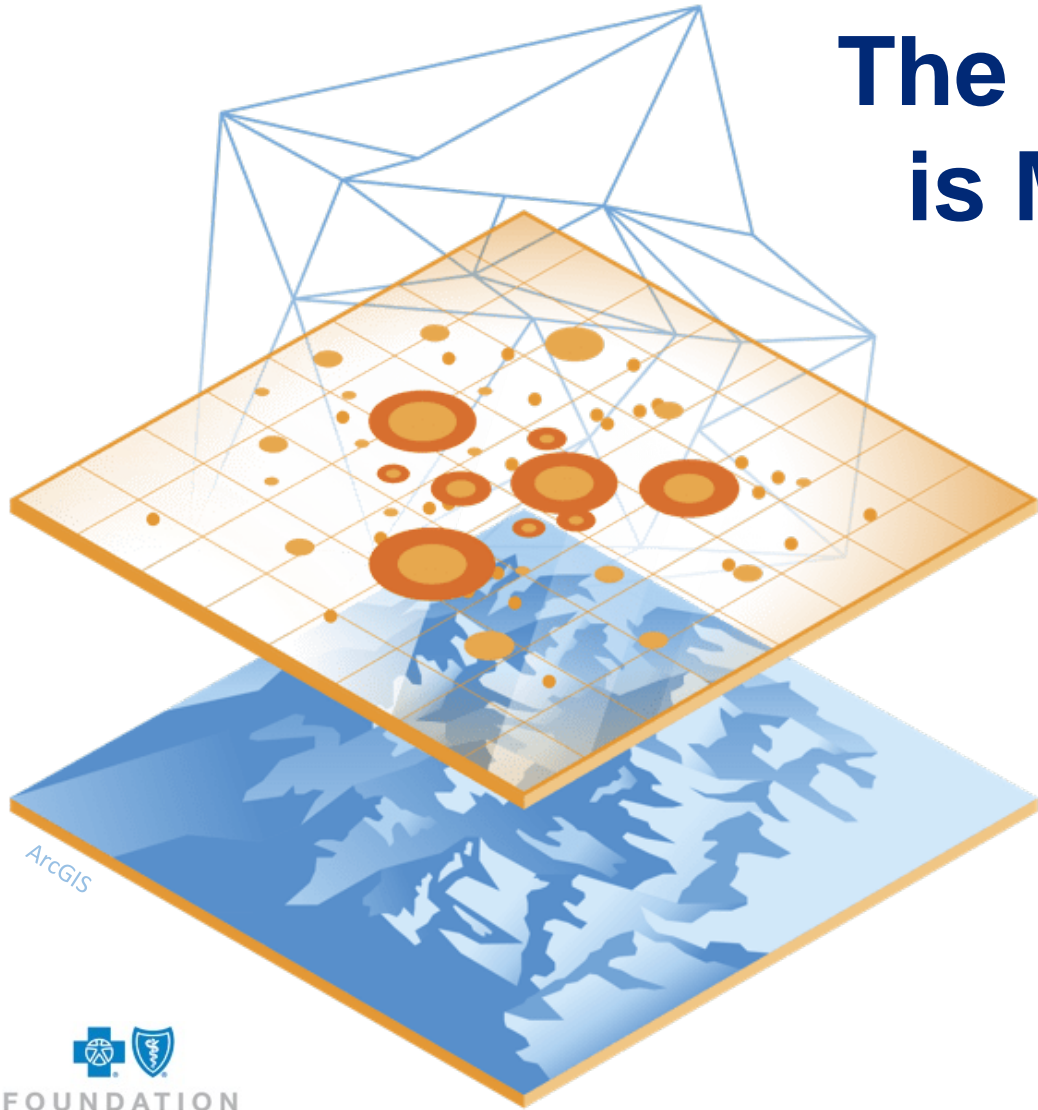


# The Massachusetts Food is Medicine State Plan



## GIS METHODOLOGY January 31<sup>st</sup>, 2019

Mapping the Need for and  
Access to FIM Interventions  
across the Commonwealth



CENTER *for* HEALTH LAW  
*and* POLICY INNOVATION  
HARVARD LAW SCHOOL

# Presenters

---



**Kristin Sukys**  
Policy Analyst  
Center for Health Law and Policy Innovation  
Harvard Law School  
[ksukys@law.harvard.edu](mailto:ksukys@law.harvard.edu)



**Sarah Downer**  
Associate Director  
Center for Health Law and Policy Innovation  
Harvard Law School  
[sdowner@law.harvard.edu](mailto:sdowner@law.harvard.edu)



**Jean Terranova**  
Director of Food and Health Policy  
Community Servings  
[jterranova@servings.org](mailto:jterranova@servings.org)



**Katie Garfield**  
Staff Attorney  
Center for Health Law and Policy Innovation  
Harvard Law School  
[kgarfield@law.harvard.edu](mailto:kgarfield@law.harvard.edu)



# Webinar Outline

---

- Overview of the State Plan
- Current state of the Plan
- Mapping the need for FIM interventions
  - Determining suitability factors
  - Disease burden analysis
  - FIM Priority Area Analysis
- Evaluating the current access to Food is Medicine interventions
- Next Steps



# What is Food is Medicine?

## FOOD IS MEDICINE



# Why here? Why Now?

THE WALL STREET JOURNAL.

The Washington Post

The New York Times

HealthAffairs

Los Angeles Times

The Boston Globe



Children's HealthWatch and Greater Boston Food Bank, 2018

# Community Servings & CHLPI



## The Impact of Medically Tailored Meals

**An innovative model for reducing healthcare costs and improving health**

Seth Berkowitz, MD MPH, University of North Carolina School of Medicine  
David B. Waters, CEO, Community Servings



## Food Is Medicine

Opportunities in Public and Private Health Care for Supporting Nutritional Counseling and Medically-Tailored, Home-Delivered Meals



# State Plan Objectives

---

1. Assess the distribution of need
2. Assess the distribution of access
3. Develop a strategy to increase the availability of Food is Medicine interventions to meet the level of need throughout the state.



# Data Collection

✓ Surveys



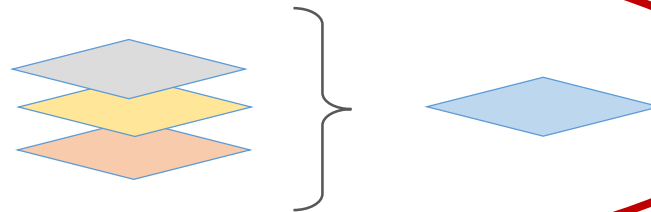
1. Healthcare Providers
2. Healthcare Payers
3. Community-based Food and Nutrition Service Organizations

✓ State-wide Listening Sessions



✓ In-Depth Community Member Interviews

Spatial Analysis



You Spoke, We Listened  
Webinar on Data Collection  
January 24, 2019



# Spatial Analysis

A background map of Massachusetts showing county boundaries and names. Visible counties include North Adams, Adams, Florida, Rowe, Charlemont, Savoy, Berkshire, Hampshire, Franklin, Hampden, and others.

**Goal: Illustrate the need for Food is Medicine interventions against the current access to Food is Medicine interventions across the state of Massachusetts**

**Step 1: Decide what factors determine the need for FIM interventions**

**Step 2: Request and map data to create FIM priority areas**

**Step 3: Geocode locations of current programs across the state**

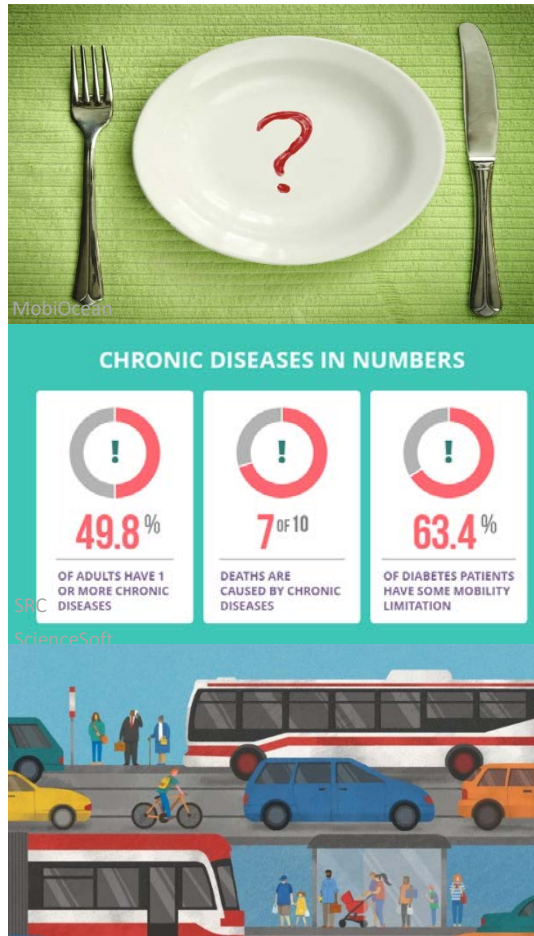
**Step 4: Create regional snapshots that incorporate regional-specific considerations**

## **DISCLAIMER !**

The methodology outlined here has some limitations. I will be mentioning many of them as we move through my steps but please feel free to comment.

# Step 1: Factors of need for FIM interventions

---



1. High rates of food insecurity
2. High burden of chronic diseases associated with food insecurity
3. Lack of accessible and reliable transportation

# Chronic Disease Literature Review Results:

- Alcohol Dependence
- Asthma
- Cancer
- Chronic Kidney Disease
- Chronic Obstructive Pulmonary Disease
- Chronic Ischemic Heart Disease
- Diabetes Mellitus (Type 2)
- Depression/Anxiety
- Fibromyalgia
- Frailty
- Gout
- Heart Failure
- Hepatitis
- Hypertension
- Iron Deficiency Anemia
- Low Birth Weight
- Lupus
- Metabolic Syndrome
- Obesity
- Arthritis
- Rheumatoid Arthritis
- Severe Mental Disorders
- Stroke
- Tobacco Dependence
- HIV/AIDS

## 15 Diseases with assumed strong association with food insecurity

- Alcohol Dependence
- Asthma
- Cancer
- Chronic Kidney Disease
- COPD
- Chronic Ischemic Heart Disease
- Heart Failure
- Type 2 Diabetes
- Depression/Anxiety
- Hypertension
- Iron Deficiency Anemia
- Low Birth Weight
- Obesity
- Arthritis
- Stroke

\_\_\_\_\_ = Included in the MA Cost of Hunger Report by Children's HealthWatch and the Greater Boston Food Bank

Orange= identified by the CDC/USDA as having a strong correlation with food insecurity among adults living at or below 200% of the Federal Poverty Line

Orange= included in both reports

## COMPARISON AND SCORING OF FOOD INSECURITY-RELATED HEALTH CONDITIONS

CONDITION	CODES RELIABLE/VALID? <sup>1</sup>	HIGH BURDEN? <sup>2</sup>	RESPONDS TO DIETARY INTERVENTION?	RESPONDS TO FI INTERVENTION?	INCLUDED IN GBFB LIST? <sup>3</sup>	INCLUDED IN USDA/ CDC LIST? <sup>4</sup>	SCORE
1. DM2	Yes	Yes	Yes	Yes	Yes	Yes	6
2. HTN	Yes	Yes	Yes	Yes	No	Yes	5
3. Obesity	Yes	Yes	Yes	Yes	Yes	No	5
4. Asthma	Yes	Yes	No data found	No data found	Yes	Yes	4
5. CKD	Yes	Yes	Yes	No data found	No	Yes	4
6. COPD	Yes	Yes	No data found	No data found	Yes	Yes	4
7. CHD/CHF	Yes	Yes	Yes	No data found	No	Yes	4
8. Iron Deficiency	Yes, but perhaps only in pregnancy/children?	Yes	Yes	Yes	Yes	No	4
9. Low Birth Weight	Yes	Yes	Yes	Yes	No	No	4
10. Stroke	Yes	Yes	Yes	No data found	No	Yes	4
11. Depression/Anxiety	Yes	Yes	Yes	Yes (in elderly)	No	No	4
12. Cancer	No – unclear which cancers associated with FI	Yes	Yes	No data found	No	Yes	3
13. Gestational Diabetes	Yes	Yes	Yes	No data found	No	No	3
14. Hepatitis	Yes	No	Yes	No data found	No	Yes	3
15. HIV/AIDS	Yes	No	Yes	Yes	No	No	3
16. Hyperlipidemia	Unlikely – suspect very underdiagnosed given asymptomatic and requires HCM bloodwork for diagnosis	Yes	Yes	Yes	No	No	3
17. Metabolic Syndrome	No – Met-S <del>subcriteria</del> more likely to be coded	Yes	Yes	Yes	No	No	3
18. Arthritis	No – unclear which types associated with FI	Yes	No	No data found	No	Yes	2
19. Fibromyalgia	Unlikely – overlap with other inflammatory disorders	No	Yes	No data found	Yes	No	2
20. Frailty	Unlikely – not reliably/consistently coded	Yes	Yes	No data found	No	No	2
21. Gout	Unlikely – care frequently not sought; <del>underdx'd</del>	No	Yes	No data found	Yes	No	2
22. Lupus	Unlikely – overlap with other inflammatory disorders	No	Yes	No data found	Yes	No	2
23. Osteoporosis	Unlikely – overlap with other arthritic disorders	Yes	Yes	No data found	No	No	2
24. Rheumatoid Arthritis	Unlikely – overlap with other inflammatory disorders	No	Yes	No data found	Yes	No	2
25. Alcohol Dependence	Unlikely – not reliably/consistently coded; care frequently not sought; <del>underdx'd</del>	Yes	No	No data found	No	No	1
26. Tobacco Dependence	Unlikely – not reliably/consistently coded; care frequently not sought; <del>underdx'd</del>	Yes	No	No data found	No	No	1
27. Severe Mental Disorders	Unlikely – not reliably/consistently coded outside of psychiatric specialties	No	No data found	No data found	No	No	0
28. Mortality (Condition-	Yes – but unclear if required 2015 data are	NA	NA	NA	NA	NA	NA

# Final List of Chronic Diseases Included

---

## Town-Level

1. Cardiovascular Disease Hospitalizations (2015)
2. Stroke Hospitalizations (2015)
3. Diabetes Prevalence (Adults-2012, 2013, 2014)
4. 15+ Days Poor Mental Health (Adults-2012, 2013, 2014)
5. Obesity (Adults-2012, 2013, 2014)
6. Asthma (Adults- 2013, 2014, 2015)
7. HIV Prevalence (2017- Top 15 Towns)

Source: MassDPH

- Massachusetts Acute Care Database
- Behavioral Risk Factor Surveillance System
- MDPH HIV/AIDS Surveillance Program

