborhoods into four categories, based in large part on their racial makeup.[15] Minority neighborhoods were marked in red — hence "redlining" — and were considered high-risk for mortgage loans. Banks offered inflated loans to Black home buyers in the redlined areas and told white residents that the presence of black people would lessen their home values. As a result many white homeowners took out mortgage loans to relocate to the suburbs. Businesses and investors followed the housing market to the suburbs, creating racially segregated inner-city communities that lacked investment.



Zoned Red: Percentage of land graded "D" or "red" for "Hazardous" by the Home Owner's Loan Corporation;

Zoned Yellow: Percentage of land graded "C" or "yellow" for "Declining" by the Home Owner's Loan Corporation;

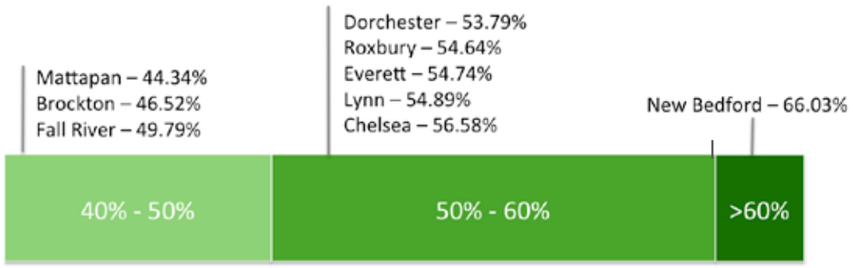
Zoned Green: Percentage of land graded "A" or "green" for "Best" by the Home Owner's Loan Corporation (HOLC Grade A - Best)

NEIGHBORHOOD ENVIRONMENT

The health of the neighborhood can impact the health of the people living in it.

CONDITIONS in high-poverty neighborhoods can expose residents to harmful toxins in air, water, soil and in their homes. Additionally, unsafe streets and open spaces, limited choices for healthy food, fewer opportunities for education and high-quality employment are also harmful to health.[16] **Everett, Fall River, and Roxbury have the highest rate of healthy food stores within the neighborhood accessible by either walking half a mile or driving a mile.**

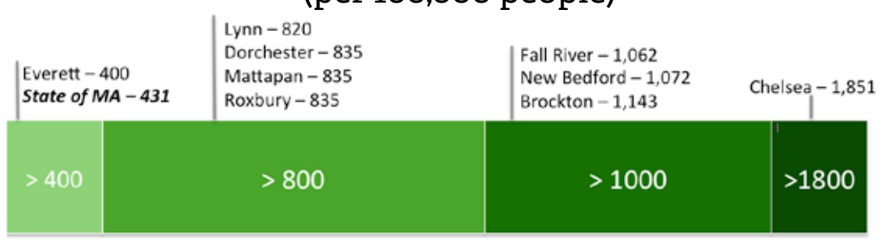
Walkability Score



Source: State of Place, 2016

Walkable, safe communities promote physical ability and good health. The State of Place™ measures how convenient, safe, pleasurable, and livable a place is. It looks block by block at features like sidewalks, benches, street trees, and land use and gives neighborhoods a score between 0 and 100. It helps highlight what assets that make communities walkable and identify opportunities for improvements.[17]

Violent Crime Rate
(per 100,000 people)

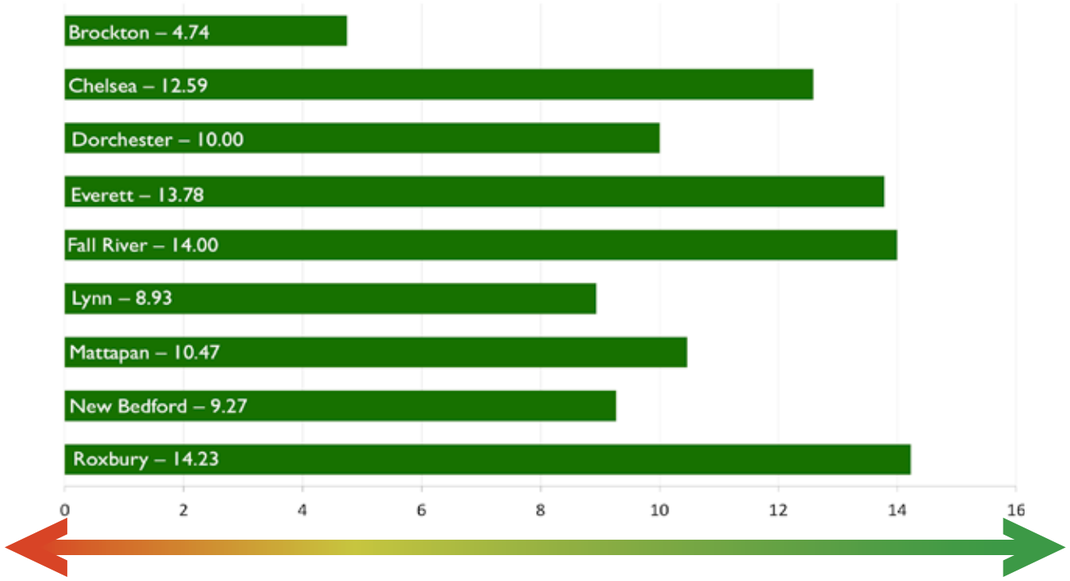


Source: Municpal, 2012

Violent crimes are harmful to community health. Beyond direct injury and stress to the victim, crime breaks down social cohesion and makes public spaces unsafe. People who report feeling very afraid of crime are more likely to report having poor health, even when controlling for less physical activity. Except for Everett, violent crime rates for all study research communities are 2 or more times the state average. Chelsea's crime rate is more than 4 times the state average.

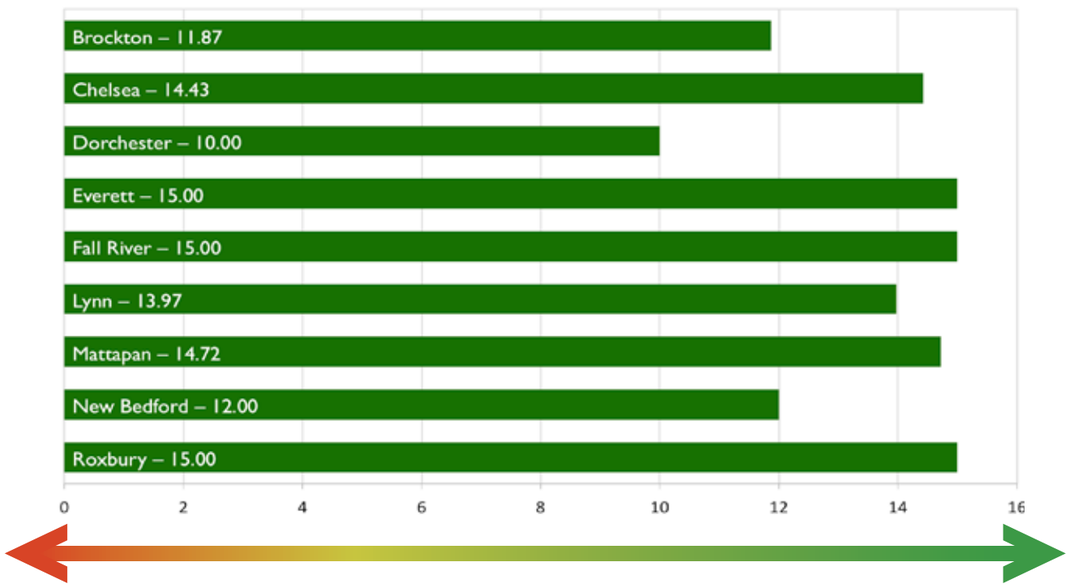
Food Environment

Healthy Food Access Within Half Mile Walk
MA Food Index Score



12-15: Very High
9-12: High
6-9: Moderate
3-6: Low
0-3: Very low

Healthy Food Access Within 1 Mile Drive
MA Food Index Score



Natural Environment

Low income, minority communities are disproportionately affected by pollution and by the increasing risks of climate change caused weather disasters.

THESE SAME COMMUNITIES historically shouldered an unfairly large share of environmental risks and burdens, which have negatively impacted their health, quality of life, and neighborhood stability. These communities are identified as Environmental Justice (EJ) Communities. This designation helps to direct resources and environmental protections to the most vulnerable communities. EJ communities have lower household incomes than the state median, at least a quarter of people identify as minorities, and at least one-fourth of households have no one over the age of 14 who speaks English very well.[18] **All of the research neighborhoods are designated Environmental Justice Communities.**

Bartlett Yard, Roxbury.

Brownfields & Environmental Jusice Communities

Brownfields are areas of land that are contaminated by pollutants or hazardous substances. Brownfields are often old factories, industrial sites, or dumping grounds. Brockton, New Bedford, and Roxbury have the highest number of brownfields.[19]

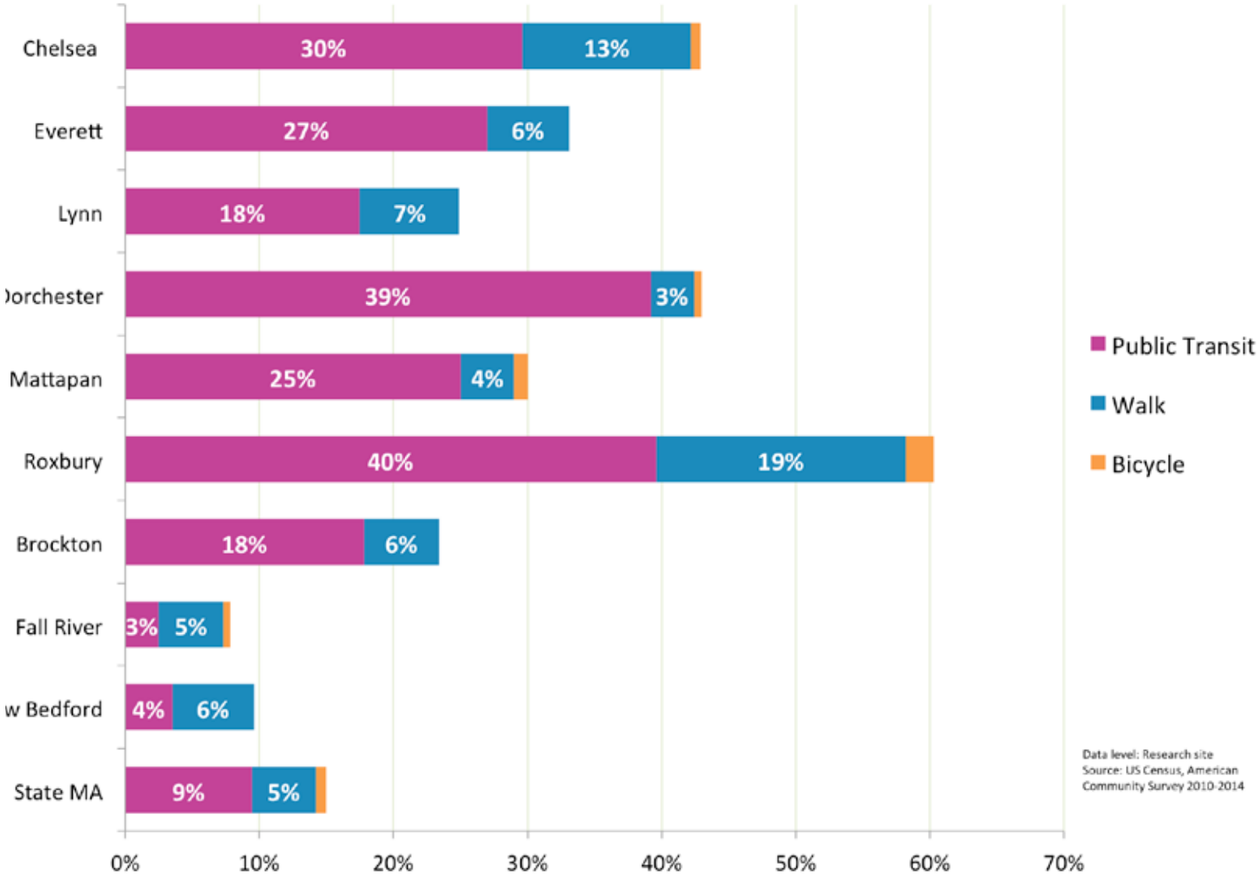
TRANSPORTATION

Every day people use personal and public transportation to travel to school, work, home and other important places. Transportation options that connect neighborhoods and cities impact the environment, quality of life, and physical health.

PUBLIC TRANSPORTATION such as commuter rail trains, subways, trollies, and buses help protect clean air. They reduce the number of cars on the road and use clean energy sources like electricity while expanding access to important opportunities for jobs, healthcare, social services, and other resources across the region. Without these options, residents without vehicles are limited to jobs and resources that are nearby. The cost of transportation also matters for health. On average, families in our research communities spend 14-20% of their income on transportation each year.

Transportation can also encourage physical activity by connecting people to bike paths, walking trails, parks, and safe, walkable streets. Although transportation planning and decisions can improve health, they are not always built fairly across communities, and can end up being harmful to health. For example, low-income communities of color are often located near highways and are more exposed to air pollution. As a result, these communities suffer more from diseases like asthma and cardio-vascular diseases.[17]

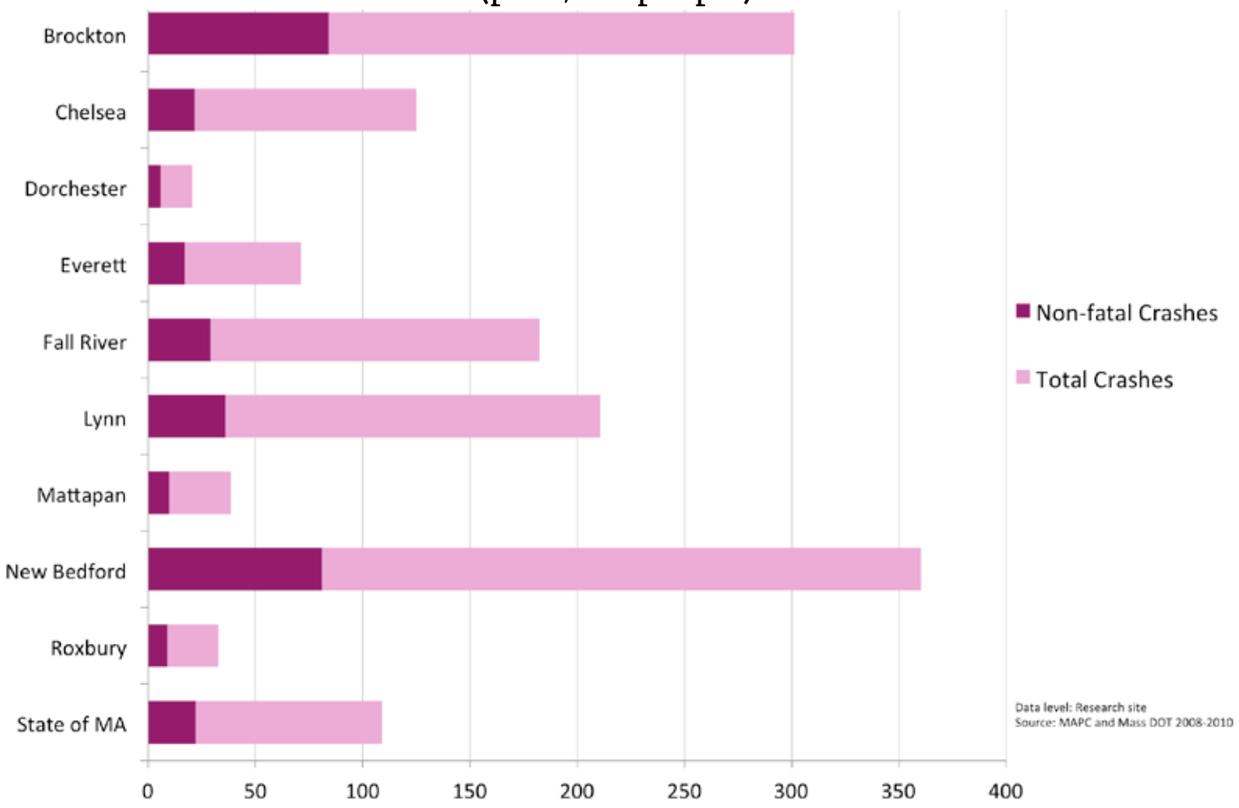
Share of All Workers Commuting by Active Transit Modes



Transit Type

		Bus	Subway	Commuter Rail
North	Chelsea	✓		✓
	Everett	✓		
	Lynn	✓		✓
Boston	Dorchester	✓	✓	✓
	Mattapan	✓	✓	✓
	Roxbury	✓	✓	✓
South	Brockton	✓		✓
	Fall River	✓		
	New Bedford	✓		

Vehicle Crashes 2008-2012
(per 1,000 people)



Fatal Vehicle Crashes 2008-2012
(per 1,000 people)

Brockton	Chelsea	Dorchester	Everett	Fall River	Lynn	Mattapan	New Bedford	Roxbury	State of MA
0.0	0.19	0.17	0.19	0.11	0.09	0.10	0.78	0.14	0.24

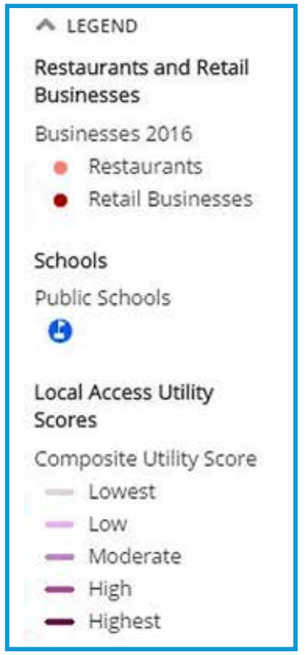
Local Access Score

LOCAL ACCESS SCORES were created by the Massachusetts Area Planning Council to show how well roads connect people walking or biking from their homes to nearby school, shops and restaurants, parks, and transit stations.[18]

Local Access scores are calculated using travel demand software to estimate the number of trips households are likely to make in a given day, the likely destinations of those trips, and the most direct routes to get there.

The darker the line, the higher the score. Dark red lines represent streets that connect the most people to the most places. Light pink lined connect the fewest people with local destinations.

See Appendix for Local Access Maps for all nine neighborhoods.



Roxbury

HEALTH

The World Health Organizations defines health as a complete state of physical, mental, and social well-being, not merely the absence of disease.[19]

THE HEALTH STATUS of an entire community can be measured in a number of ways. In this report, population health is measured in three ways: i) healthcare use and costs, ii) chronic disease outcomes and burden of disease, and iii) healthy behaviors that promote wellness. The communities selected for this study all have significant disparities (or preventable differences) in their health status in comparison to the average community in the state of Massachusetts in all three areas: healthcare use and spending, health outcomes, and healthy behaviors.

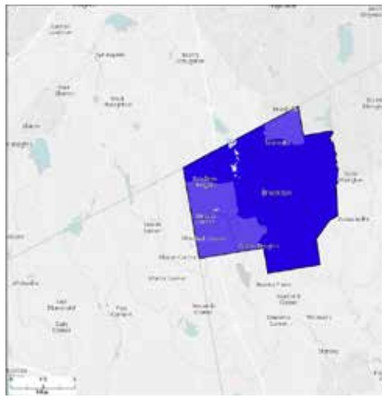
HEALTH OUTCOMES

Chronic Diseases

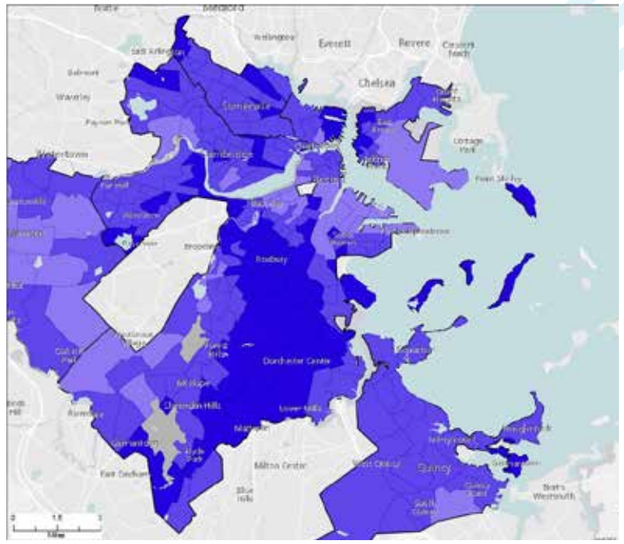
Of the dollars that are spent on healthcare, seventy-five percent of them are spent on treating chronic diseases. Nearly 1 of every 2 people in the nation has a chronic disease. In fact, more than two-thirds of all deaths are caused by one or more of five chronic diseases: heart disease, cancer, stroke, chronic obstructive pulmonary disease, and diabetes.[20]

Adults Ages 18+ Reporting Asthma
(BRFSS 500 Cities Project 2014)

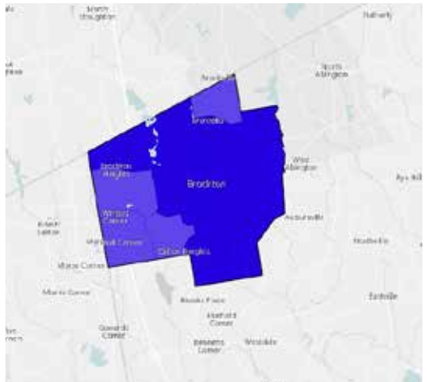
Lynn



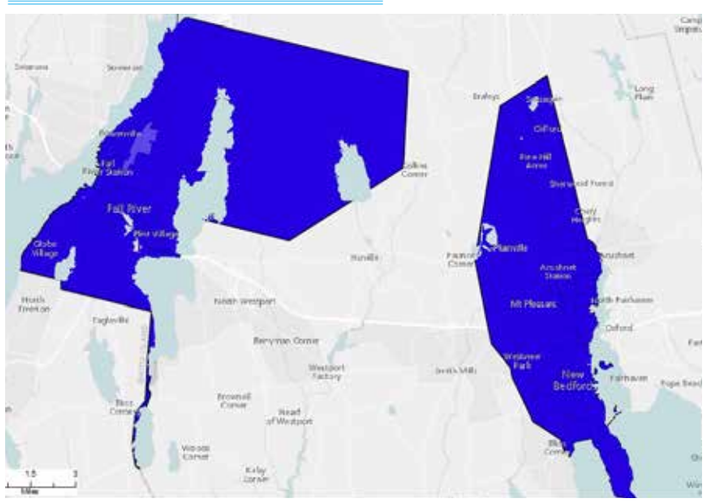
Boston



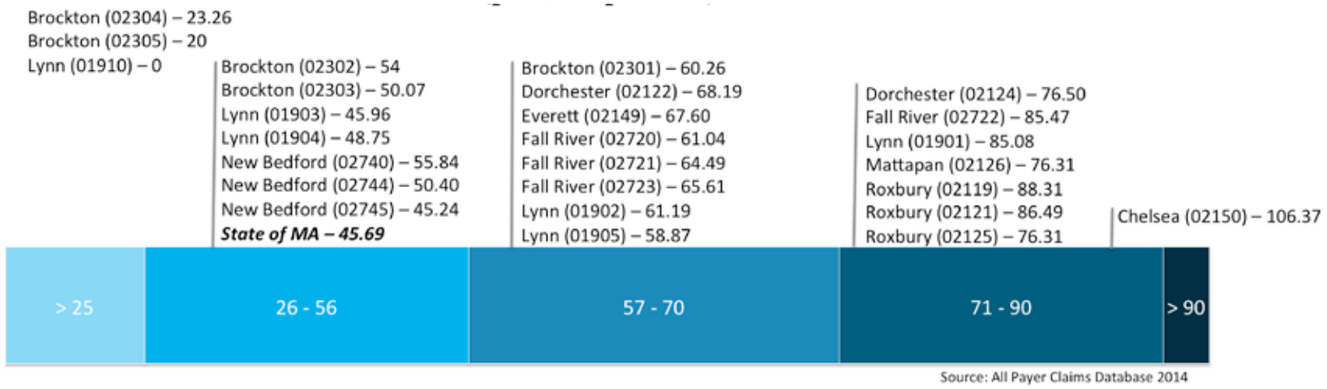
Brockton



Fall River & New Bedford

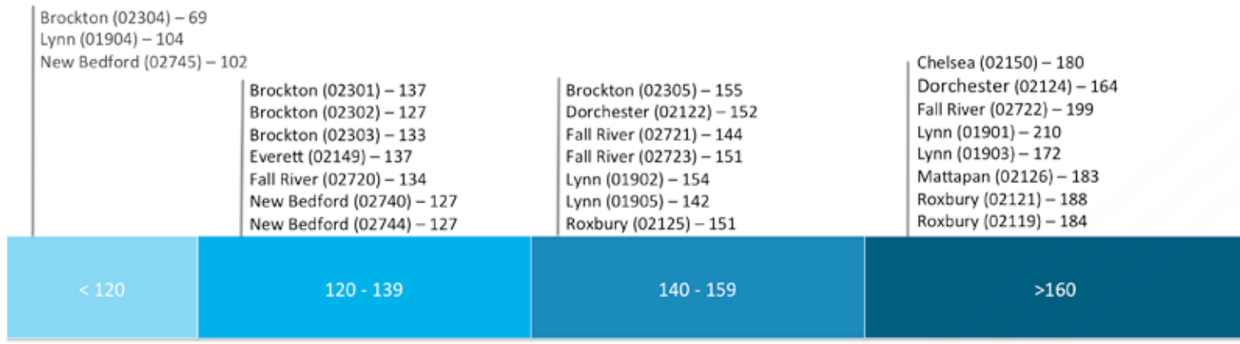


Proportion of patients with Cancer by Zip Code
(per 1,000 patients)