## County Level 2011-2015

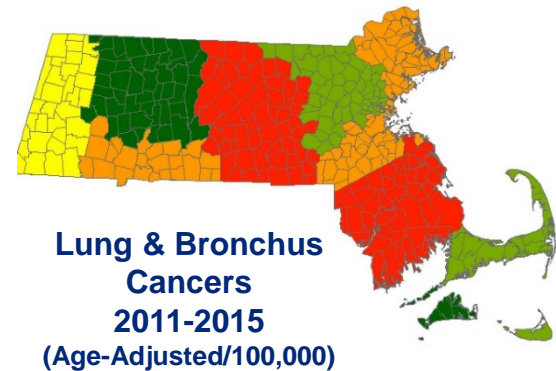
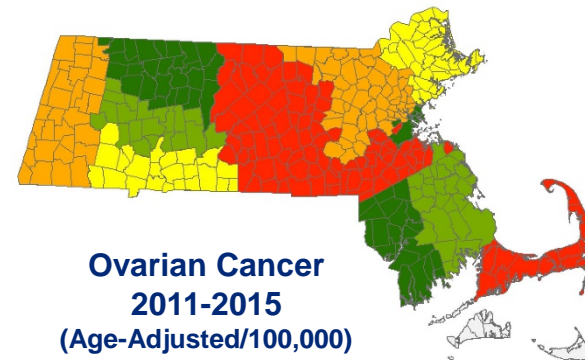
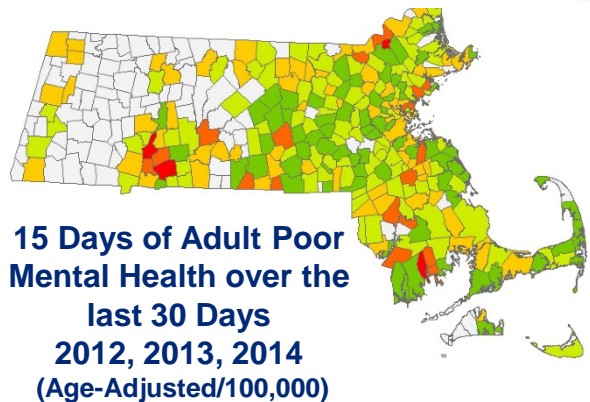
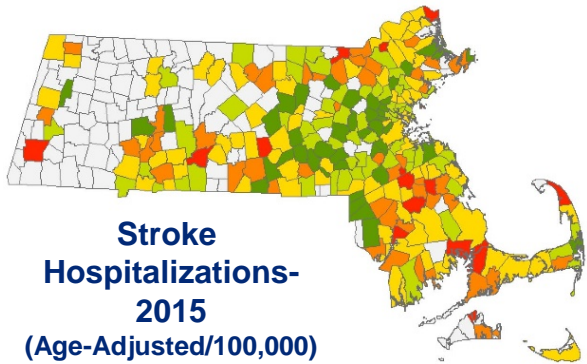
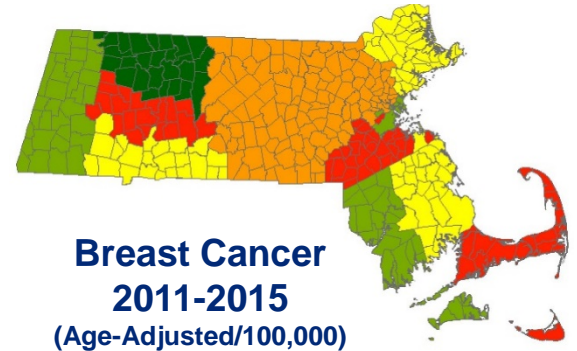
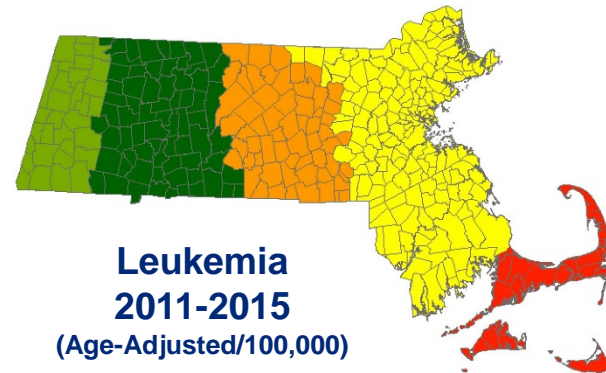
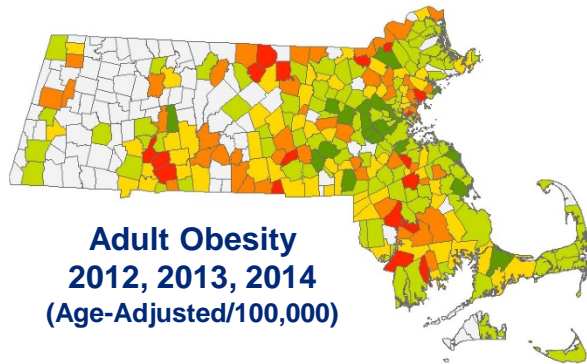
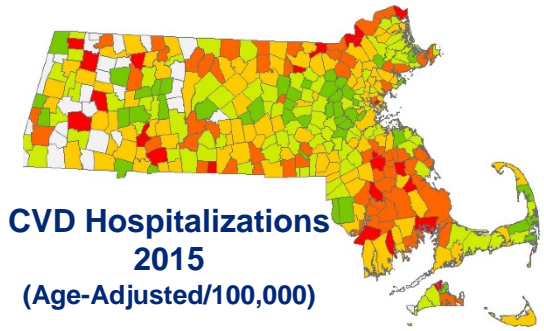
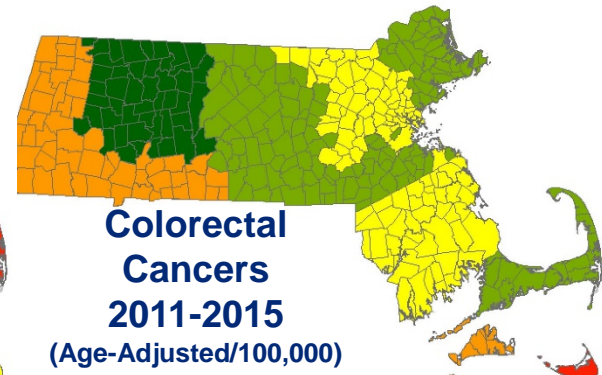
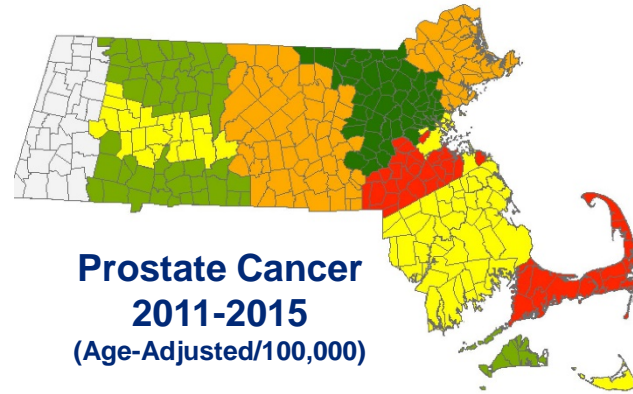
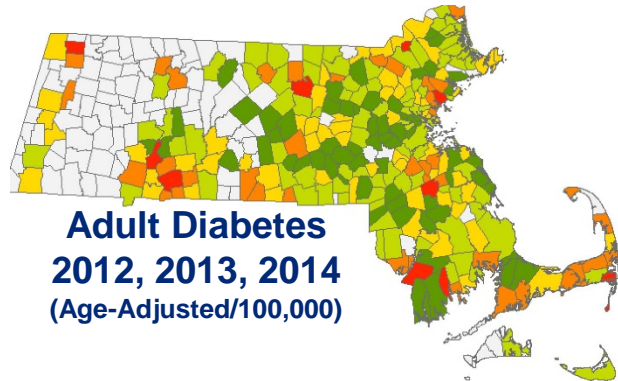
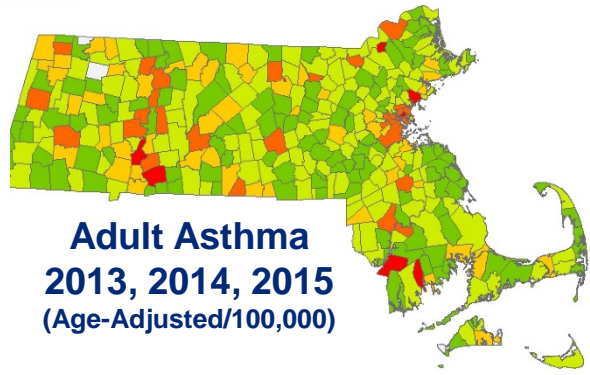
1. Lung & Bronchus Cancers
2. Colon & Rectal Cancers
3. Prostate Cancer
4. Ovarian Cancer
5. Female Breast Cancer
6. Leukemia

Source: Massachusetts Cancer Registry

**Step 2:**  
**Mapping the**  
**Data**



# Mapping the Raw Disease Data



# Data Organization and Reclassification

## Example: CVD Hospitalization Reclassification

Reclassify (2)

Input raster: cvd

Reclass field: VALUE

Reclassification

Old values	New values
0 - 250.222378	NoData
250.222378 - 829.010831	1
829.010831 - 1101.101072	2
1101.101072 - 1350.56	3
1350.56 - 1648.53	4
1648.53 - 2129.99	5
NoData	NoData

Buttons: Load..., Save..., Reverse New Values, Precision...

Output raster

Reclassify

Input raster: asthma

Reclass field: VALUE

Reclassification

Old values	New values
0 - 8.747847	NoData
8.747847 - 10.182149	1
10.182149 - 10.977738	2
10.977738 - 12.423245	3
12.423245 - 15.034123	4
15.034123 - 20	5
NoData	NoData

Buttons: Load..., Save..., Reverse New Values, Precision...

Output raster

## Example: Asthma reclassification

Different

SAME

Classification

Classification Method: Manual

Classes: 6

Data Exclusion: Exclusion ..., Sampling ...

Classification Statistics

Count:	39302
Minimum:	0
Maximum:	2129.99
Sum:	43103634.22
Mean:	1096.728773
Standard Deviation:	446.886503

Columns: 100

Break Values

250.222378
829.010831
1101.101072
1350.56
1648.53
2129.99

9277 Elements in Class

Mean: 10.713226

Standard Deviation: 1.647997

Classification

Classification Method: Manual

Classes: 6

Data Exclusion: Exclusion ..., Sampling ...

Classification Statistics

Count:	2768
Minimum:	0
Maximum:	20
Sum:	29.76
Mean:	1.075
Standard Deviation:	0.8

Columns: 100

Break Values

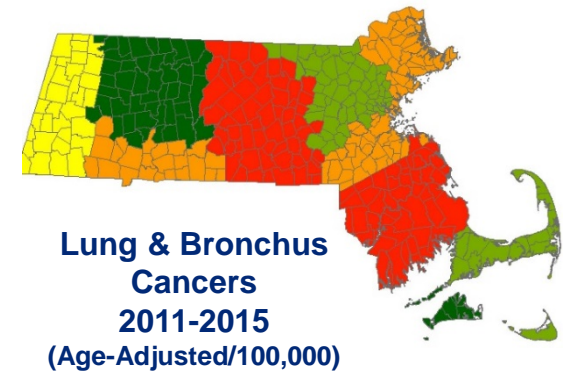
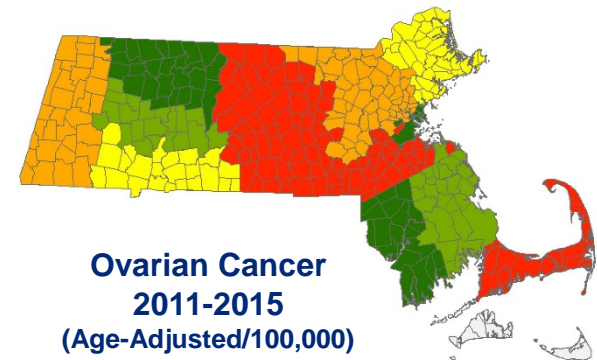
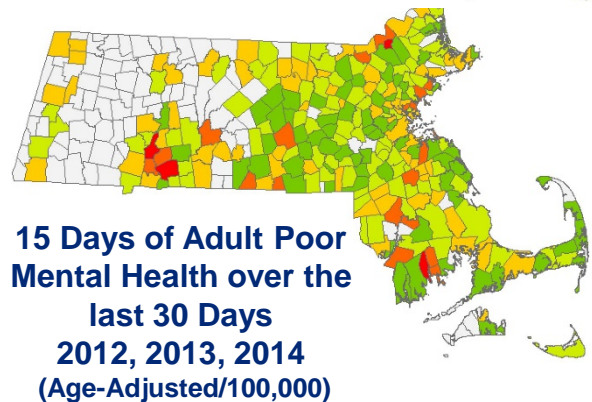
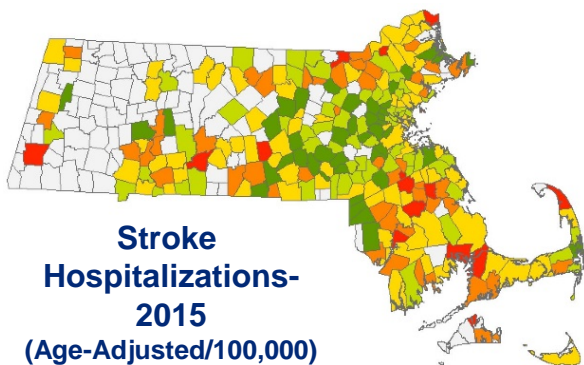
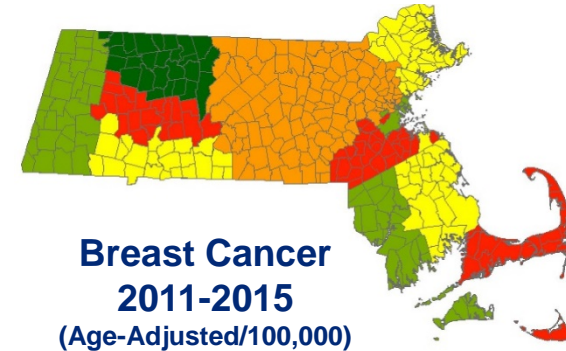
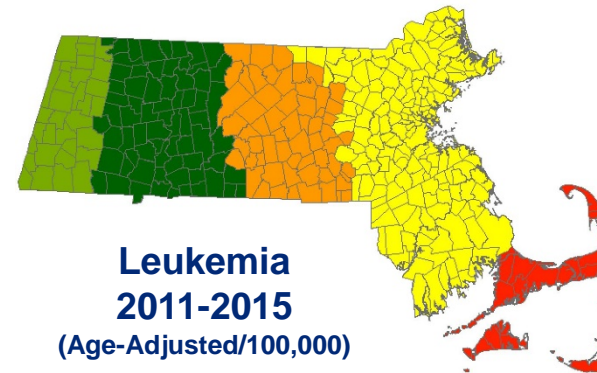
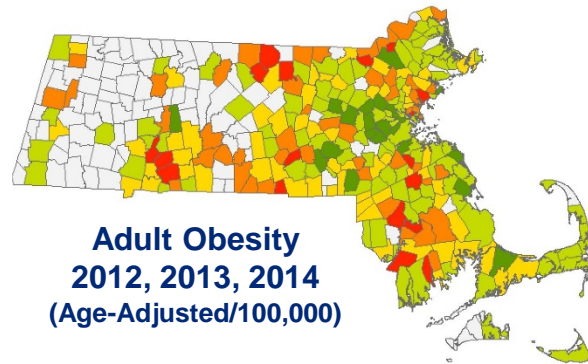
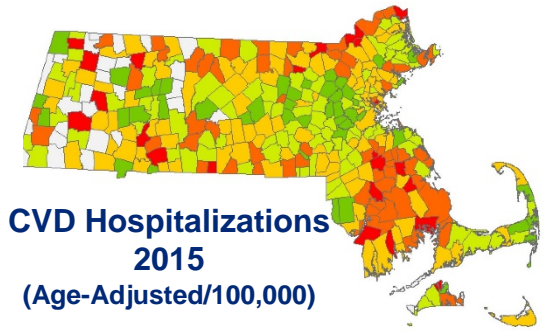
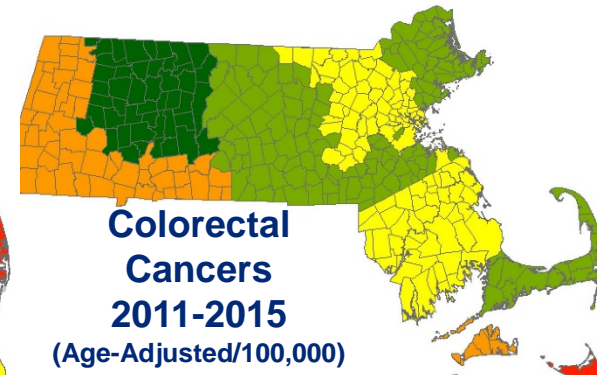
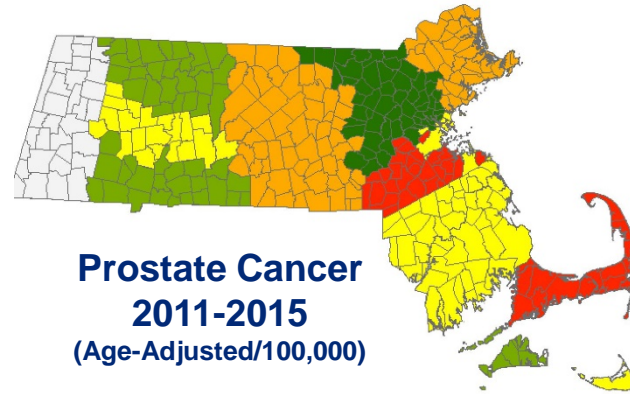
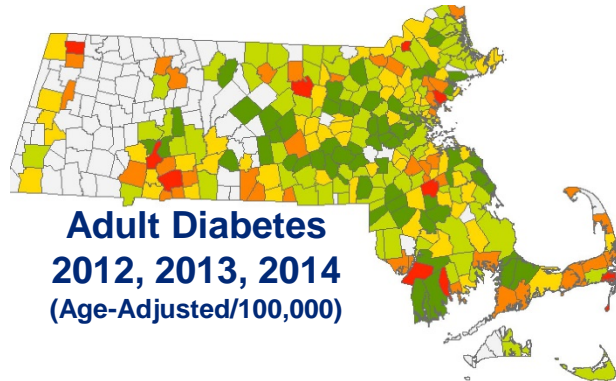
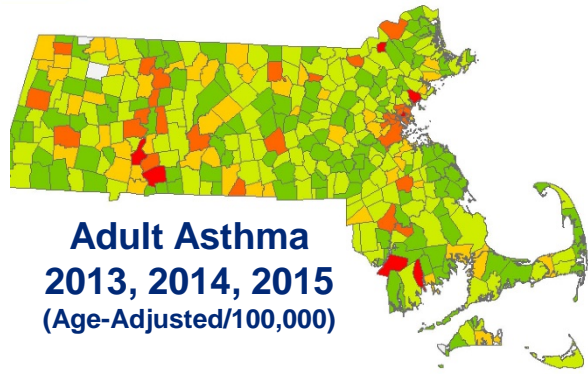
8.747847
10.182149
10.977738
12.423245
15.034123
20