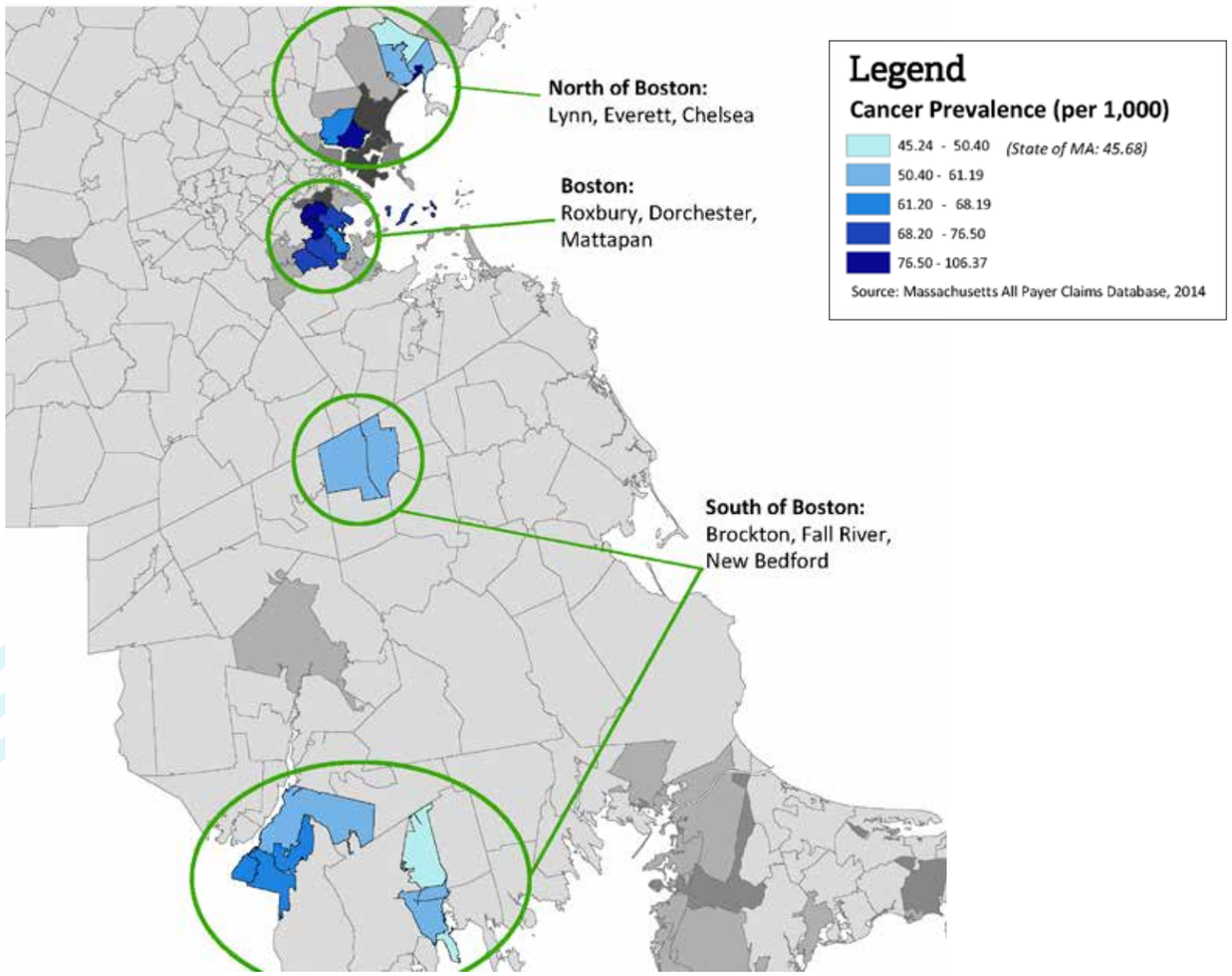
Source: All Payer Claims Database 2014

Proportion of patients with Diabetes by Zip Code
(per 1,000 patients)

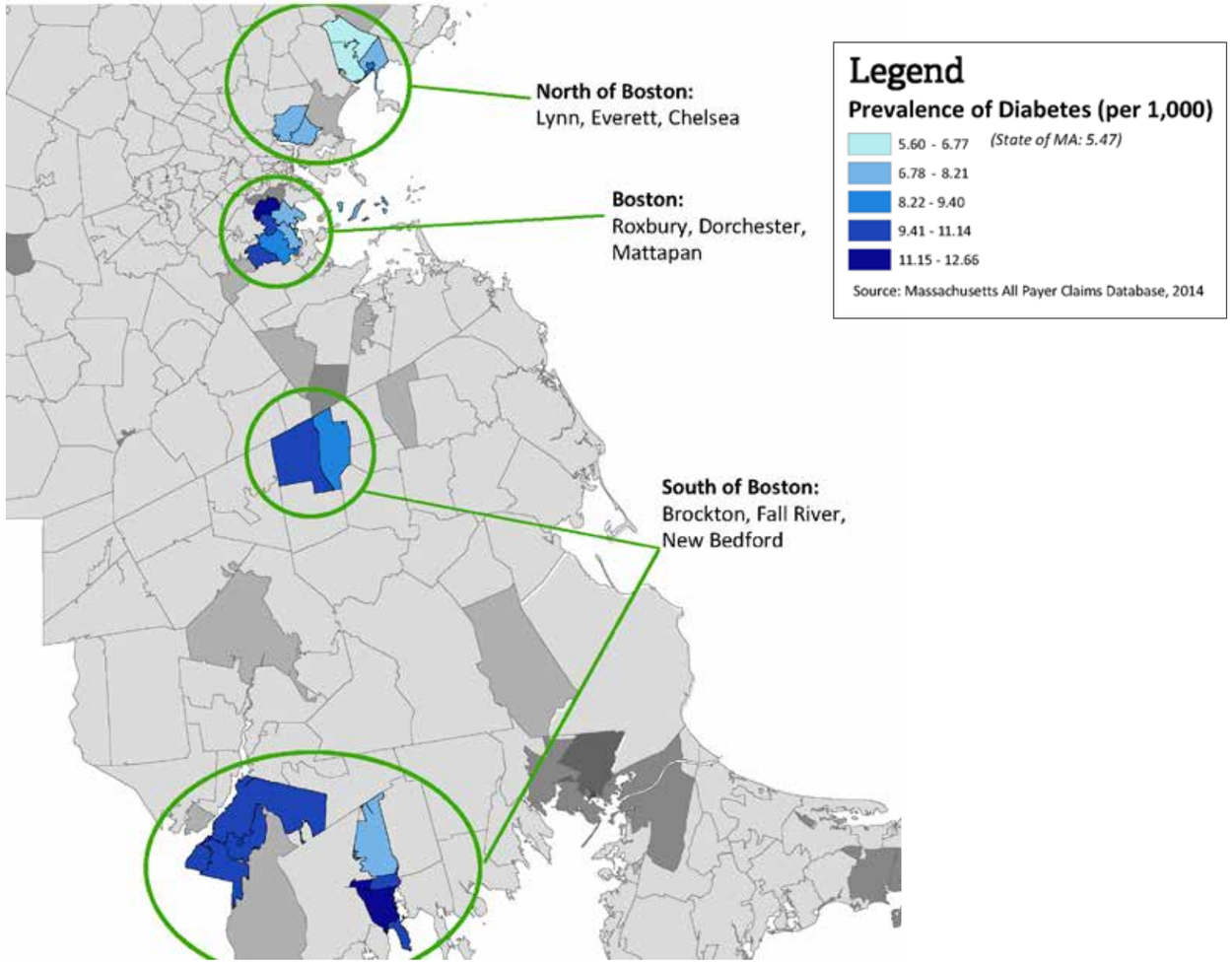


Source: All Payer Claims Database, 2014

Prevalence of Cancer among patients in MA by Zip Code
(per 1,000 people ages 0-64)



Prevalence of Diabetes among patients in MA by Zip Code
(per 1,000 people ages 0-64)



Proportion of patients with Stroke by Zip Code
(per 1,000 patients)

Brockton (02303) – 11.86
Brockton (02304) – 5.81
Lynn (01904) – 9.78
Lynn (01910) – 0
New Bedford (02744) – 12.88
New Bedford (02745) – 10.40
State of MA – 12.21

Brockton (02301) – 20.82
Brockton (02302) – 18.19
Brockton (02305) – 15
Everett (02149) – 21.95
Fall River (02720) – 15.81
Fall River (02721) – 18.45
Fall River (02723) – 17.62
Lynn (01902) – 16.05
Lynn (01905) – 15.46
New Bedford (02740) – 14.39

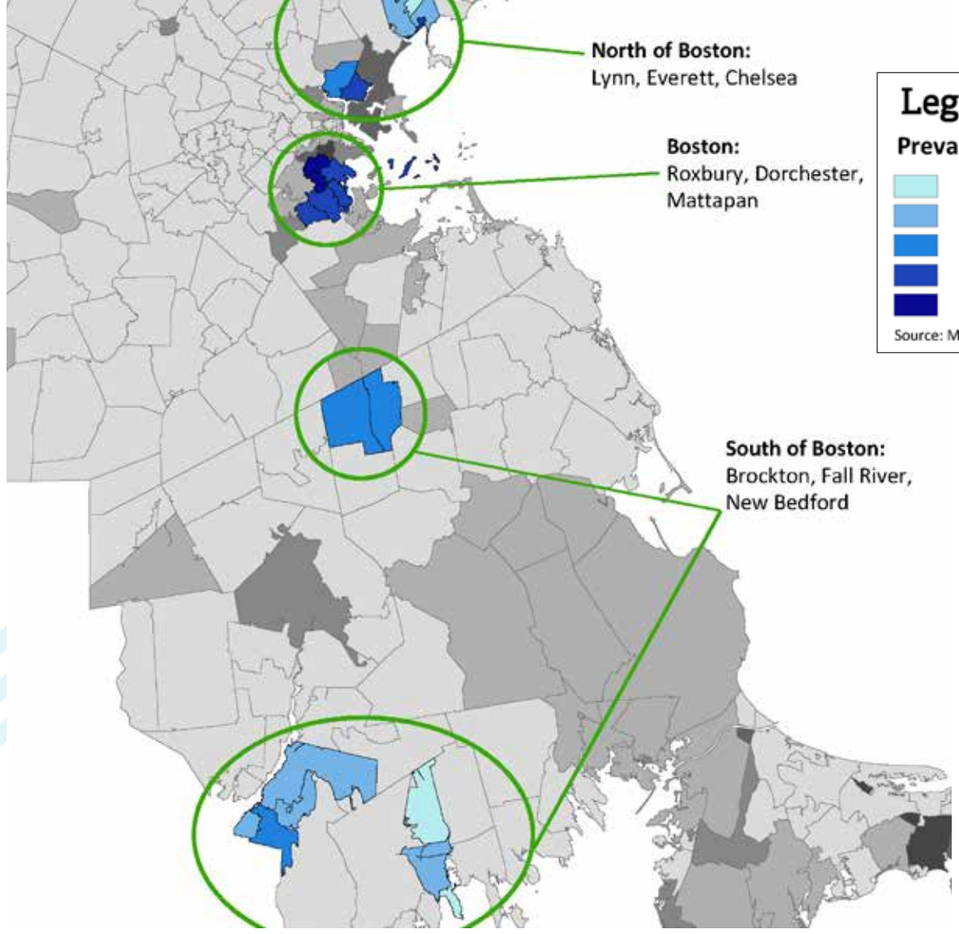
Chelsea (02150) – 27.16
Dorchester (02122) – 27.56
Dorchester (02124) – 28.97
Fall River (02722) – 25.64
Lynn (01901) – 24.31
Lynn (01903) – 25.74
Mattapan (02126) – 27.71
Roxbury (02125) – 27.71

Roxbury (02119) – 34.83
Roxbury (02121) – 33.93

< 13 | 13 - 22 | 23 - 30 | > 31

Source: All Payer Claims Database, 2014

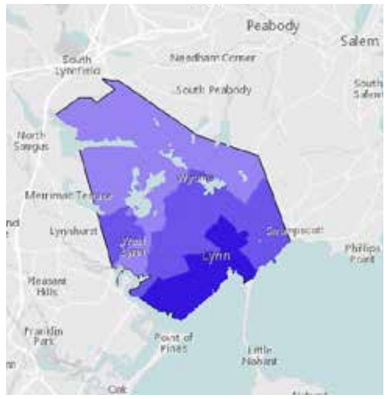
Prevalence of Stroke among patients in MA by Zip Code
(per 1,000 people ages 0-64)



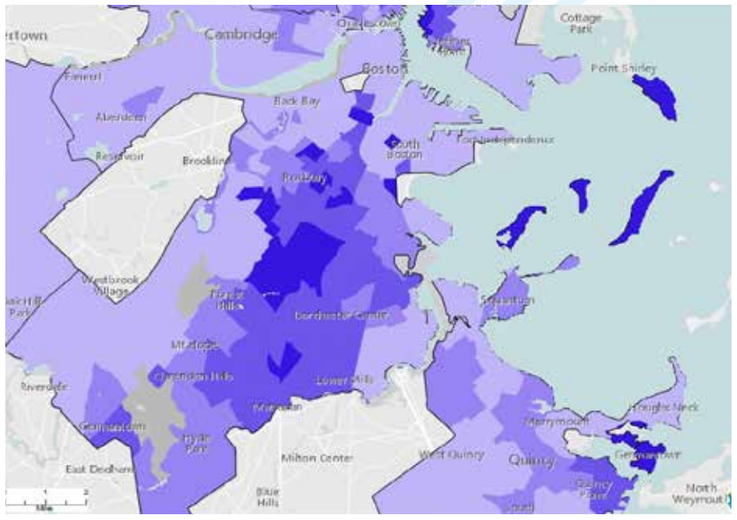
Physical Health

Adults Ages 18+ Reporting Poor Physical Health
BRFSS 500 Cities Project (2014)

Lynn

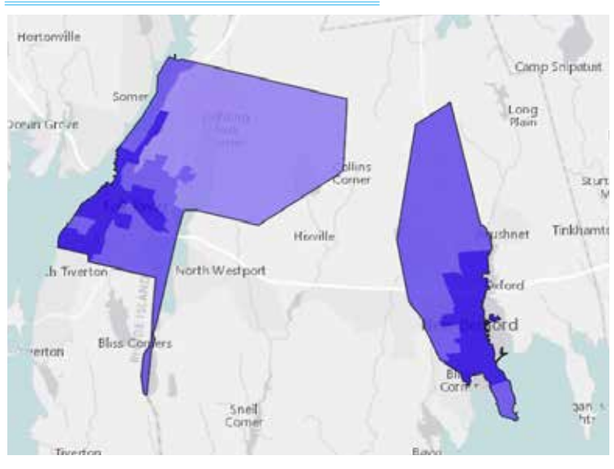


Boston



Brockton

Fall River & New Bedford



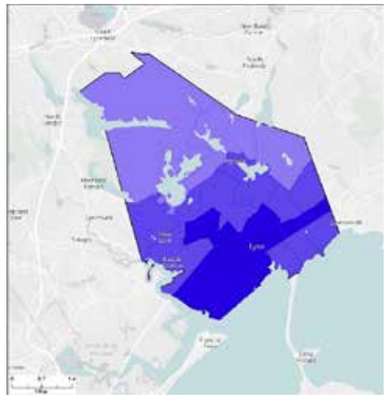
Legend
Poor Physical Health, Percentage of Adults Age 18+ by Census Tract
BRFSS 500 Cities Project 2014
Over 17.0%
13.1% - 17.0%
10.1% - 13.0%
Under 10.1%
No Data or Data Suppressed
Commonwealth Communities, 3/30/2017

Mental Health

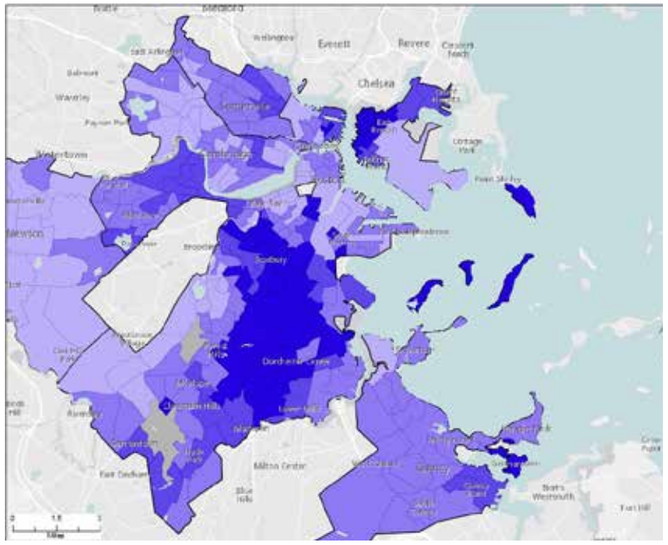
Adults Ages 18+ Reporting Poor Mental Health

BRFSS 500 Cities Project (2014)

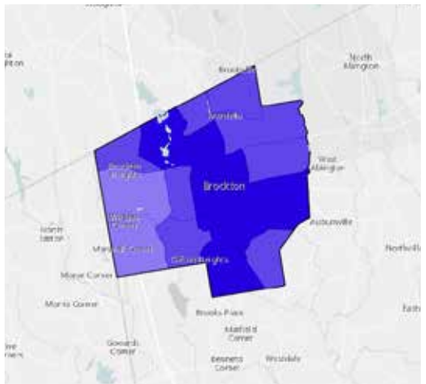
Lynn



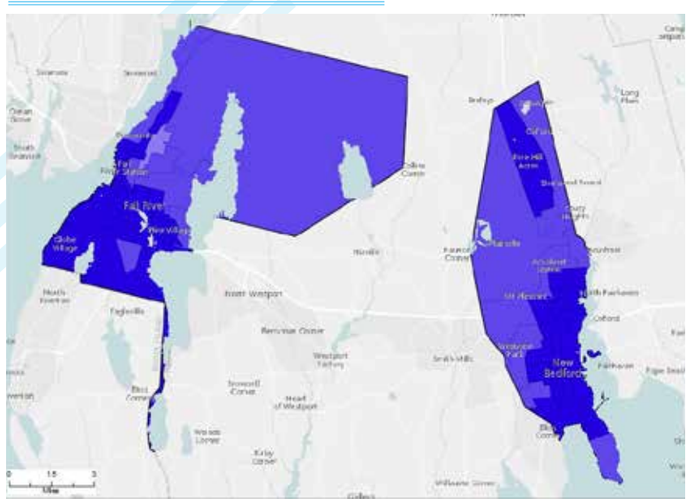
Boston

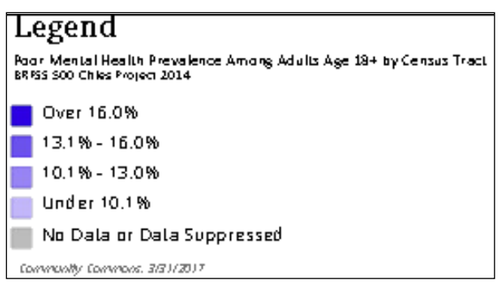


Brockton



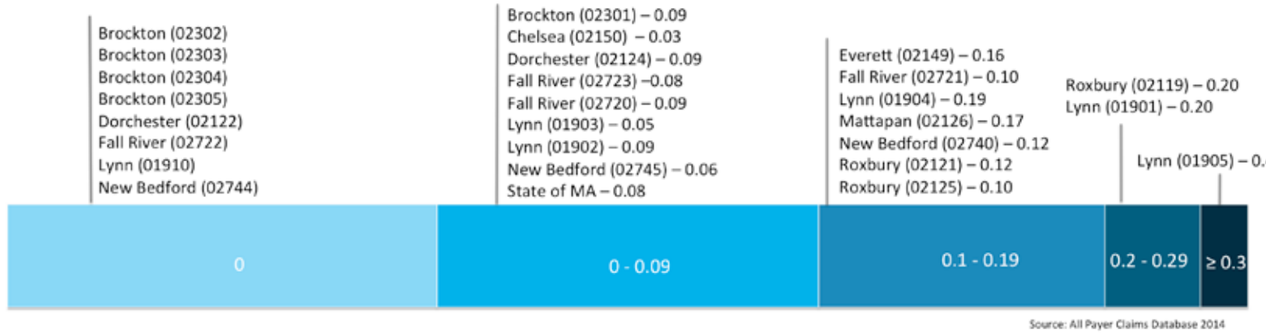
Fall River & New Bedford





Number of Suicides by Zip Code

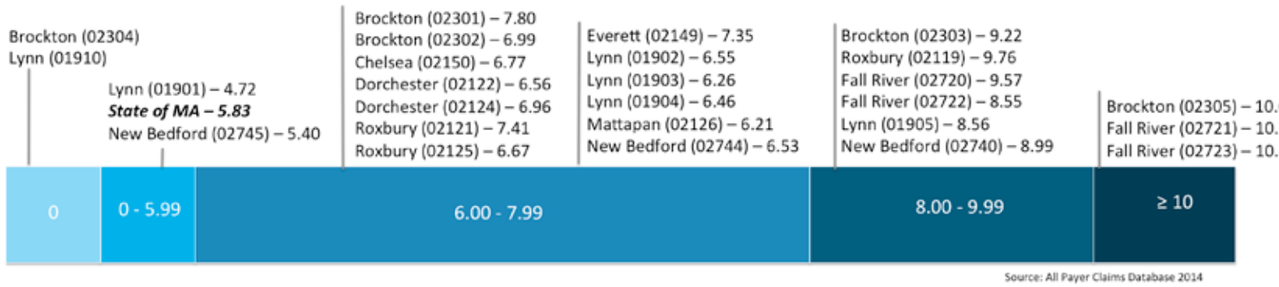
(per 1,000 people)