2768 Elements in Class

Mean: 1.075

Standard Deviation: 0.8

# Mapping the Raw Disease Data





# Data Organization Summary

---

- All diseases were classified into 5 categories based on Natural Breaks (Jenks)
- If necessary, the break values were adjusted, though minimally
- Towns were organized into 6 groups depending on their data limitations
  1. All 13 datasets (15 towns)
  2. All 12 datasets (259 towns)
  3. Missing diabetes, obesity, poor mental health data (6 towns)
  4. Missing CVD, diabetes, obesity, or poor mental health data (25 towns)
  5. No diabetes, obesity, poor mental health, or stroke data (57 towns)
  6. Only cancer data (3 towns)
- If towns were only missing one or two statistics, the state-average statistic acted as a filler to estimate the missing statistic

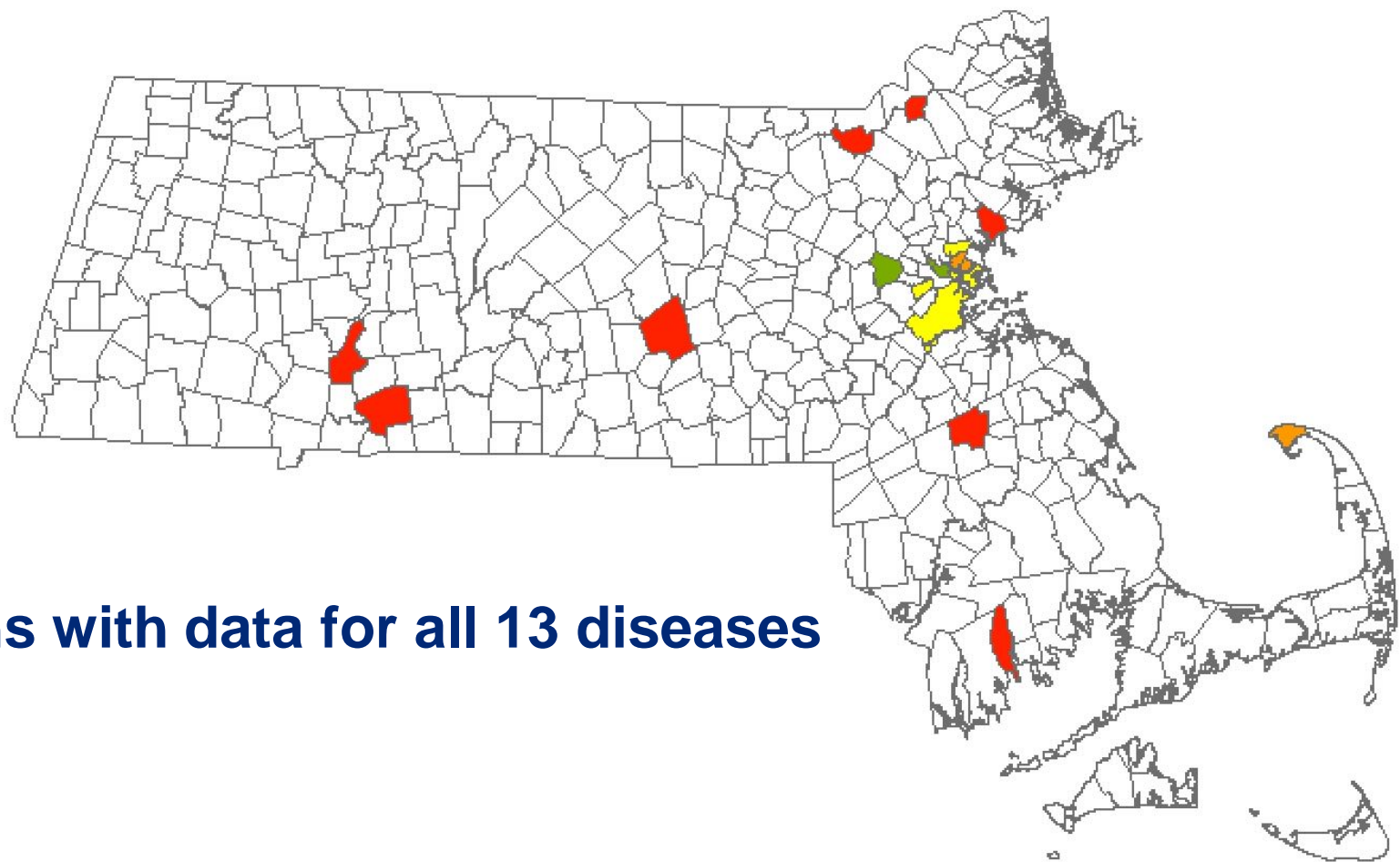
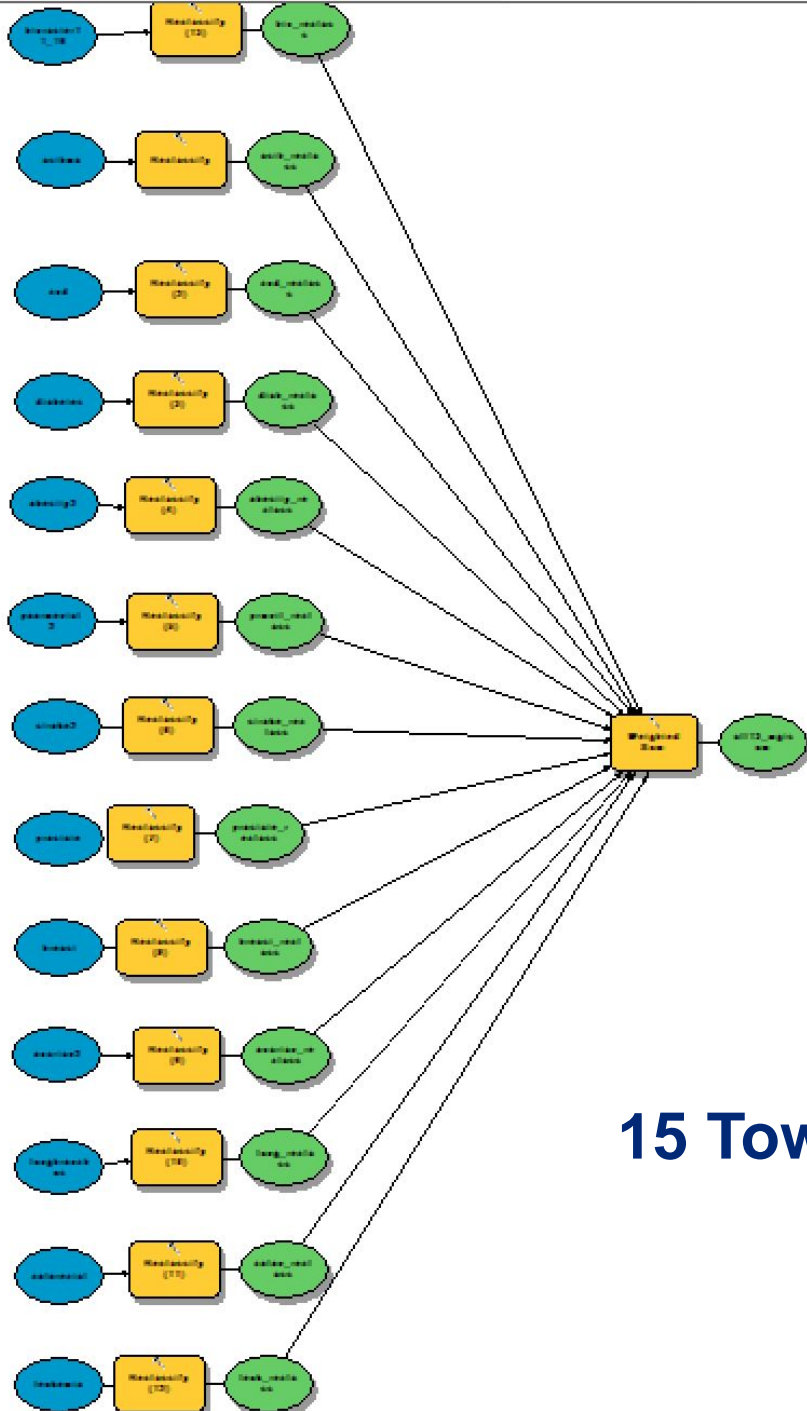
# Weighted Sum Model

---

- Process to evaluate the overall burden score given individual disease burden scores (scores 1-5)
- Weighted Sum works by multiplying the designated field values (1-5) for each input raster by the specified weight. It then sums (adds) all input rasters together to create an output raster.

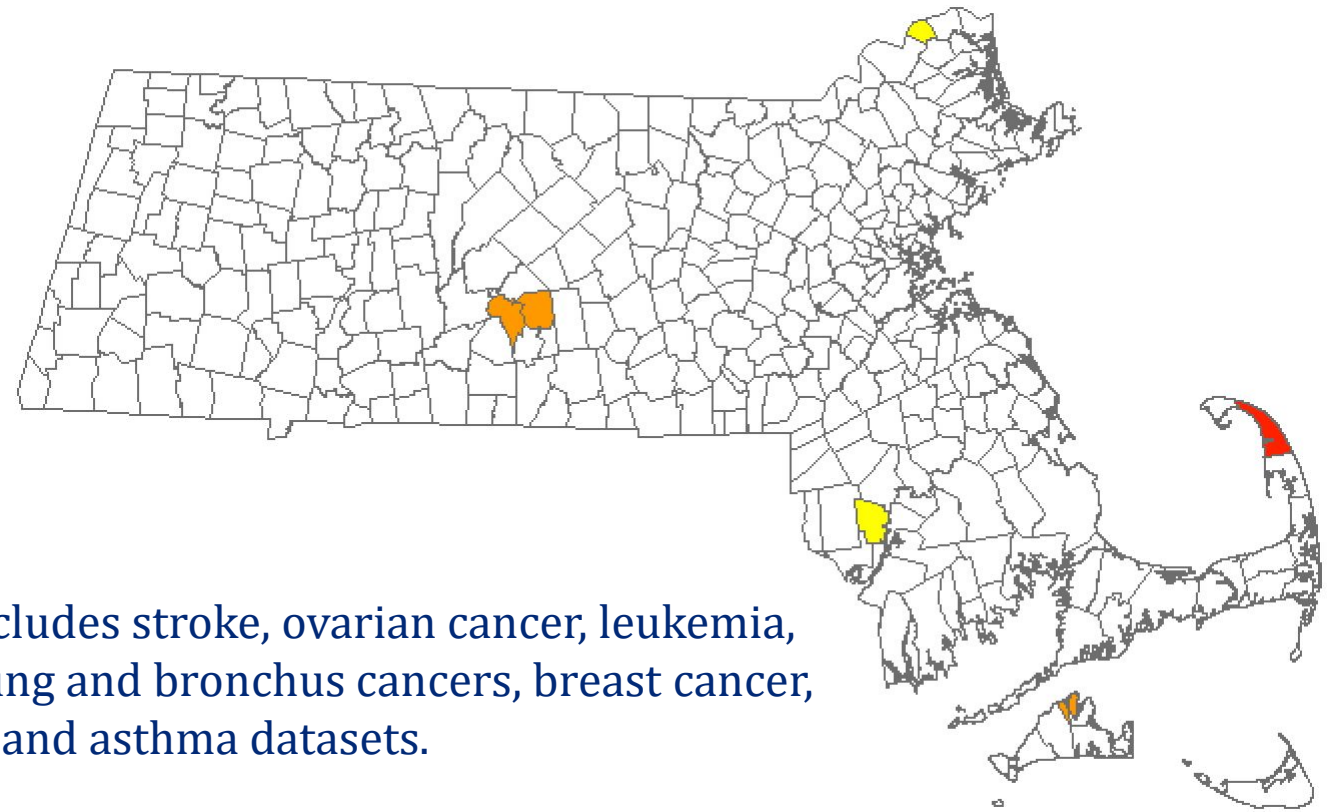
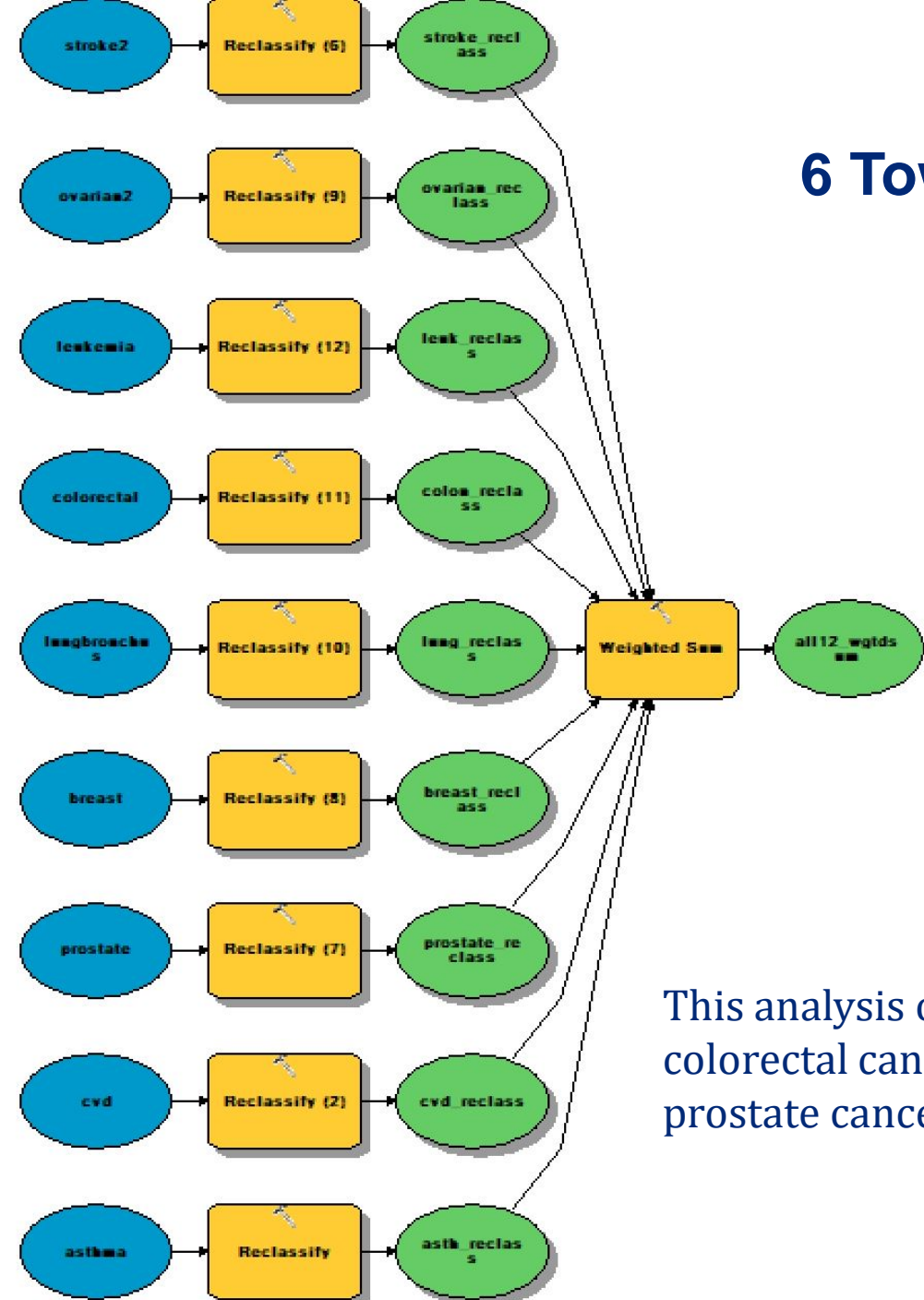
Town	Disease 1 Burden Score	Disease 2 Burden Score	Disease 3 Burden Score	Disease 4 Burden Score	Overall Burden Score
A	1	2	2	5	10
B	3	4	4	2	13

# Weighted Sum Analysis

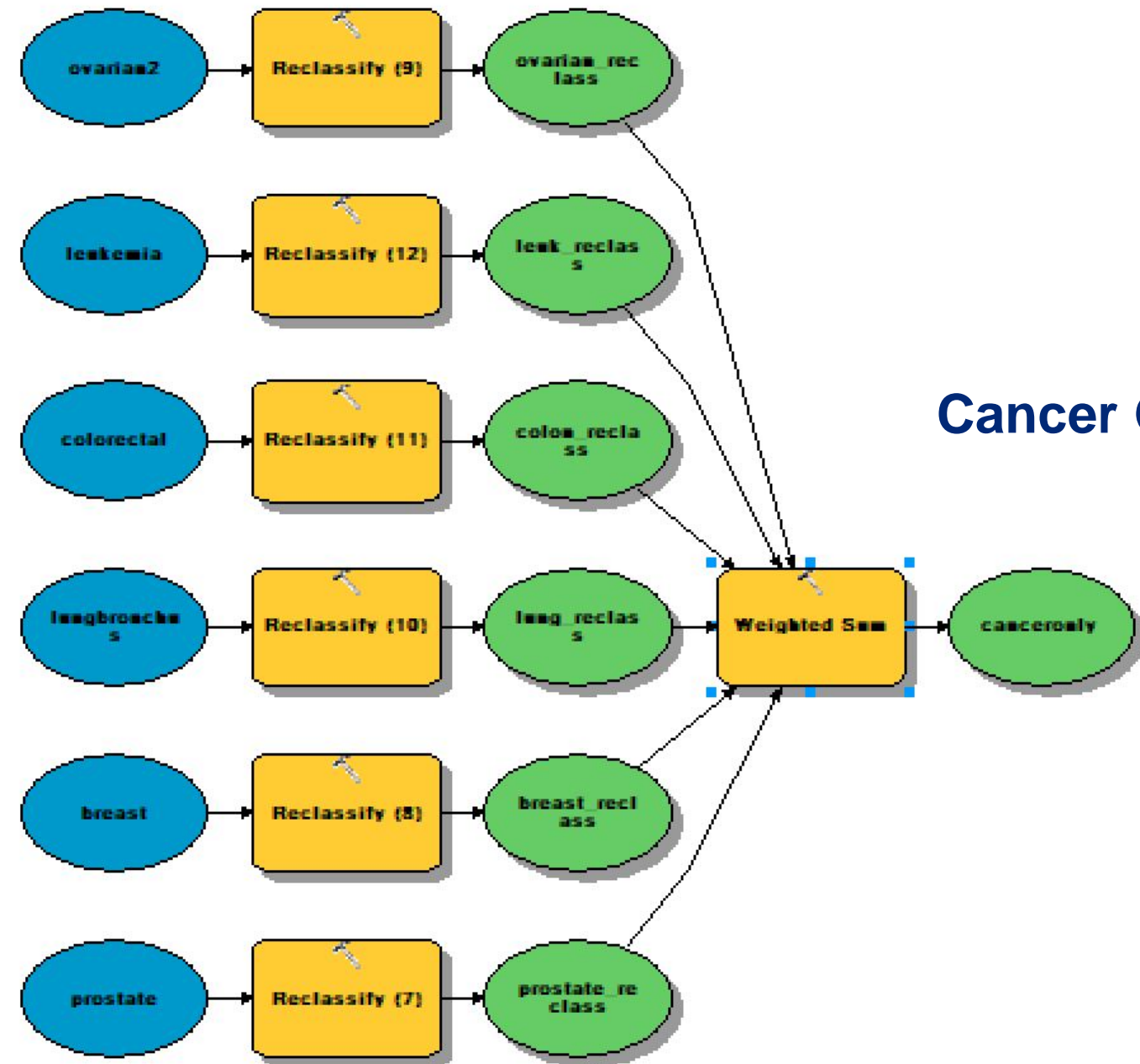


**15 Towns with data for all 13 diseases**

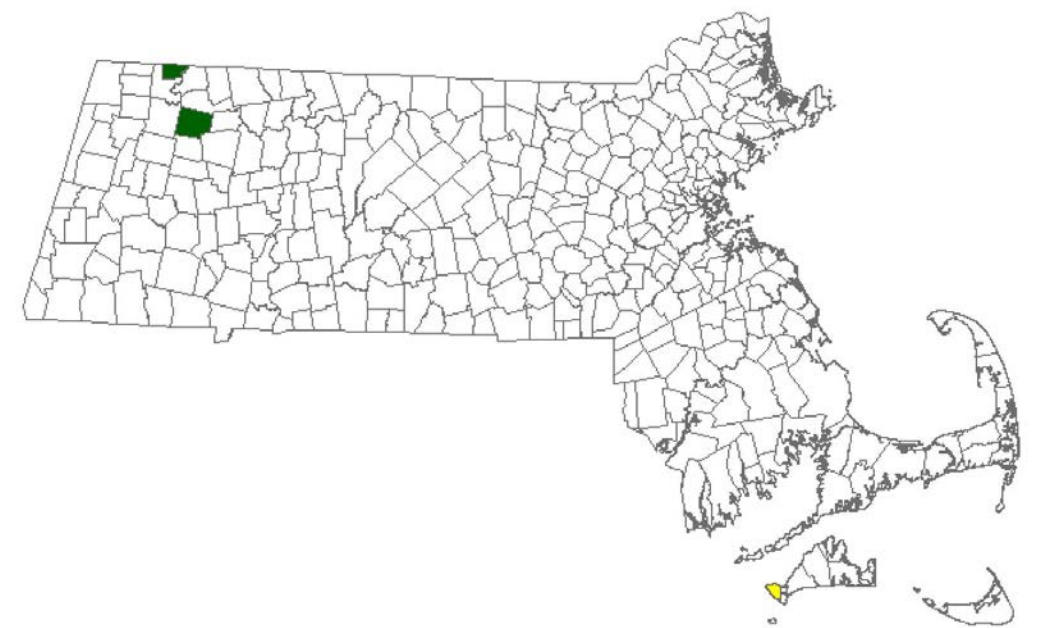
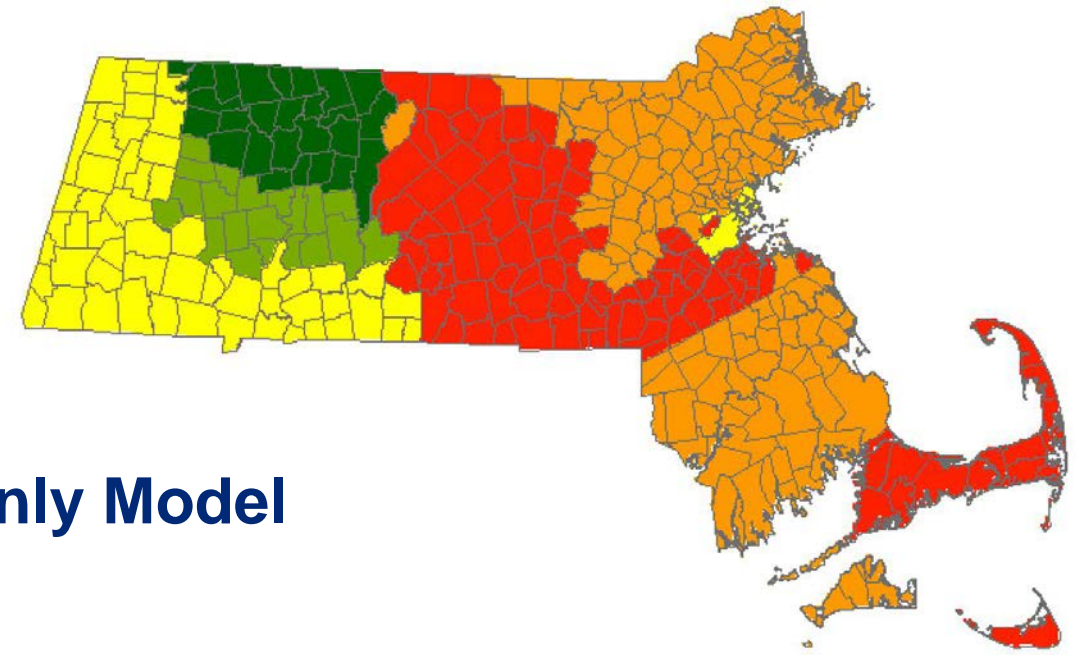
## 6 Towns missing diabetes, obesity, and poor mental health data.



This analysis only includes stroke, ovarian cancer, leukemia, colorectal cancers, lung and bronchus cancers, breast cancer, prostate cancer, cvd, and asthma datasets.



## Cancer Only Model



# 6 Separate Weighted Sum Analyses

All diseases weighted as 1.

6 towns no diabetes, obesity, or poor mental health data. Only cancer, stroke, asthma, and cvd.

25 towns with no cvd, diabetes, obesity, poor mental health or stroke data. Only asthma and cancer.