Source: All Payer Claims Database 2014

Mental Health Admissions for Depression by Zip Code

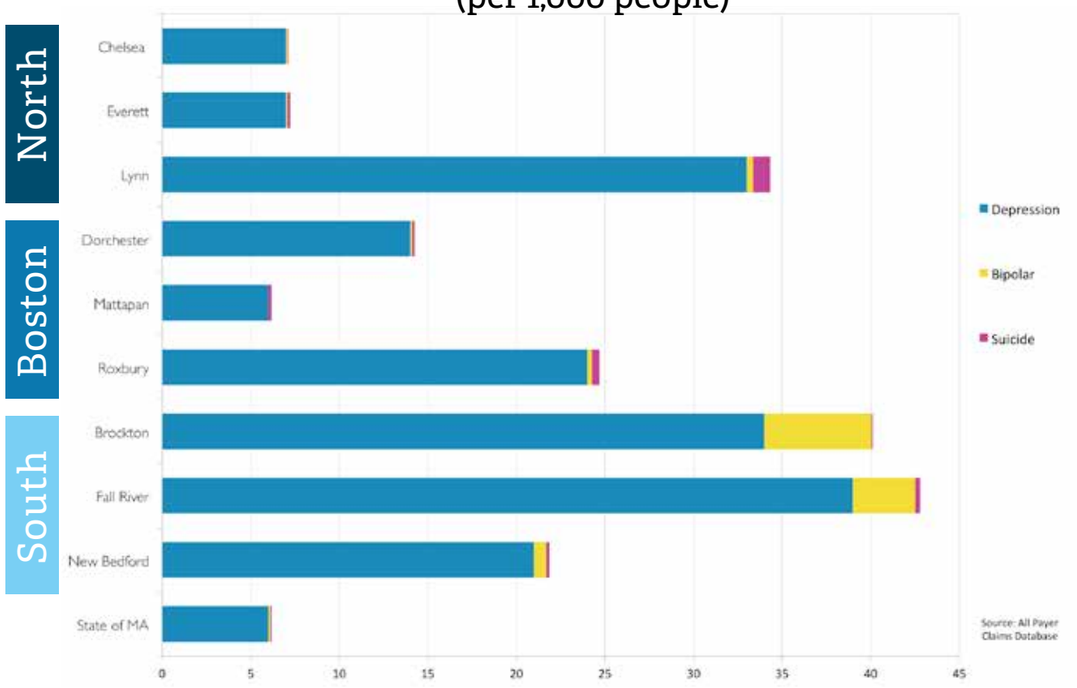
(per 1,000 people)



Source: All Payer Claims Database 2014

Number of Admissions for Mental Health Conditions

(per 1,000 people)



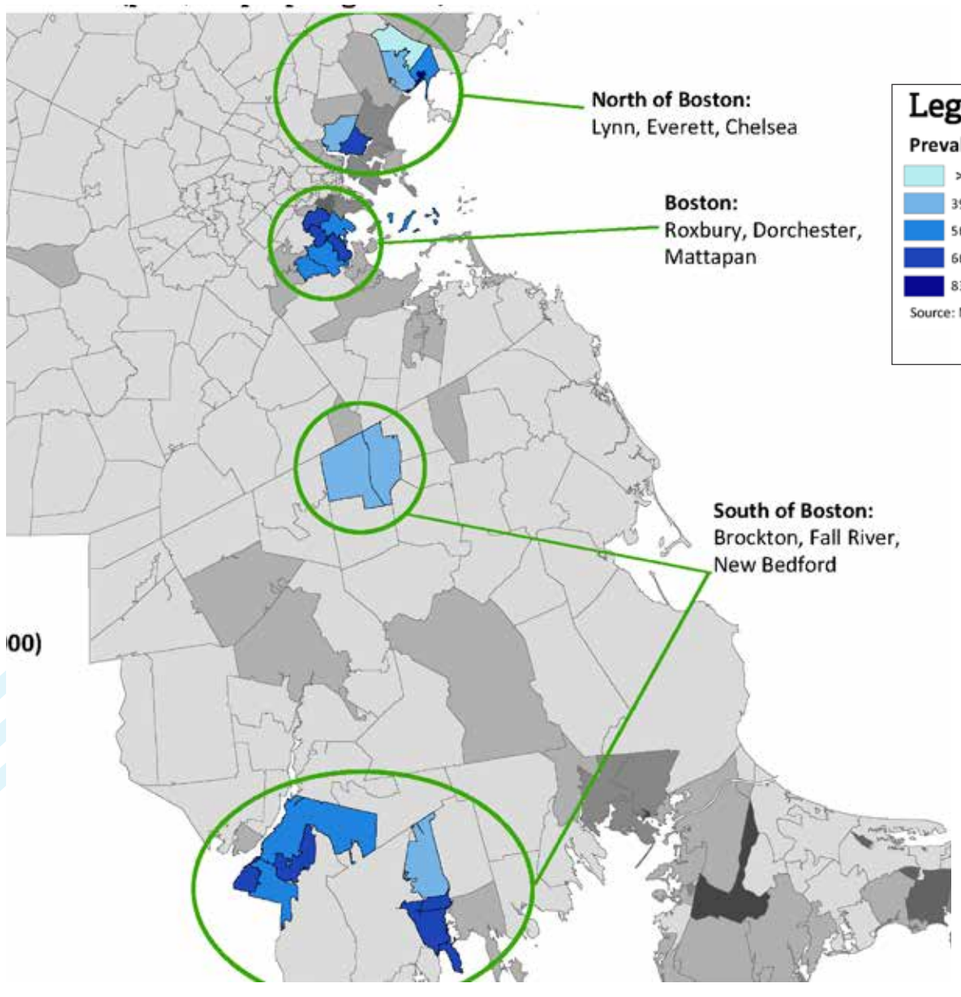
Source: All Payer Claims Database

Health Behaviors

Neighborhoods shape the choices people have and the actions they take to support their health. Some behaviors like physical activity and healthy eating support good health, while others like binge drinking and smoking are health risks.

Prevalence of Substance Abuse among patients in MA by Zip Code

(per 1,000 people ages 0-64)

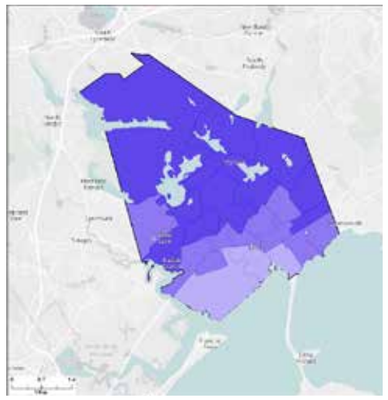


Adults Ages 18+ Reporting Binge Drinking

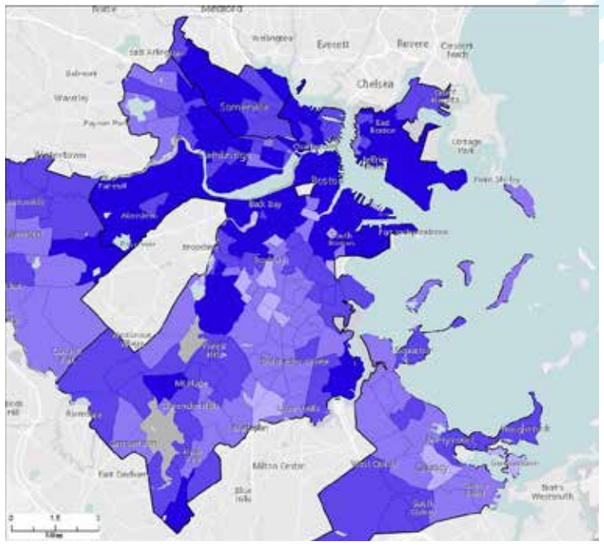
BRFSS 500 Cities Project (2014)

Binge drinking is defined as adults aged ≥18 years who report having five or more drinks (men) or four or more drinks (women) on an occasion in the past 30 days.

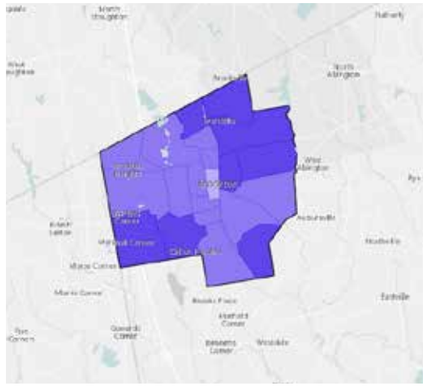
Lynn



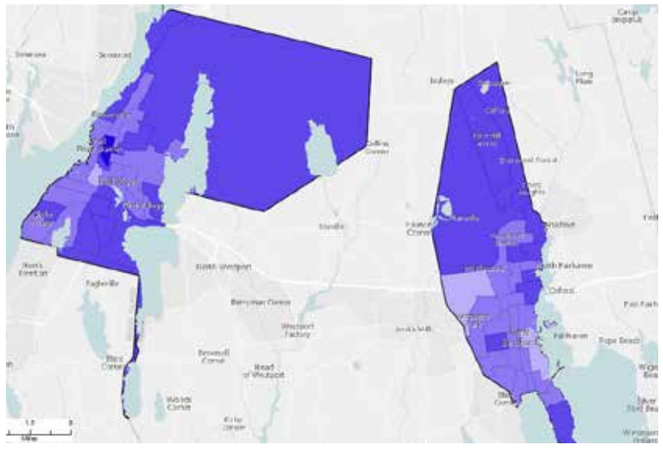
Bos-

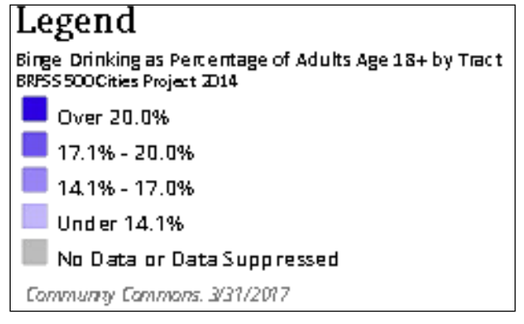


Brockton



Fall River & New Bedford



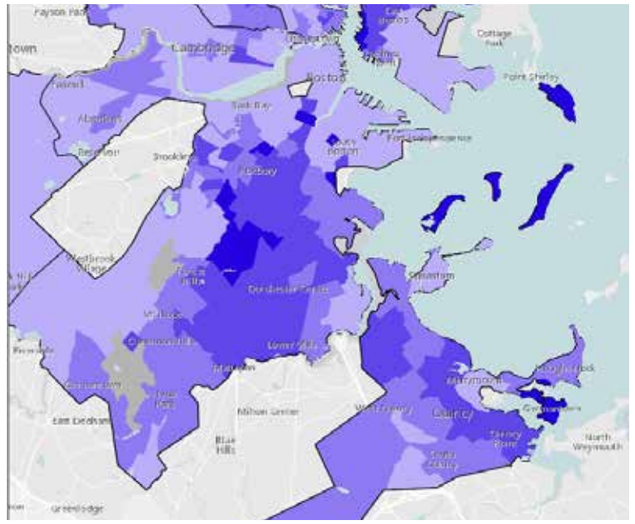


Adults Ages 18+ Reporting No Leisure Time Physical Activity

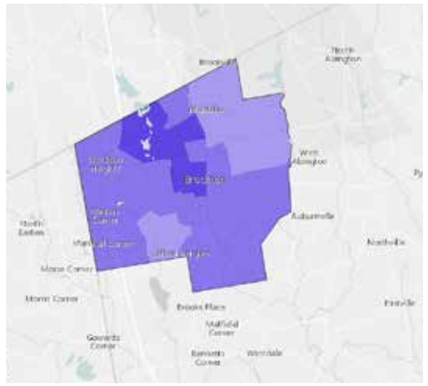
BRFSS 500 Cities Project (2014)

Lynn

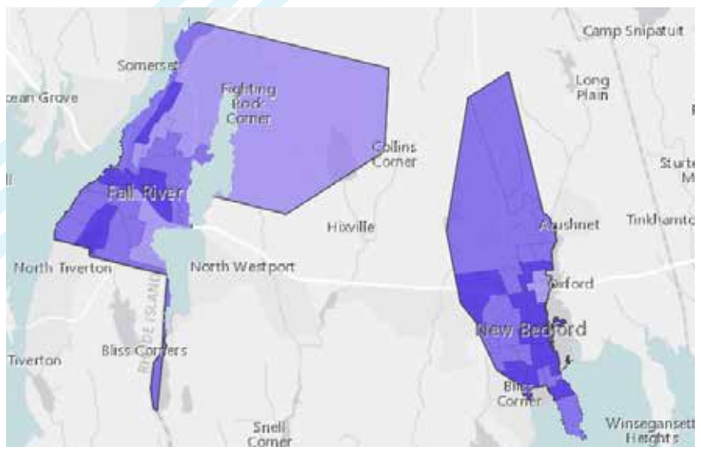
Boston



Brockton



Fall River & New Bedford



Legend

No Leisure-Time Physical Activity, Percentage of Adults Age 18+
BRFSS 500 Cities Project 2014