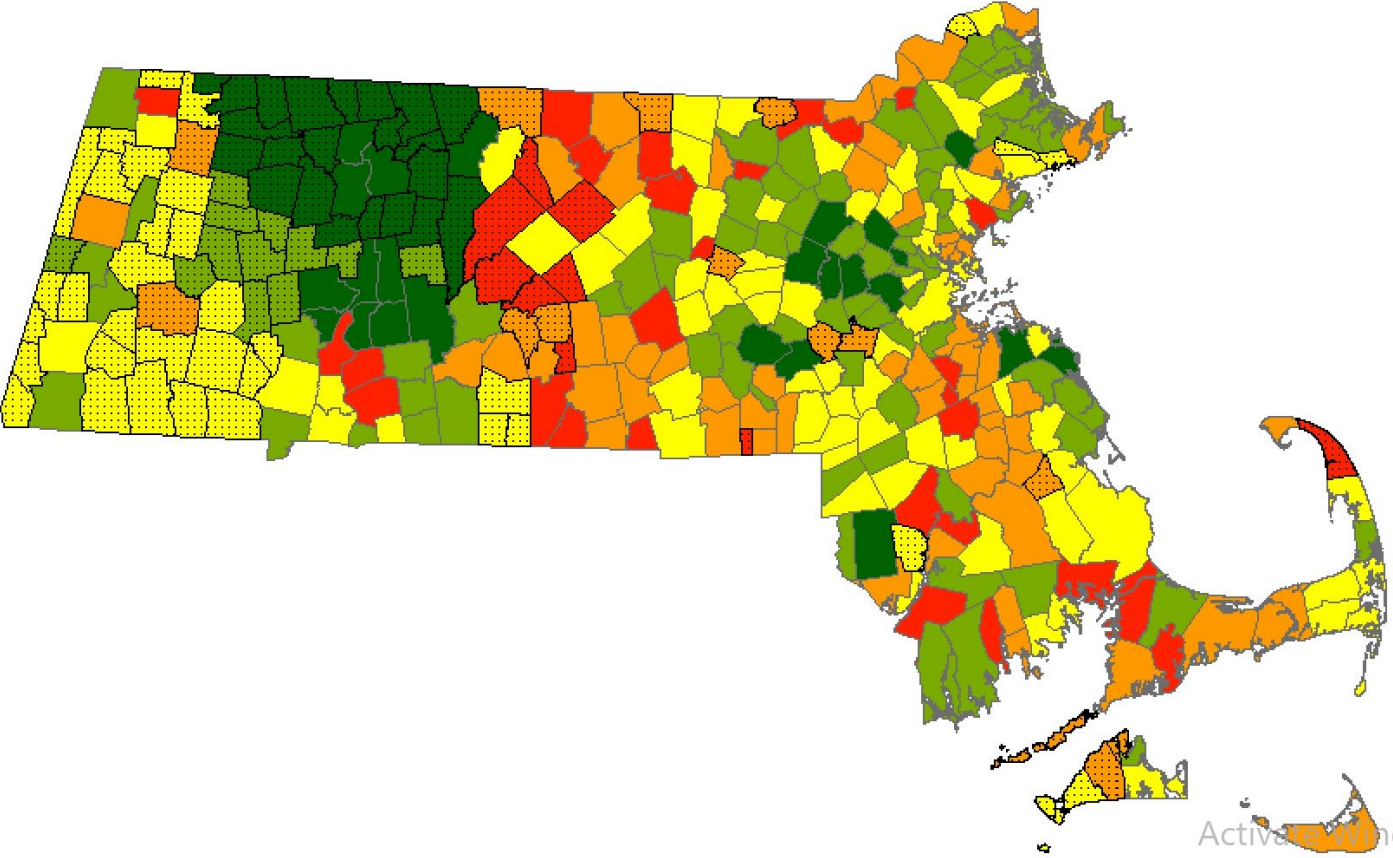
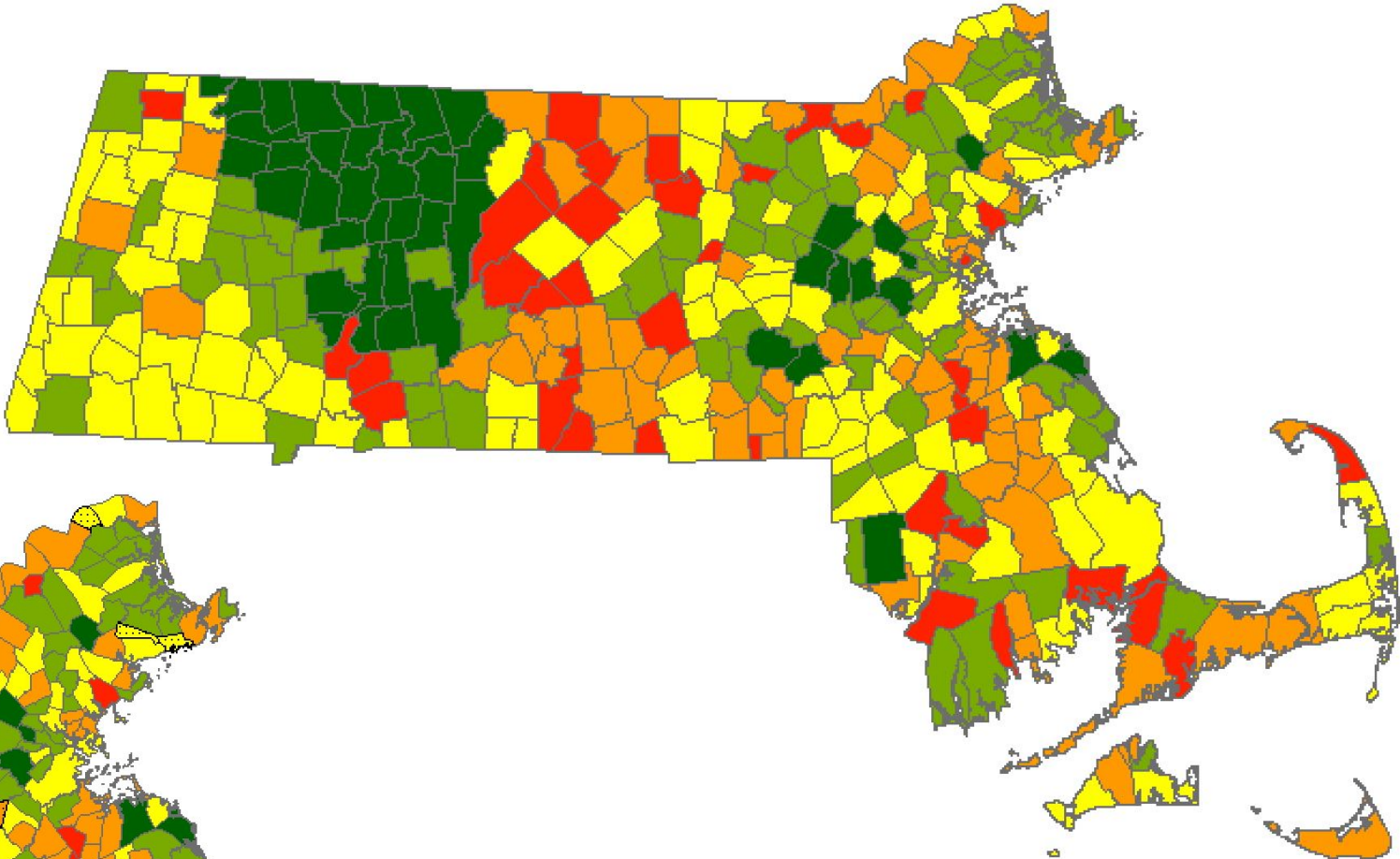
259 Towns with 12 disease datasets

57 towns with no diabetes, obesity, poor mental health or stroke data. Only cvd, asthma and cancer mapped.

15 towns with 13 diseases, including HIV incidence

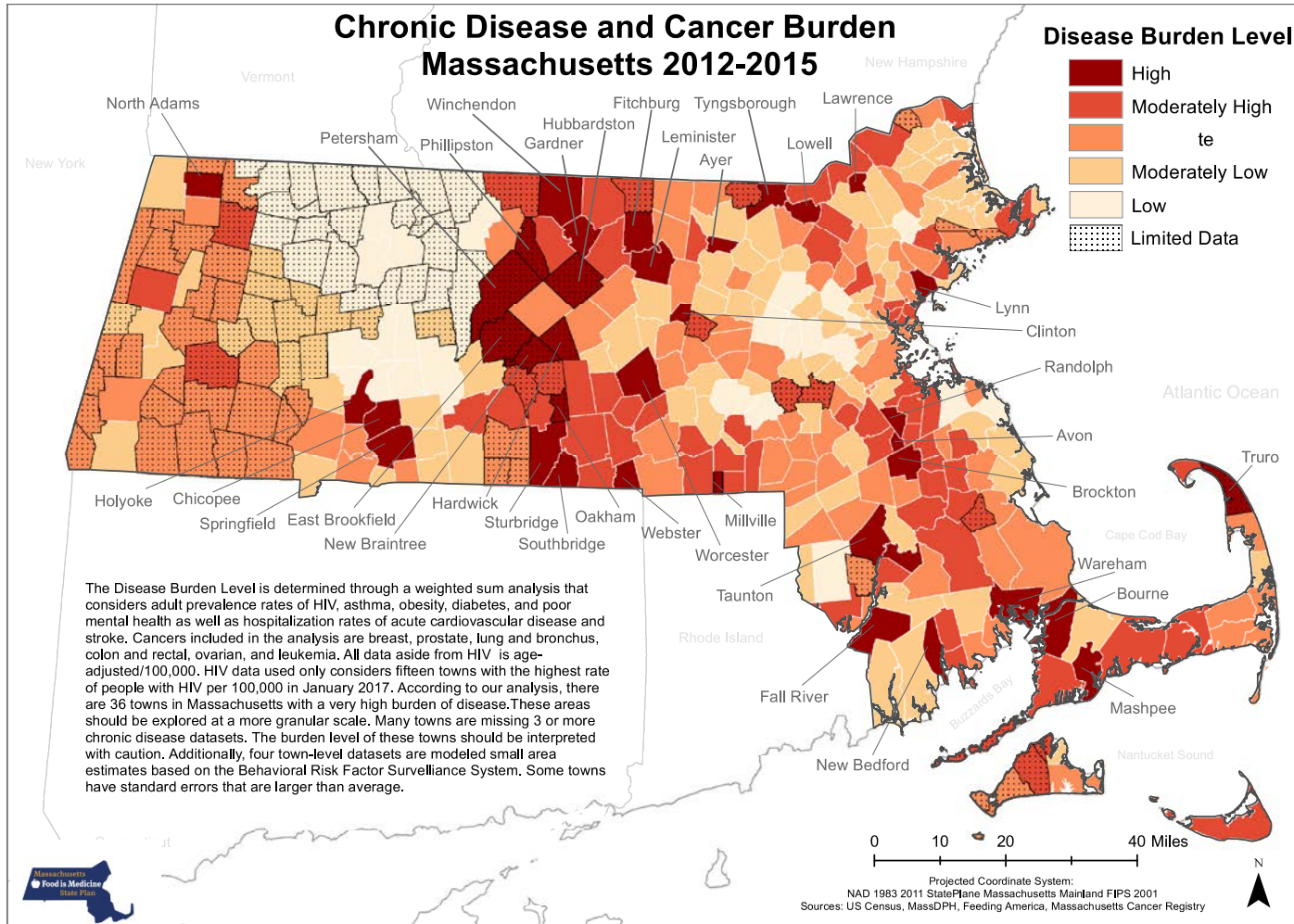
3 Towns Cancer Only

**All 6 Analyses Merged  
351 Towns total**



**< Chronic Disease Burden  
Towns missing 3+ diseases  
highlighted to expose data  
limitations**

# Disease Burden Summary



- 13 diseases included

HIV  
Asthma  
Obesity  
Diabetes  
Poor Mental Health  
CVD Hospitalizations  
Stroke Hospitalizations

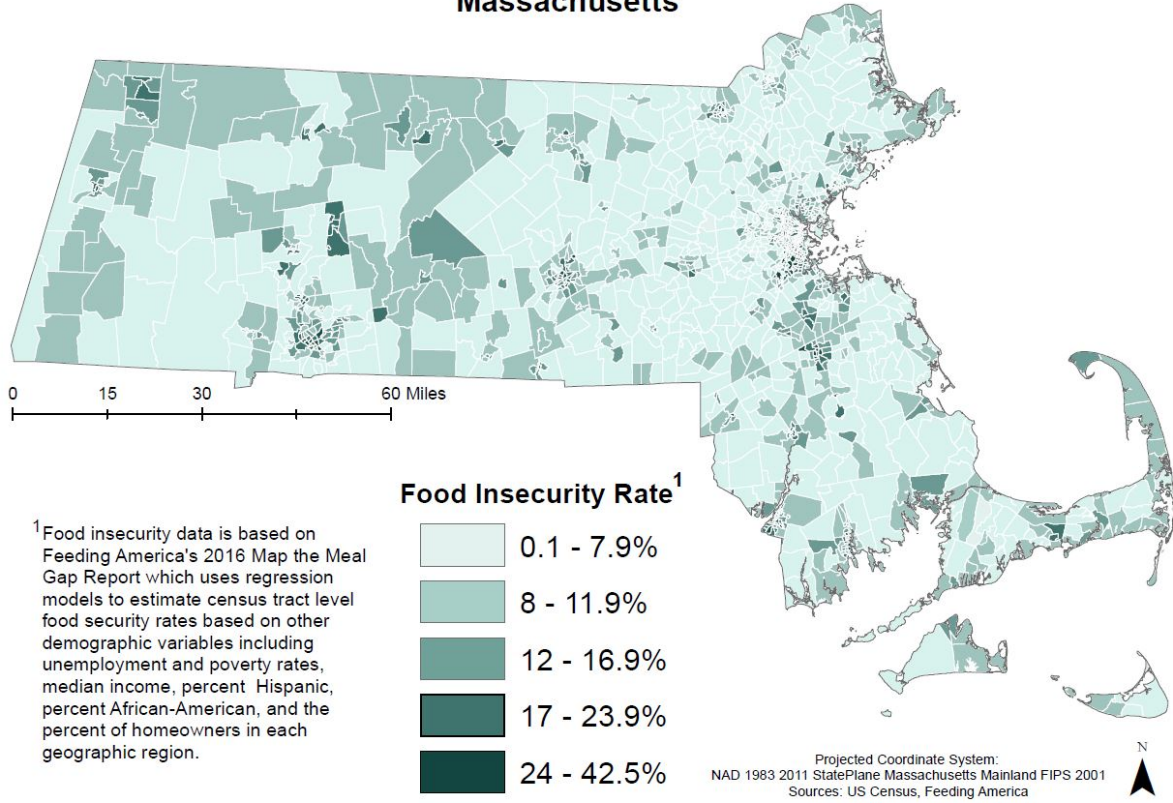
**Cancers**

Prostate  
Colon & Rectal  
Lung & Bronchus  
Breast  
Ovarian  
Leukemia

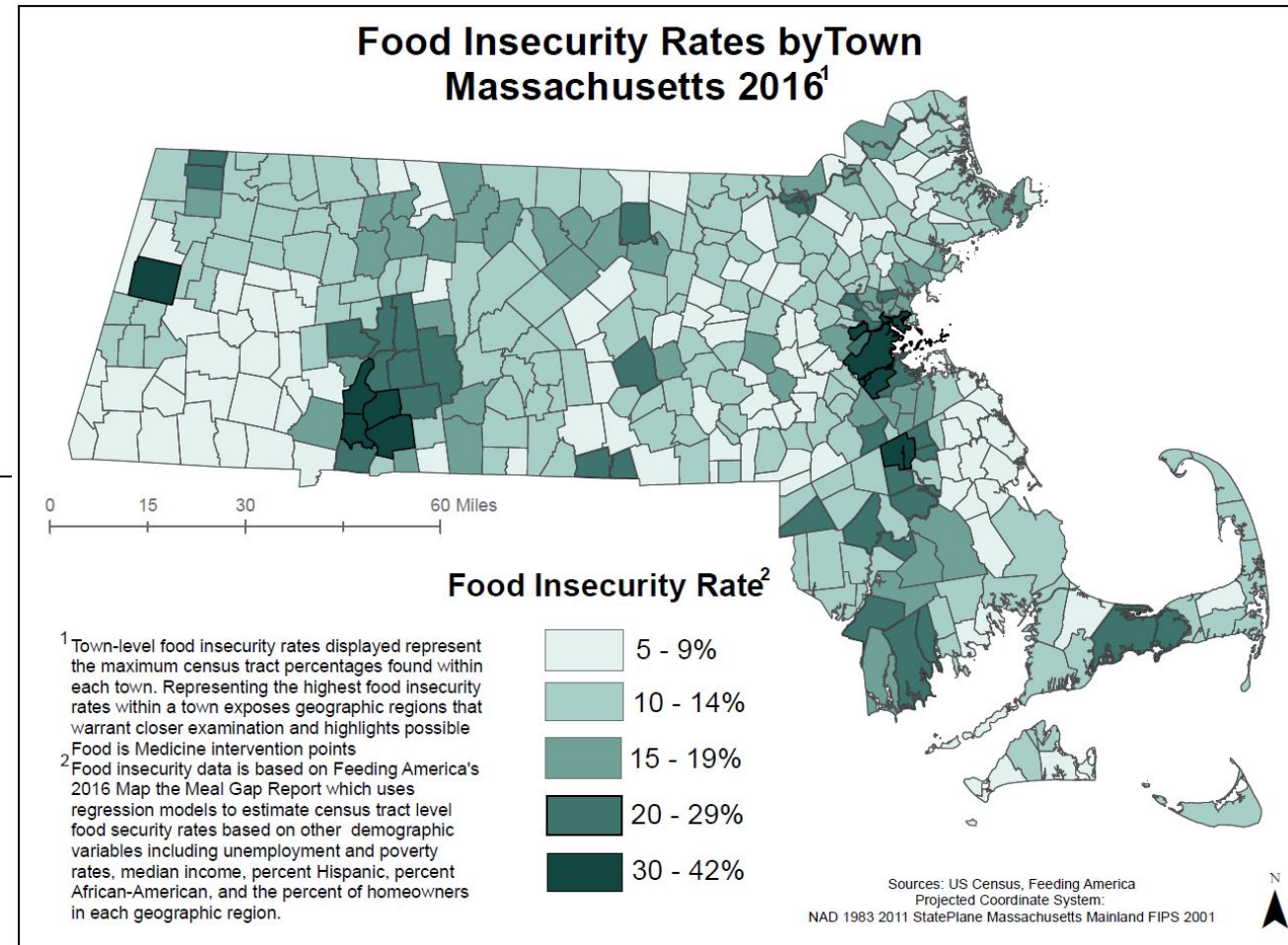
- All diseases age-adjusted/100,000
- 6 analyses for data limitations
  - Towns missing 3+ datasets are highlighted
- All diseases weighted 1 in weighted sum analysis



# 2016 Census Tract Food Insecurity Rates Massachusetts

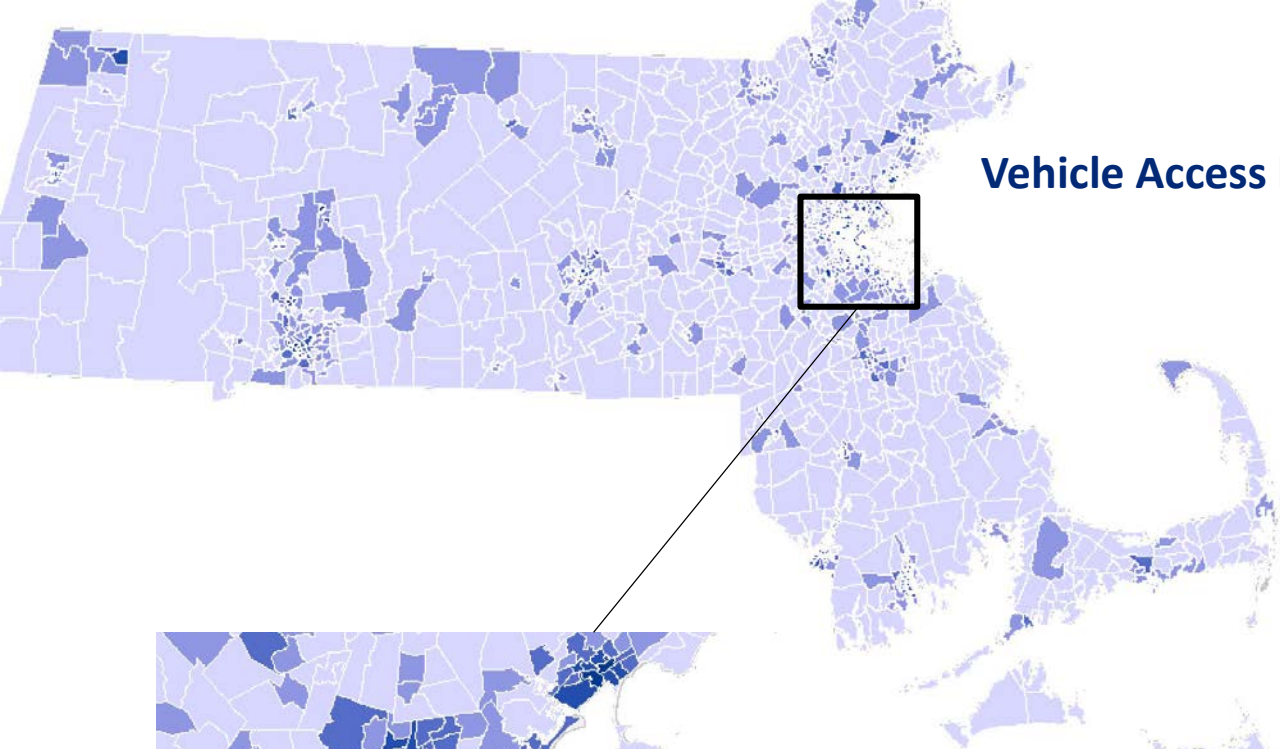


# Maximum Census Tract Food Insecurity Rates at Town-Level



[Map the Meal Gap](#)

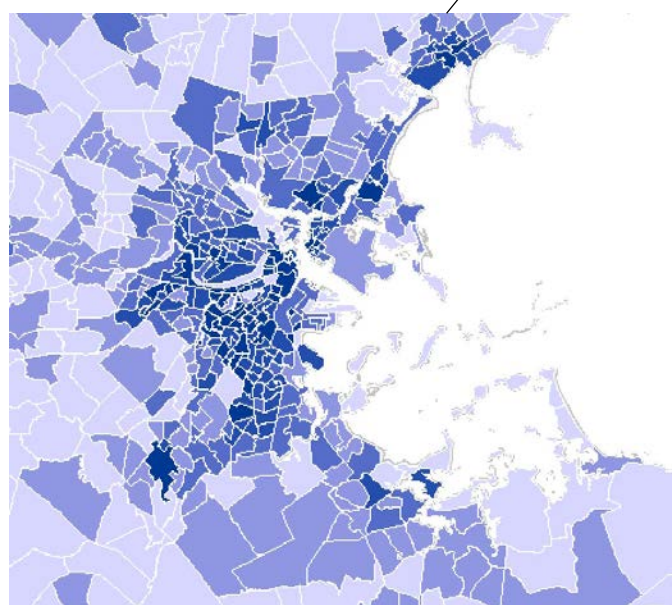
[Feeding America](#)



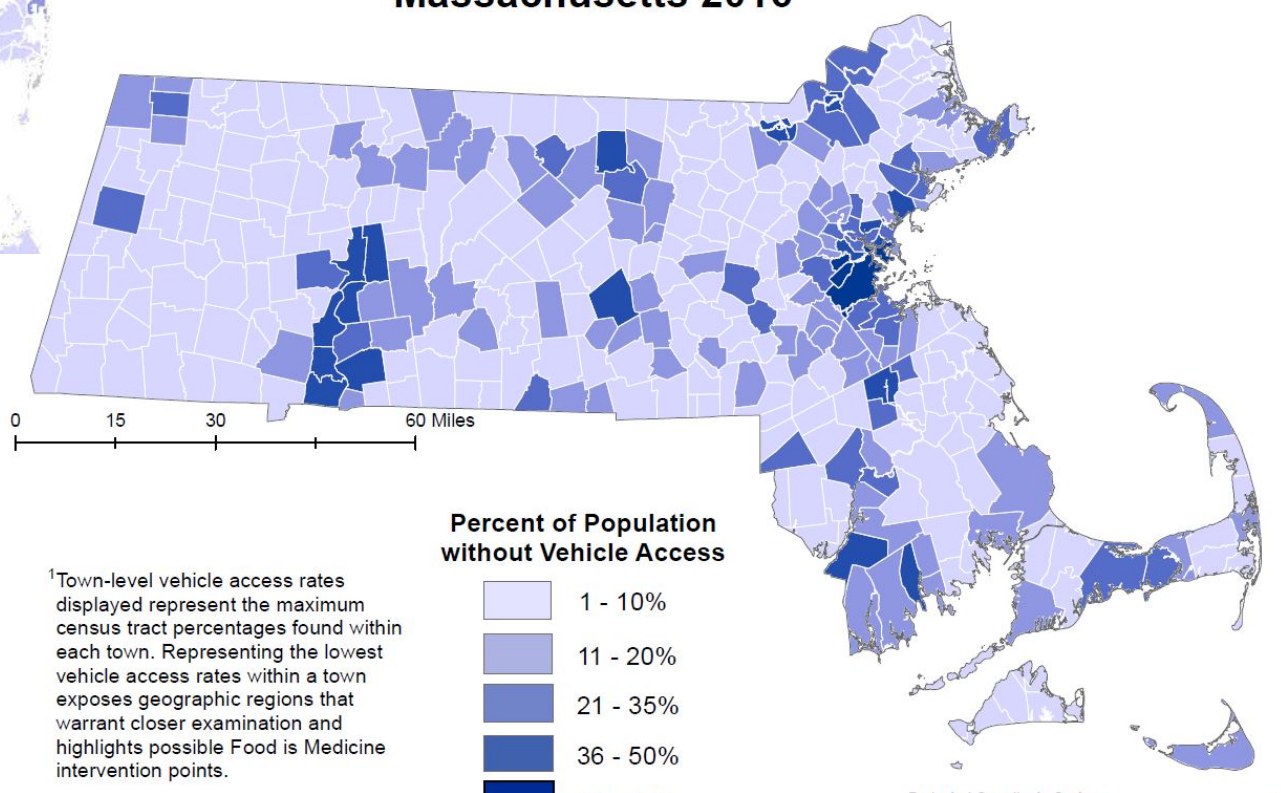
**Vehicle Access by Census Tract**

**Lowest Census Tract Vehicle Access at Town-Level**

**Vehicle Access Rates byTown  
Massachusetts 2016<sup>1</sup>**



**Boston**



0 15 30 60 Miles

**Percent of Population  
without Vehicle Access**

- 1 - 10%
- 11 - 20%
- 21 - 35%
- 36 - 50%
- 51 - 79%

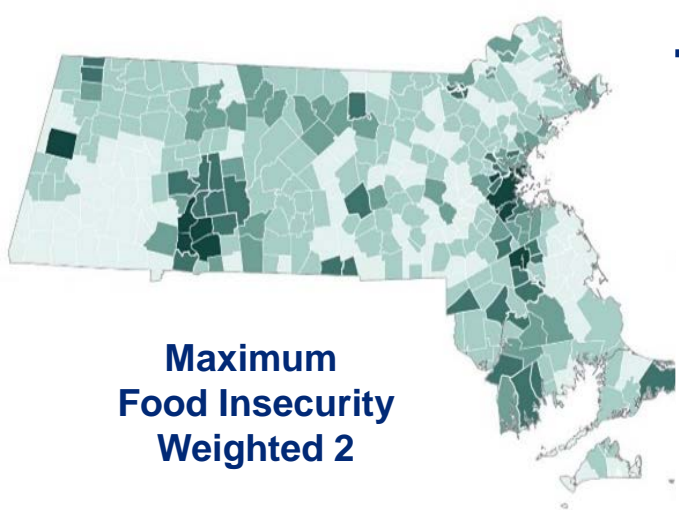
<sup>1</sup>Town-level vehicle access rates displayed represent the maximum census tract percentages found within each town. Representing the lowest vehicle access rates within a town exposes geographic regions that warrant closer examination and highlights possible Food is Medicine intervention points.

Projected Coordinate System:  
NAD 1983 2011 StatePlane Massachusetts Mainland FIPS 2001  
Sources: US Census, ACS 2012-2016 5-year Estimates  
Massachusetts Food is Medicine State Plan, October 2018

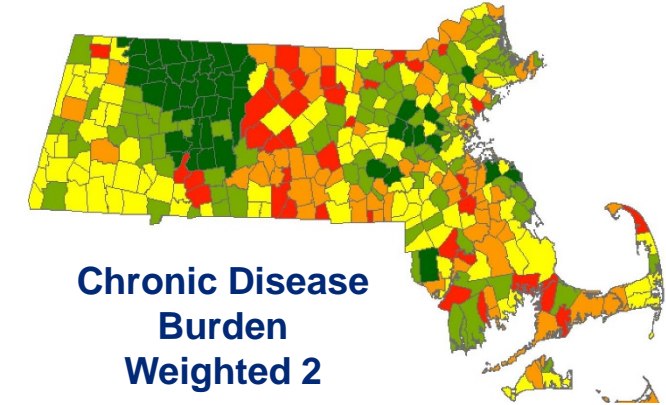


# Priority Area Analysis

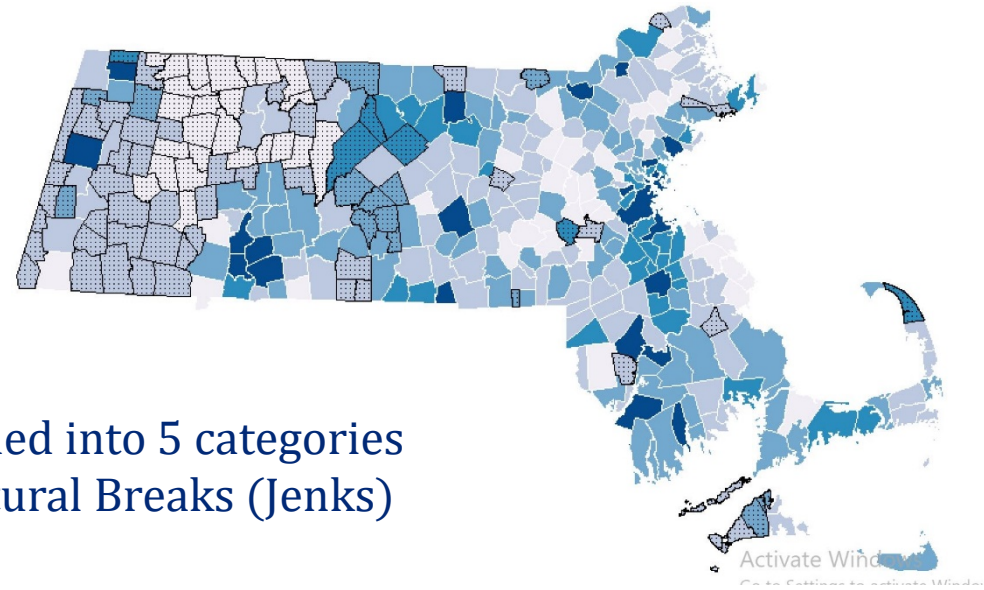
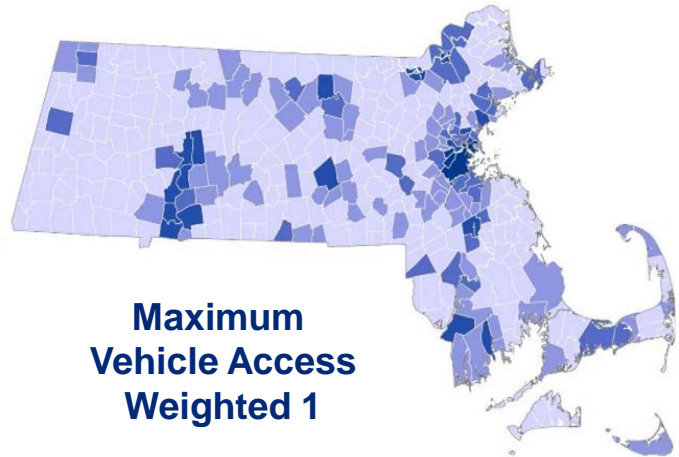
Maximum Food Insecurity Weighted 2