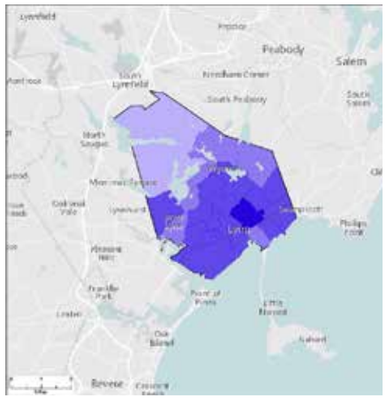
- Over 32.0%
- 24.1% - 32.0%
- 18.1% - 24.0%
- Under 18.1%
- No Data or Data Suppressed

Community Commons, 3/31/2017

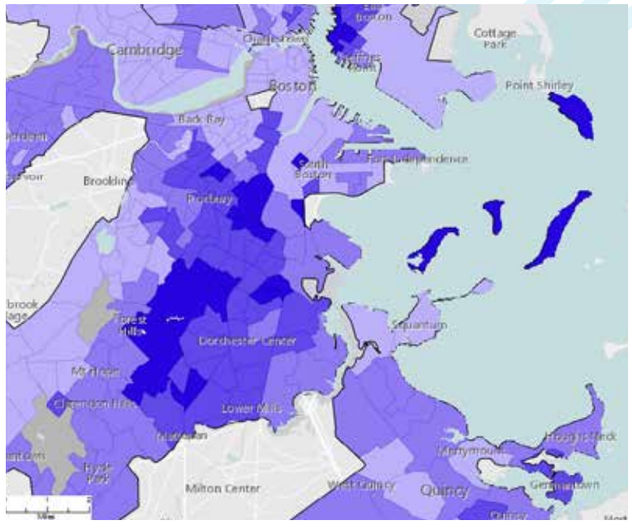
Adults Ages 18+ Reporting Smoking

BRFSS 500 Cities Project (2014)

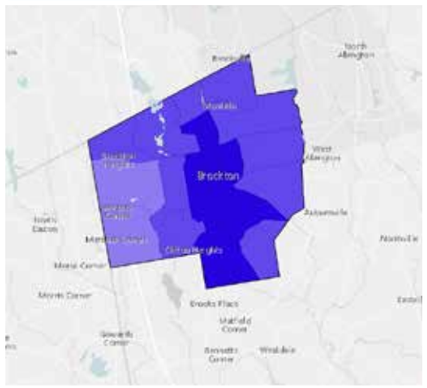
Lynn



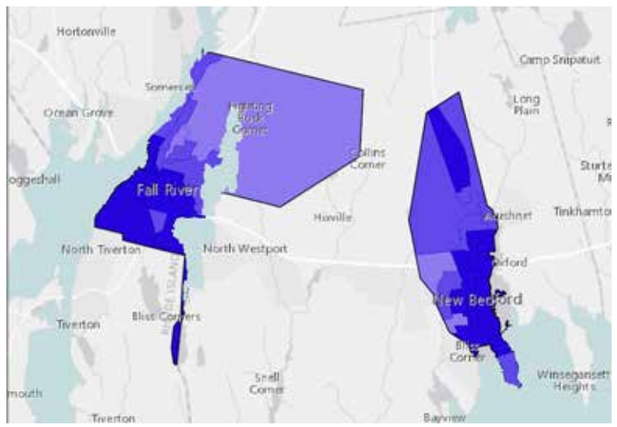
Boston



Brockton



Fall River & New Bedford



Legend

Current Smokers, Percent of Adults Age 18+ by Census Tract
BRFSS 500 Cities Project 2014

- Over 25.0%
- 20.1% - 25.0%
- 15.1% - 20.0%
- Under 15.1%
- No Data or Data Suppressed

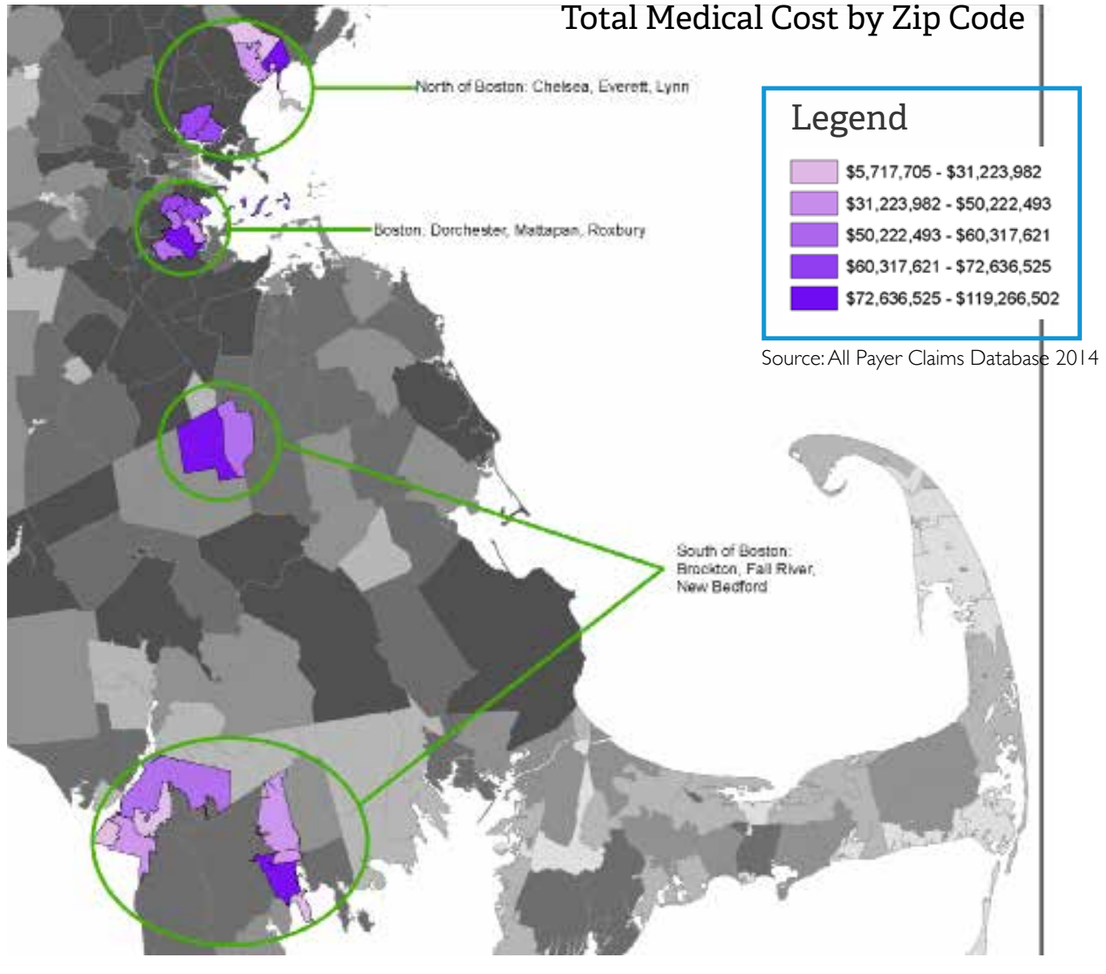
Community Commons, 3/30/2017

HEALTHCARE USE & COSTS

In the US, half of the population spends very little or nothing on health care, while 5 percent of the population spends almost half of all of all dollars spent on healthcare.[21] Such a large amount spent by very few people indicates that a small portion of the population is very sick and is expensive to care for.

Total Medical Cost by Zip Code
(per 1,000 patients)

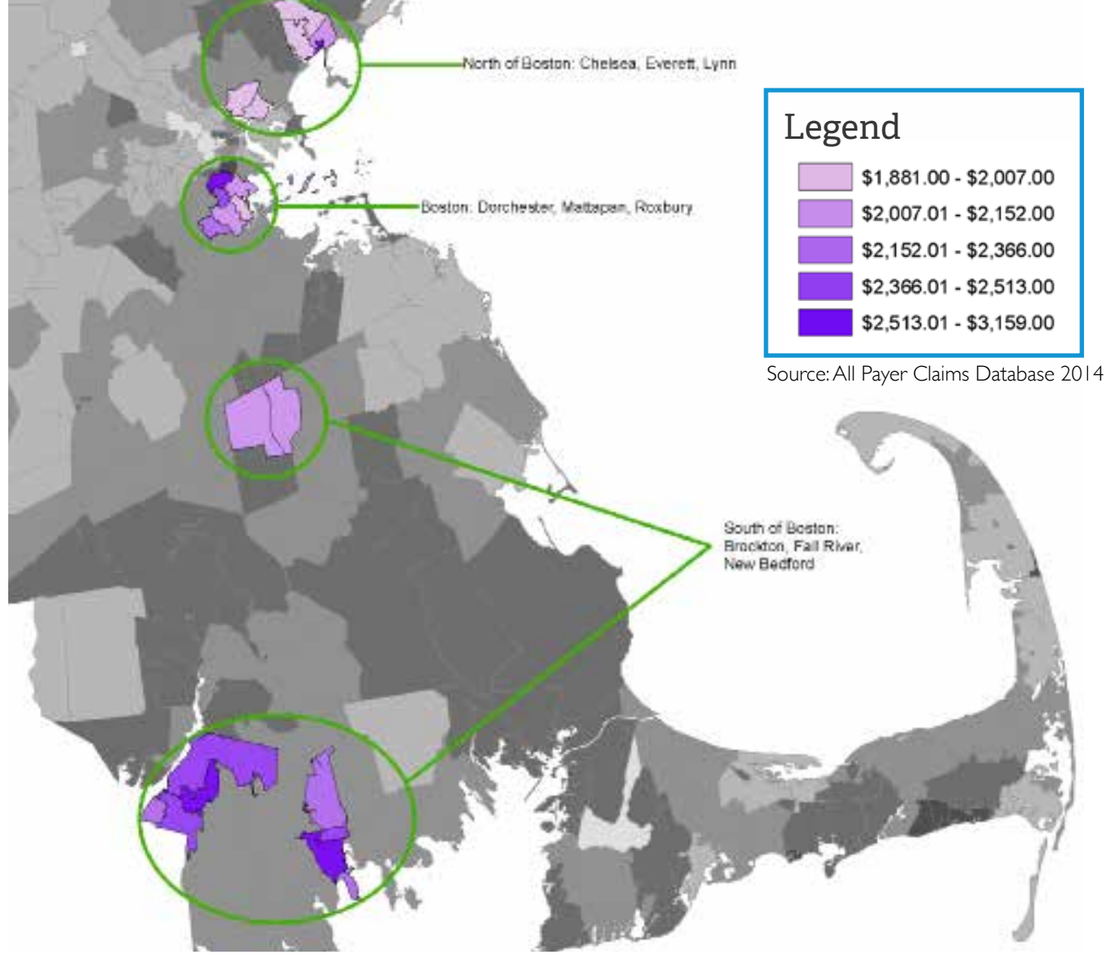
Total Medical Cost by Zip Code



Source: All Payer Claims Database 2014

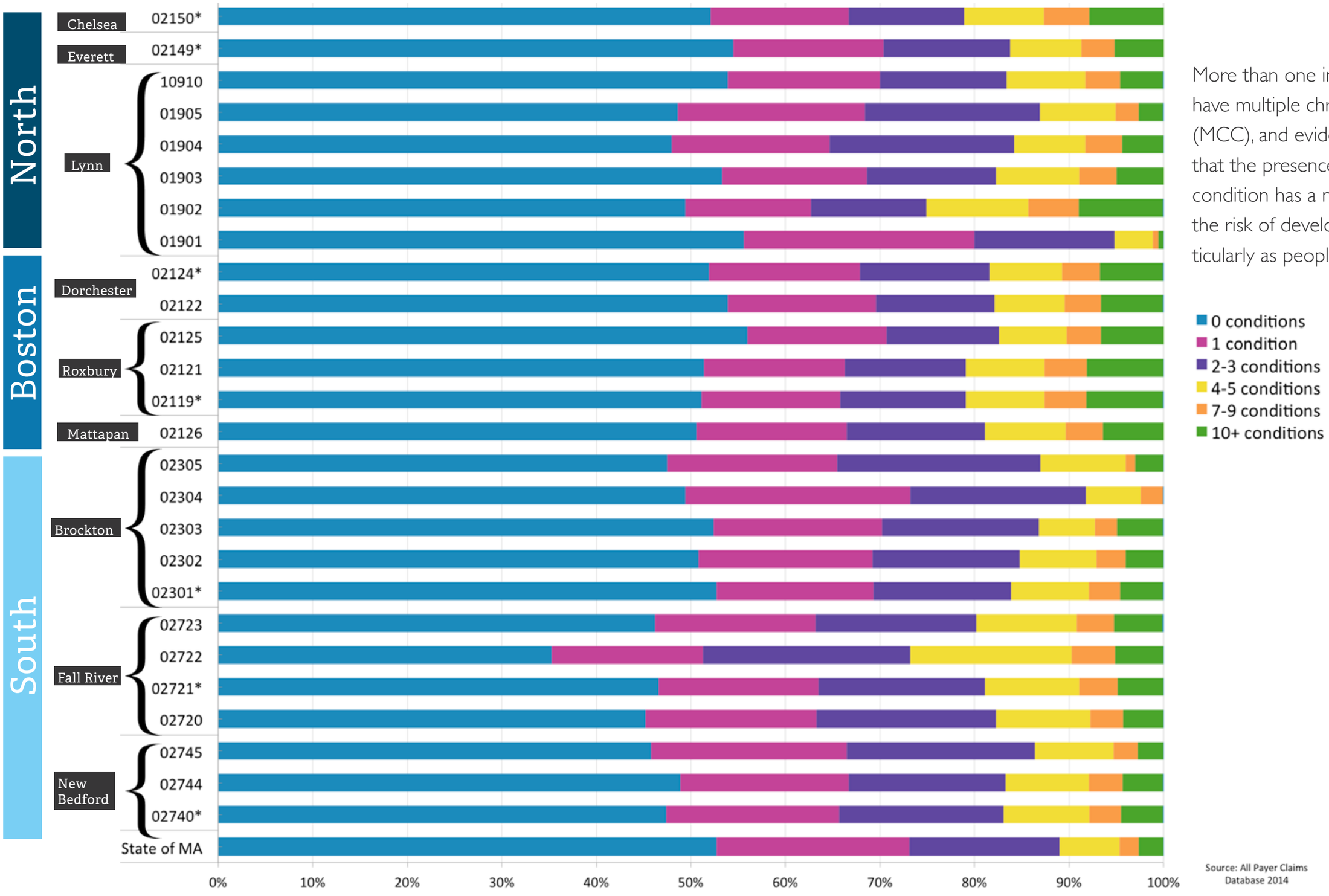
Average Medical Cost by Zip Code
(per 1,000 patients)

Average Medical Cost Per Person by Zip Code



Source: All Payer Claims Database 2014

BURDEN OF DISEASE



More than one in four Americans have multiple chronic conditions (MCC), and evidence is growing that the presence of one chronic condition has a negative impact on the risk of developing others, particularly as people age.[22]

APPENDIX

State of Place Index & Profile

Baseline Assessments Conducted June - August 2016

The State of Place™ Index (SOP) is a tool used to assess the sense and quality of walking in an urban place. Together, the State of Place Index & Profile provide a measurable review of how walkable a neighborhood is, and point out things that make walking more enjoyable, like green spaces and art. SOP assessments can be taken overtime to track changes in walkability. The State of Place Index is a score ranging from 0-100. It is calculated by taking 286 measures of the outdoor walking environment – sidewalks benches, street trees, and land uses –that are assessed block by block.[14]

URBAN FABRIC

Form	Density	Connectivity
Streetscape continuity and enclosure (e.g. distance from the street to a building, street width, building heights).	Building height and closeness to one another.	Ease of access and lack of barriers to walking (e.g. six lane roads).

DESTINATIONS

Proximity	Parks & Public Spaces	Recreational Facilities
Mix of uses of land and buildings (e.g. retail, open space, housing, offices, parks).	Presence, quality, and access to parks and public spaces.	Presence of outdoor and indoor places and spaces to be active.

HUMAN NEEDS & COMFORT

Pedestrian Amenities	Traffic Safety
Features that make it comfortable for people to walk and bike (sidewalks, seating)	Quality and safety of the intersection; traffic calming features

LIVELINESS & UPKEEP

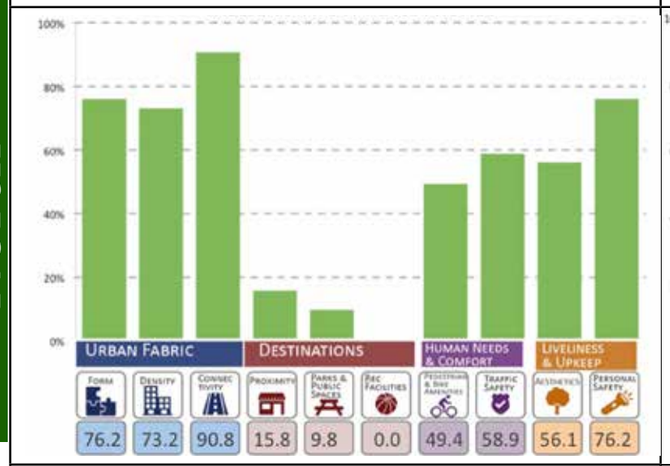
Aesthetics	Traffic Safety
Urban design features that make places dynamic and inviting	Features that influence perceptions of safety (graffiti, litter, broken windows, etc)

State of Place Index & Profile

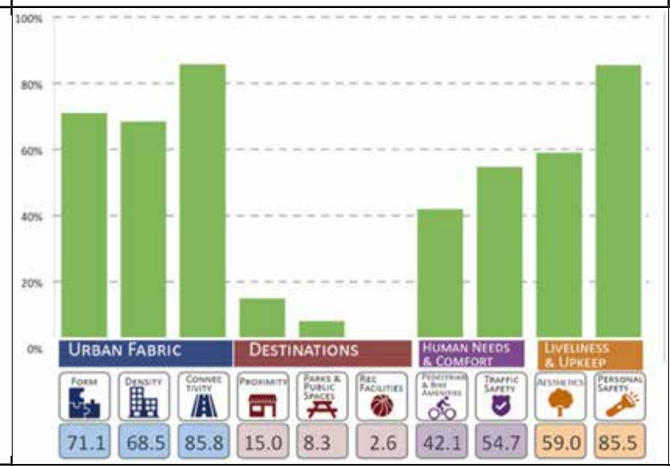
Baseline Assessments Conducted June - August 2016

North

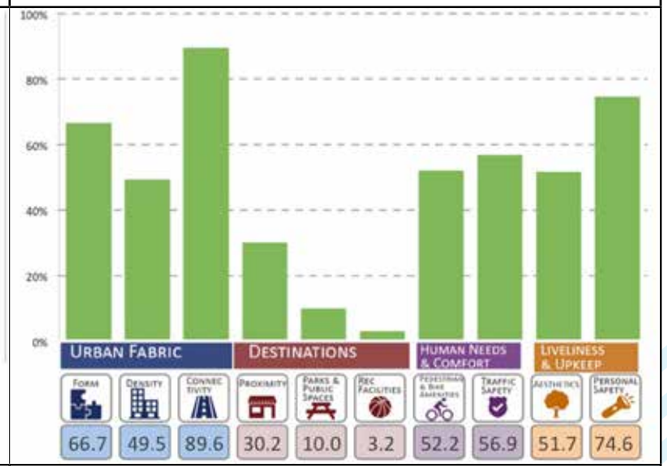
Chelsea: 56.58%



Everett: 54.74%



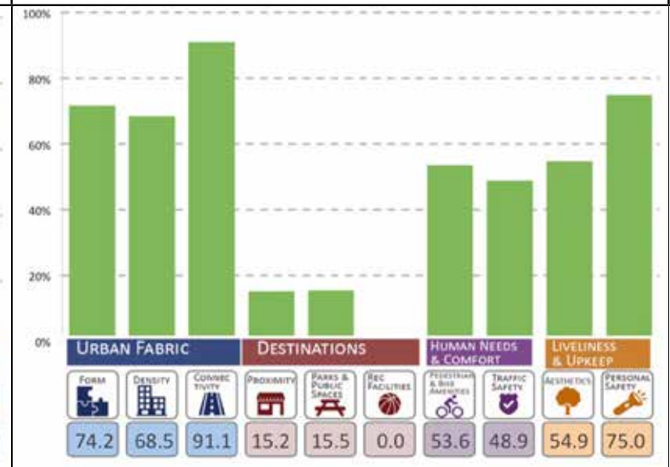
Lynn: 54.89%



Boston

Roxbury: 54.64%

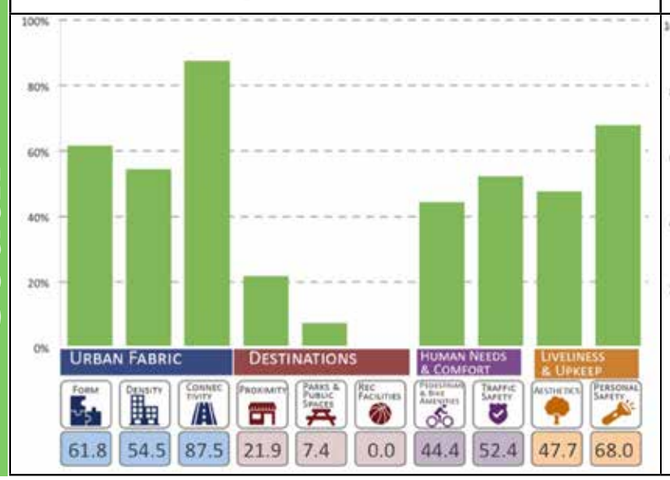
Dorchester: 53.79%



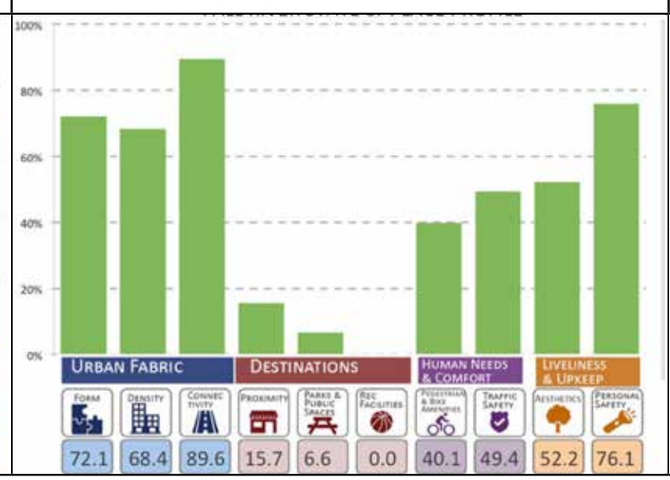
Mattapan: 44.34%

South

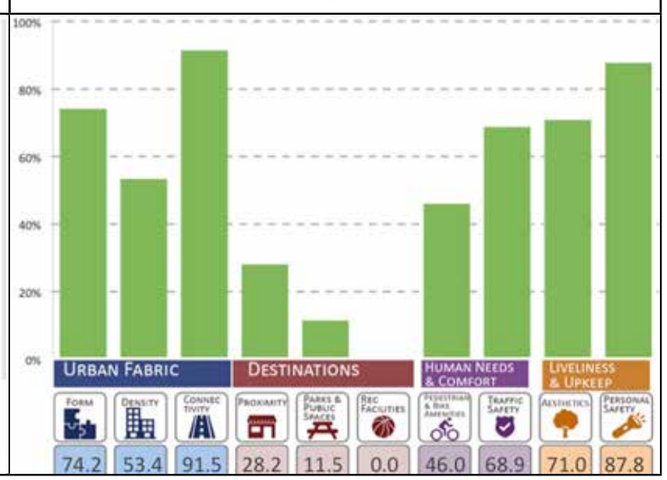
Brockton: 46.52%



Fall River: 49.79%



New Bedford: 66.03%



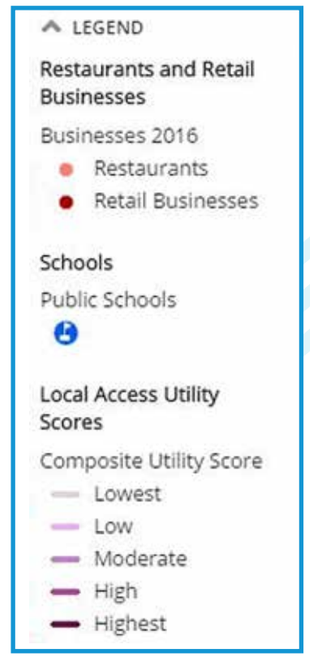
Local Access Score: North

Lynn

LOCAL ACCESS SCORES were created by the Massachusetts Area Planning Council to show how well roads connect people walking or biking from their homes to nearby school, shops and restaurants, parks, and transit stations.[18]

Local Access scores are calculated using travel demand software to estimate the number of trips households are likely to make in a given day, the likely destinations of those trips, and the most direct routes to get there.