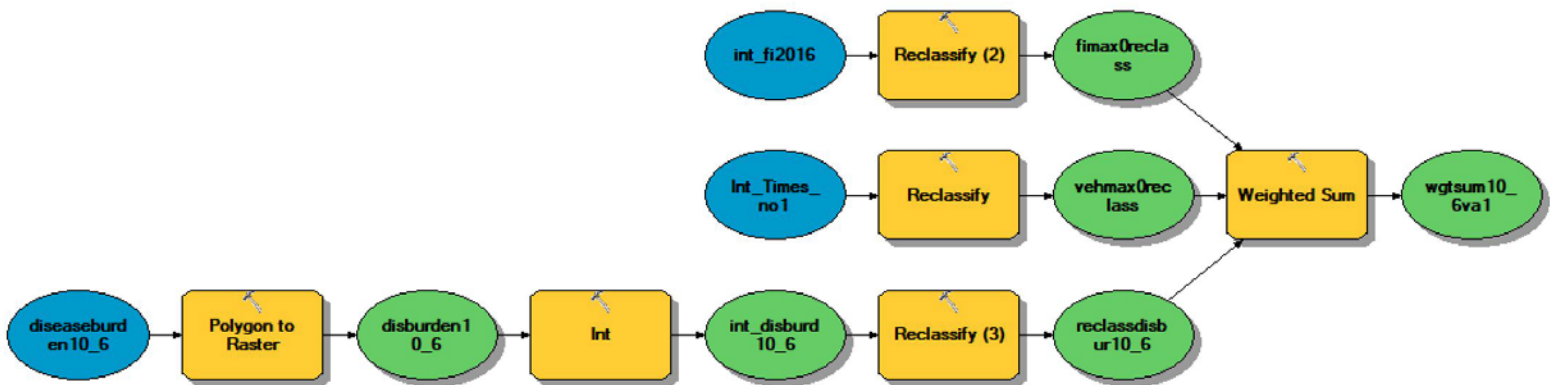
Chronic Disease Burden Weighted 2



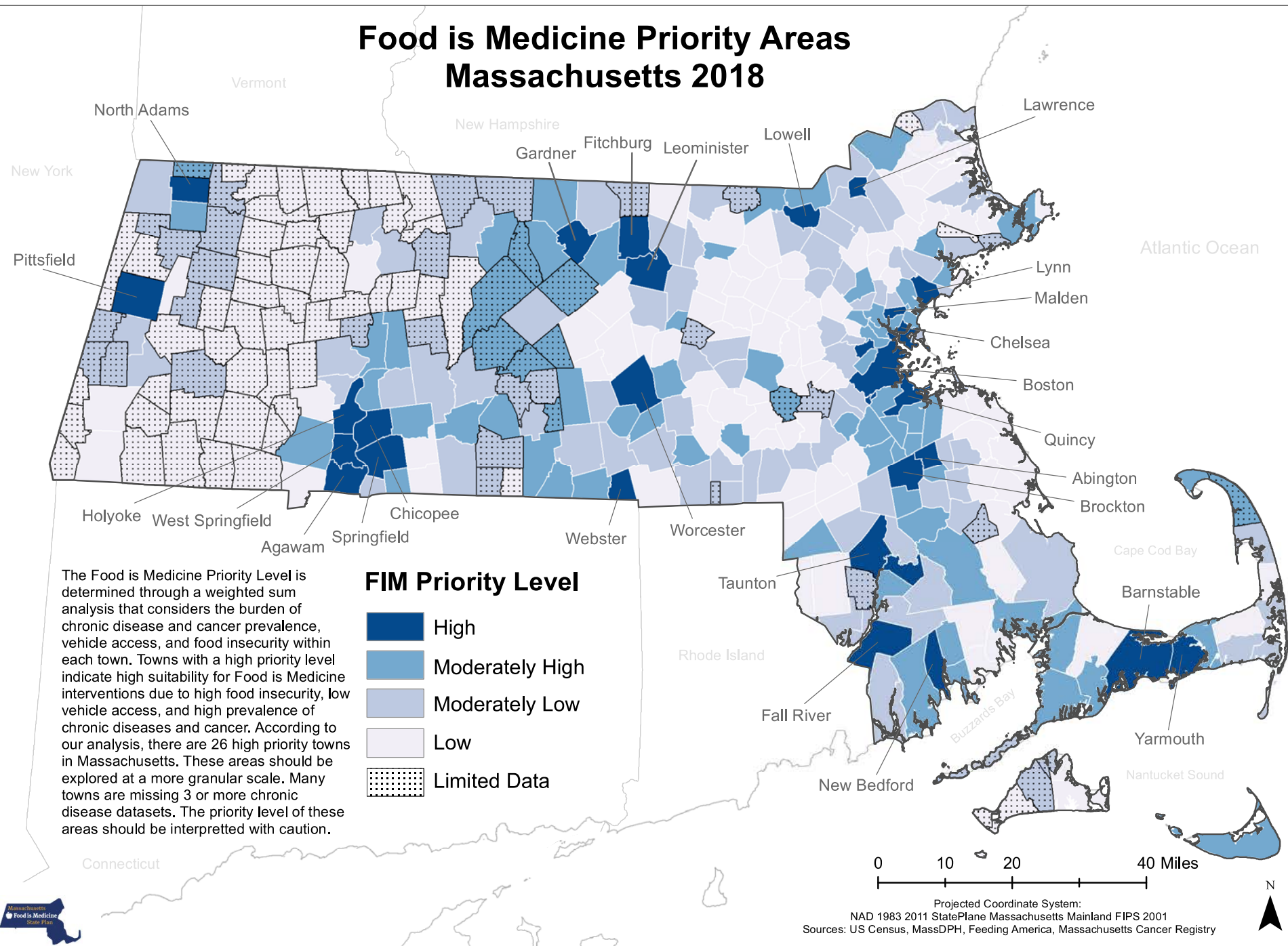
Maximum Vehicle Access Weighted 1



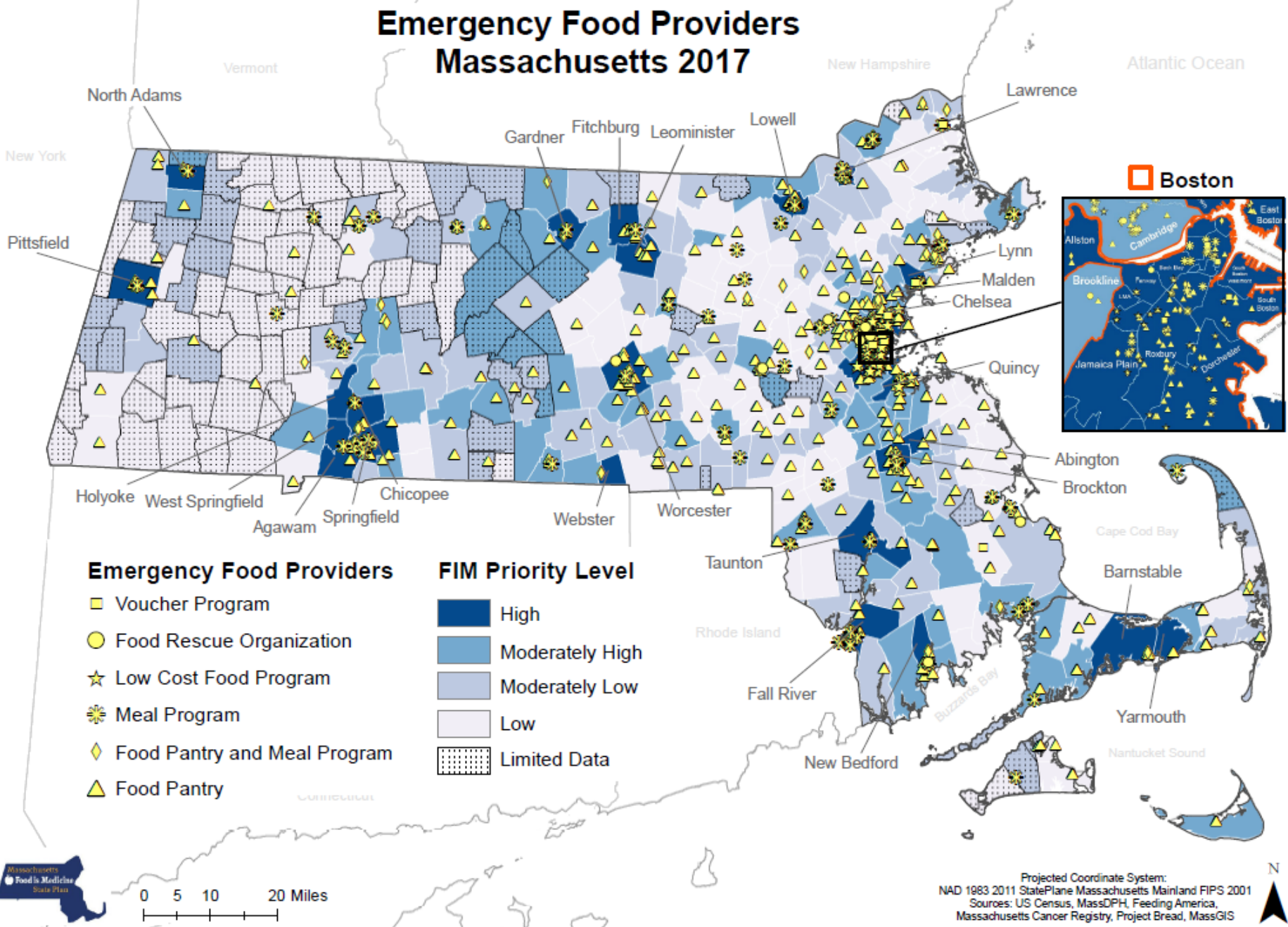
Classified into 5 categories by Natural Breaks (Jenks)



# Food is Medicine Priority Areas Massachusetts 2018



# Emergency Food Providers Massachusetts 2017



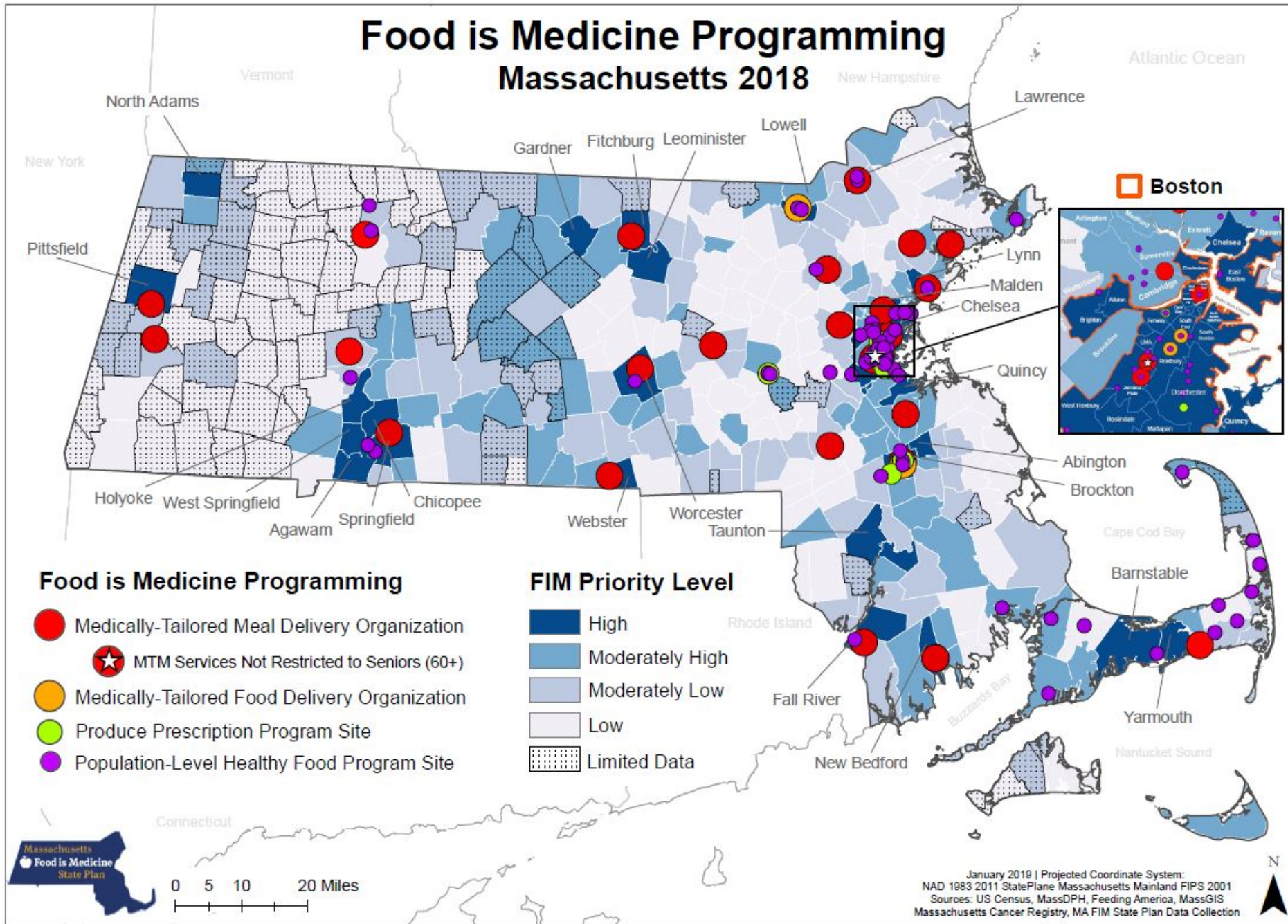
## 736 Emergency Food Providers

- 503 food pantries
- 86 food pantries with meal program
- 95 independent meal programs
- 9 food rescue organizations
- 8 voucher programs

The Food is Medicine Priority Level is determined through a weighted sum analysis that considers the burden of chronic disease and cancer prevalence, vehicle access, and food insecurity within each town. Towns with a high priority level indicate high suitability for Food is Medicine interventions due to high food insecurity, low vehicle access, and high prevalence of chronic diseases and cancer. According to our analysis, there are 26 high priority towns in Massachusetts. These areas should be explored at a more granular scale. Many towns are missing 3 or more chronic disease datasets. The priority level of these areas should be interpreted with caution.