The darker the line, the higher the score. Dark red lines represent streets that connect the most people to the most places. Light pink lined connect the fewest people with local destinations.



Everett

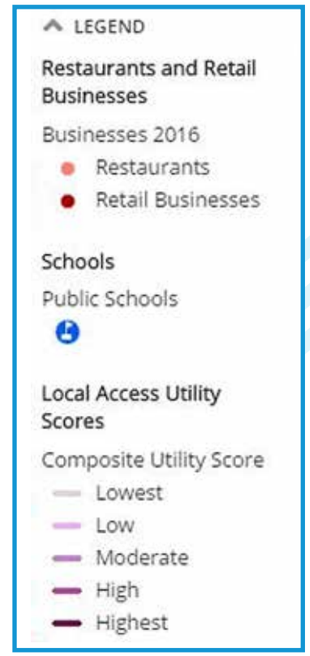
Chelsea

Local Access Score: Boston

Roxbury

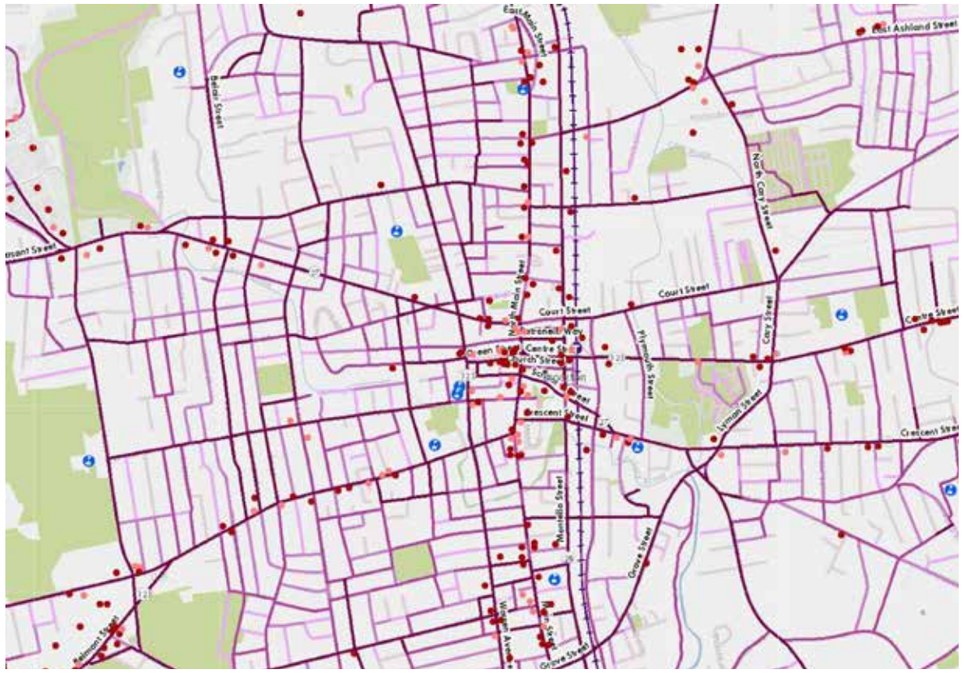
Mattapan

Dorchester



Local Access Score: South

Brockton



Fall River

New Bedford

LEGEND

Restaurants and Retail Businesses

Businesses 2016

- Restaurants
- Retail Businesses

Schools

Public Schools

Local Access Utility Scores

Composite Utility Score

- Lowest
- Low
- Moderate
- High
- Highest

Urban Planning and Policy Definitions

Term	Definition
Community Preservation Act	Allows a surcharge on local property taxes up to 3% to help fund open spaces, historic preservation, and affordable housing. There is a matching State fund.
Community Investment Tax Credit	A tax credit obtained by CDCs that allows individuals and businesses to donate a minimum $1,000. In return, donors receive 50% state tax credit on the donation and up to 35% federal tax credit.
Casino Zoning and Planning	Towns or Cities in which casinos are legally allowed. Zoning has been changed to allow casino use.
TDI Districts	Fund that helps subsidize developments in Gateway designated cities. Focused on dense, high walkability areas.
Land Banks	Community-owned land in a designated Trust, use for housing, open space, and urban farming.
40R Districts	Smart Growth Zoning Overlay Districts which allows locales to encourage Transit-Oriented Developments by offering financial incentives.
Gateway Cities	Designated for midsized urban centers with economic challenges and unrealized potential.
Massachusetts Workforce Housing Fund	Supports the creation of rental housing that is affordable for working families whose incomes are too high for subsidized housing but are priced out of market rents.
Housing Development Incentive	Provides Gateway Cities with a development tool to increase residential growth, expand diversity of housing stock, support economic development, and promote neighborhood stabilization in designated areas. The program provides two tax incentives to developers to undertake substantial rehabilitation of properties for lease or sale as multi-unit market rate housin.
Mass Green Communities Designation	Qualifies communities for grants that finance additional energy efficiency and renewable energy projects at the local level.

Data Sources & Works Cited

1. Edmonds, A., Braveman, P., Arkin, E., & Jutte, D. (2015). How Do Neighborhood Conditions Shape Health? An Excerpt from Making the Case for Linking Community Development and Health. Retrieved from http://www.buildhealthyplaces.org/content/uploads/2015/09/How-Do-Neighborhood-Conditions-Shape-Health.pdf

2. Healthy Neighborhoods Equity Fund LP (2017). The Healthy Neighborhoods Equity Fund. Retrieved from www.HNEFund.org

3. Ludwig, J., Duncan, G.J., Gennetian, L.A., Katz, L.F., Kessler, R.C., Kling, J.R., & Sanbonmatsu. (2012). Neighborhood Effects on the Long-term Well-being of Low-Income Adults. Science, 337(6101), 1505–1510. http://doi.org/10.1126/science.1224648

4. Institute for Policy Studies. (2017). Inequality and Health. Retrieved from http://inequality.org/inequality-health/

5. Catlin, B., Jovaag, A., & Van Dijk, J.W. (2015). 2015 County Health Rankings Key Findings Report. Retrieved from: http://www.countyhealthrankings.org/sites/default/files/resources/CHR%26R%202015%20Key%20Findings.pdf

6. Robert Wood Johnson Foundation. (2013, March 1). Infographic: Better Education = Healthier Lives. Retrieved from http://www.rwjf.org/en/library/infographics/infographic--better-education---healthier%2520lives.html

7. Bell, J. & Lee, M.M. (2011). Why Place and Race Matter: Impacting health through a focus on place and race. Retrieved from http://www.policylink.org/sites/default/files/WPRM_EXEC_SUM_LOW_RES.PDF

8. The Boston Indicators Project. (2016). Civic Vitality: 1.7.1 Linguistic Isolation & Multilingual Access. Retrieved from http://www.bostonindicators.org/indicators/civic-vitality/1-7welcoming-inclusive-environment/171-lingiso

9. Robert Wood Johnson Foundation. (2013, January 13). Infographic: Stable Jobs = Healthier Lives. Retrieved from: http://www.rwjf.org/en/library/infographics/infographic--stable-jobs---healthier-lives.htm

10. Guzman, C., Bhatia, R., and Durazo, C. (2005). Anticipated Effects of Residential Displacement on Health: Results from Qualitative Research. Retrieved from http://www.pewtrusts.org/~/media/assets/2005/hiareporttrinityplazahousingredevelopment.pdf

11. Frank, D. A., Neault, N. B., Skalicky, A., Cook, J. T., Wilson, J. D., Levenson, S., & Black, M. M. (2006). Heat or eat: the Low Income Home Energy Assistance Program and Nutritional and Health Risks among Children Less than 3 Years of Age. Pediatrics, 118(5), e1293-e1302.

12. Coulton, C., Theodos, B., & Turner, M.A. (2012). Residential mobility and neighborhood change: Real neighborhoods under the microscope. Cityscape, 55-89.

13. Reardon, T. & Dutta, M. (2012). Growing Station Areas: The Variety and Potential of Transit Oriented Development in Metro Boston. Retrieved from http://www.mapc.org/sites/default/files/MAPC-TOD-Report-FINAL-web-reduced-size.pdf

14. Reardon, T., Hari, M., Akhavan, A., Shulll, S., Wallace, E., Pollack, S., & Gartsman, A., (2015). Information Station: User Guide and Data Dictionary. Retrieved from: http://www.tstation.info/user_guide.pdf

15. Nelson, R.K., Winling, L., Marciano, R., Connolly, N. et al. (2015). Mapping Inequality. In R. K. Nelson & E. L. Ayers (Eds.), American Panorama. Retrieved from https://dsl.richmond.edu/panorama/redlining/#loc=4/36.71/-96.93&opacity=0.8&text=intro

16. Fanous, J., Habeeb, N., Matthews, C., & Raczka, L. (2016). Massachusetts Food Access Index: A Pilot Method for Assessing Food Access in the Commonwealth. Retrieved from http://www.mapc.org/sites/default/files/Food%20Access%20Index%20Score%202016_DRAFT.pdf

17. State of Place Score. State of Place. Urban Imprint Inc. www.urbanimprint.com/state-of-place

18. Fanous, J., Habeeb, N., Matthews, C., & Raczka, L. (2016). Massachusetts Food Access Index: A Pilot Method for Assessing Food Access in the Commonwealth. Retrieved from http://www.mapc.org/sites/default/files/Food%20Access%20Index%20Score%202016_DRAFT.pdf

19. United States Environmental Protection Agency. (2017). Overview of the Brownfields Program. Retrieved from: hhttps://www.epa.gov/brownfields/brownfield-overview-and-definition

20. U.S. Department of Transportation. (2015, October 26). Integrate Health and Transportation Planning. Retrieved from https://www.transportation.gov/mission/health/Integrate-Health-and-Transportation-Planning

21. Local Access Score. Explore the Score. Massachusetts Area Planning Commission. http://localaccess.mapc.org/

22. World Health Organization. (2017). Constitution of WHO: Principles. Retrieved from http://www.who.int/about/mission/en/

23. Gerteis, J., Izrael, D., Deitz, D., LeRoy, L., Ricciardi, R., Miller, T., & Basu, J. (2014). Multiple Chronic Conditions Chartbook: 2010 Medical Expenditure Panel Survey Data. Agency for Healthcare Research and Quality, Q14-0038. Retrieved from https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/prevention-chronic-care/decision/mcc/mccchartbook.pdf

24. Conwell, L.J. & Cohen, J.W. (2005). Characteristics of People with High Medical Expenses in the U.S. civilian noninstitutionalized population, 2002. Agency for Healthcare Research and Quality, 73. Retrieved from http://meps.ahrq.gov/mepsweb/data_files/publications/st73/stat73.pdf

25. U.S. Department of Health and Human Services. (2010). Multiple Chronic Conditions—A Strategic Framework: Optimum Health and Quality of Life for Individuals with Multiple Chronic Conditions. Retrieved from: https://www.hhs.gov/sites/default/files/ash/initiatives/mcc/mcc_framework.pdf