# Food is Medicine Programming

- 26 Medically-Tailored Meal Delivery Organizations
  - 25 are Meals on Wheels Programs that provide meals for seniors (60+)
  - Wide spectrum of menus offered and clients served
- 3 Medically Tailored Food Delivery Organizations
- 5 Produce Prescription Programs
  - Some have multiple sites that are mapped here
- 30 Population-level Healthy Food Programs
  - Some have multiple sites that are mapped here



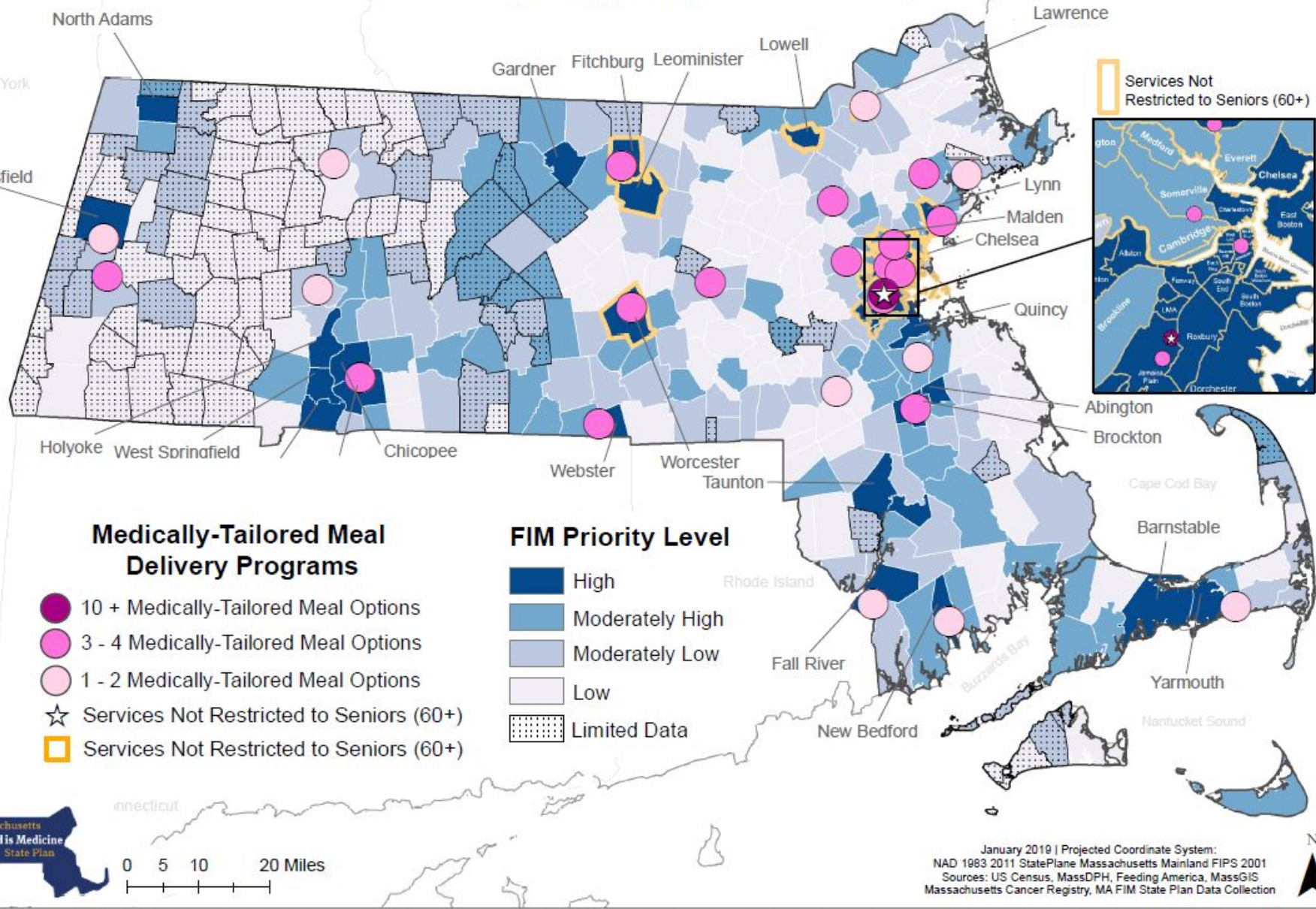
The Food is Medicine Priority Level is determined through a weighted sum analysis that considers the burden of chronic disease and cancer prevalence, vehicle access, and food insecurity within each town. Towns with a high priority level indicate high suitability for Food is Medicine interventions due to high food insecurity, low vehicle access, and high prevalence of chronic diseases and cancer. According to our analysis, there are 26 high priority towns in Massachusetts. These areas should be explored at a more granular scale. Many towns are missing 3 or more chronic disease datasets. The priority level of these areas should be interpreted with caution.

# FIM Programs Across Massachusetts

---

<b>Program Type</b>	<b>State Plan Definition</b>	<b>Example</b>
<b>Medically-Tailored Meal Delivery</b>	Programs that provide home-delivered meals that are tailored for specific diseases (renal disease) and medical conditions (pureed, cardio friendly) to individuals who are unable to cook for themselves. These programs work with health professionals to design meals and/or have health care partners.	Community Servings & Meals on Wheels Programs for Seniors
<b>Medically-Tailored Food Delivery</b>	Programs that provide home-delivered illness-specific food boxes or groceries (diabetic friendly) for individuals who are able to cook for themselves. These programs work with health professionals to design meals and/or have health care partners.	Merrimack Valley Food Bank
<b>Produce Prescription Program</b>	Programs where health care professionals "prescribe" fruits and vegetables as part of a treatment or prevention plan for their patients. This is usually in the form of a voucher that they redeem at local grocery stores, food pantries, or farmers markets.	Health Imperatives
<b>Population-Level Healthy Food Program</b>	Population-level programs that deliberately connection the provision of healthy food with health care (be it through relationships and interactions with registered dietician, clinicians, physicians or co-locating services with health care centers).	Lower Cape Outreach Council

# Medically-Tailored Meal Delivery Programs Massachusetts 2018



## Notable Variation

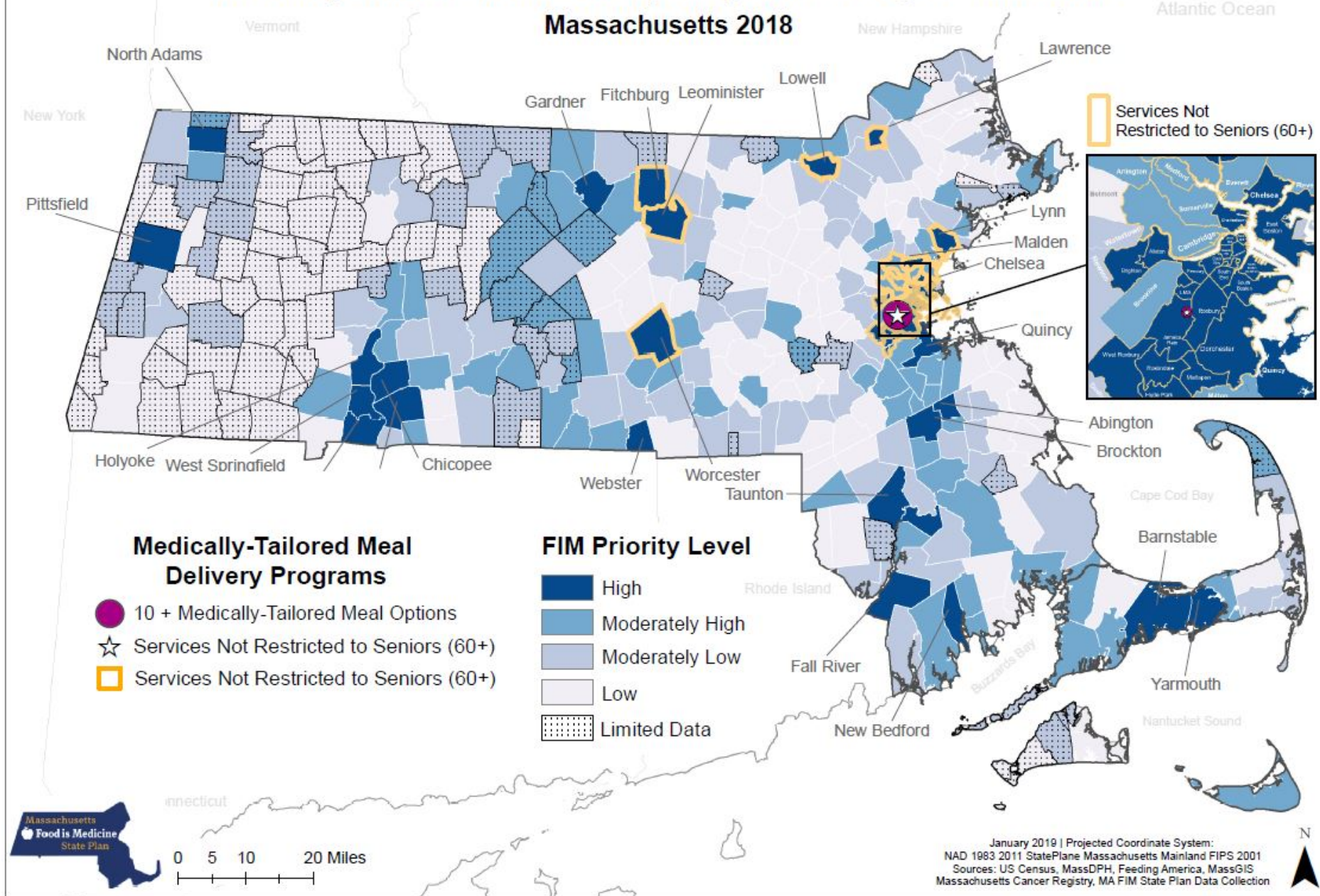
1. Age restrictions
2. Number of diet options available
3. No universal standards for medically-tailored meals.
  - Big differences across the definition of a “diabetic” friendly meal, for example

The Food is Medicine Priority Level is determined through a weighted sum analysis that considers the burden of chronic disease and cancer prevalence, vehicle access, and food insecurity within each town. Towns with a high priority level indicate high suitability for Food is Medicine interventions due to high food insecurity, low vehicle access, and high prevalence of chronic diseases and cancer. According to our analysis, there are 26 high priority towns in Massachusetts. These areas should be explored at a more granular scale. Many towns are missing 3 or more chronic disease datasets. The priority level of these areas should be interpreted with caution.



# Medically-Tailored Meal Delivery Programs: No Age Restrictions

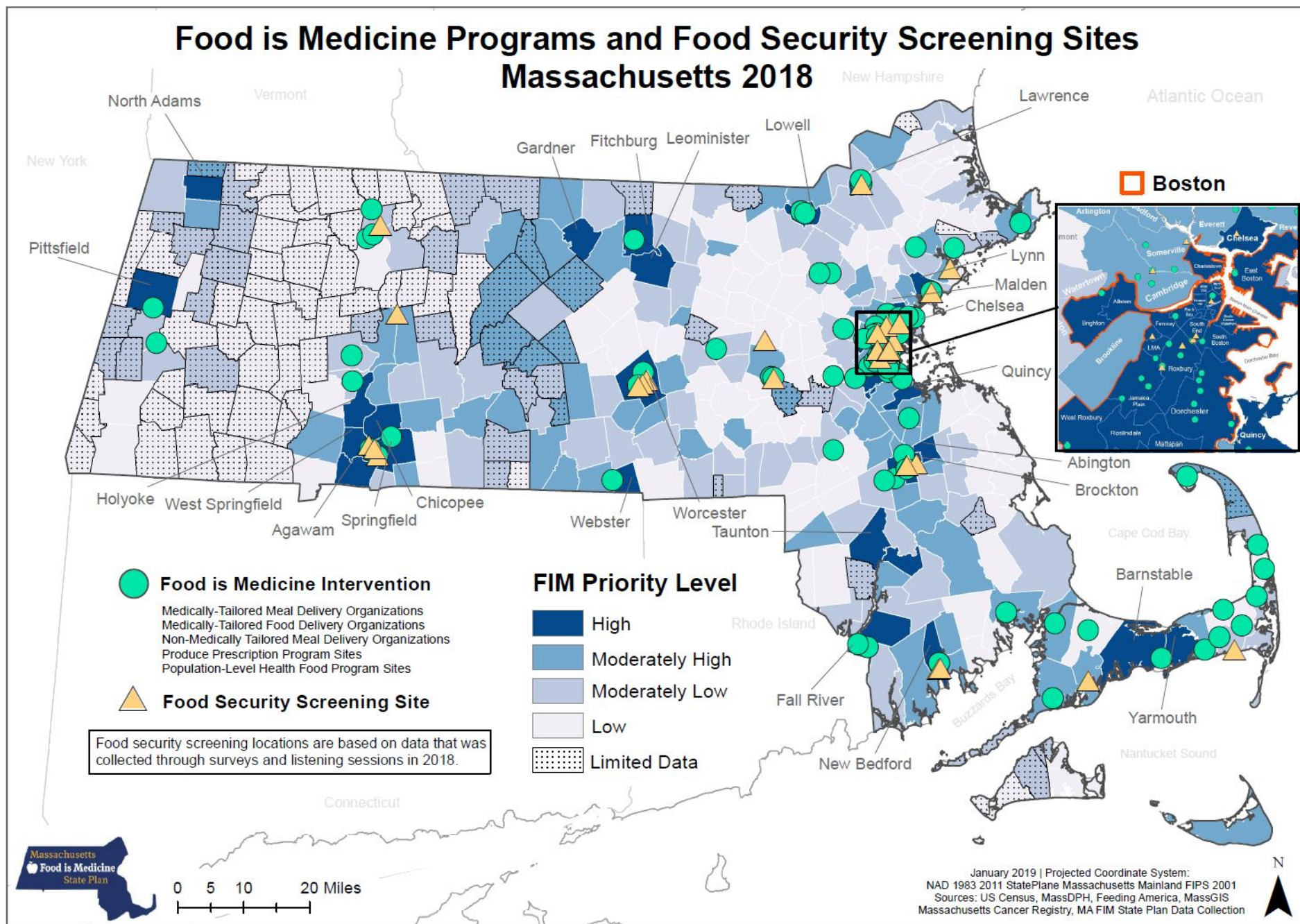
## Massachusetts 2018



The Food is Medicine Priority Level is determined through a weighted sum analysis that considers the burden of chronic disease and cancer prevalence, vehicle access, and food insecurity within each town. Towns with a high priority level indicate high suitability for Food is Medicine interventions due to high food insecurity, low vehicle access, and high prevalence of chronic diseases and cancer. According to our analysis, there are 26 high priority towns in Massachusetts. These areas should be explored at a more granular scale. Many towns are missing 3 or more chronic disease datasets. The priority level of these areas should be interpreted with caution.

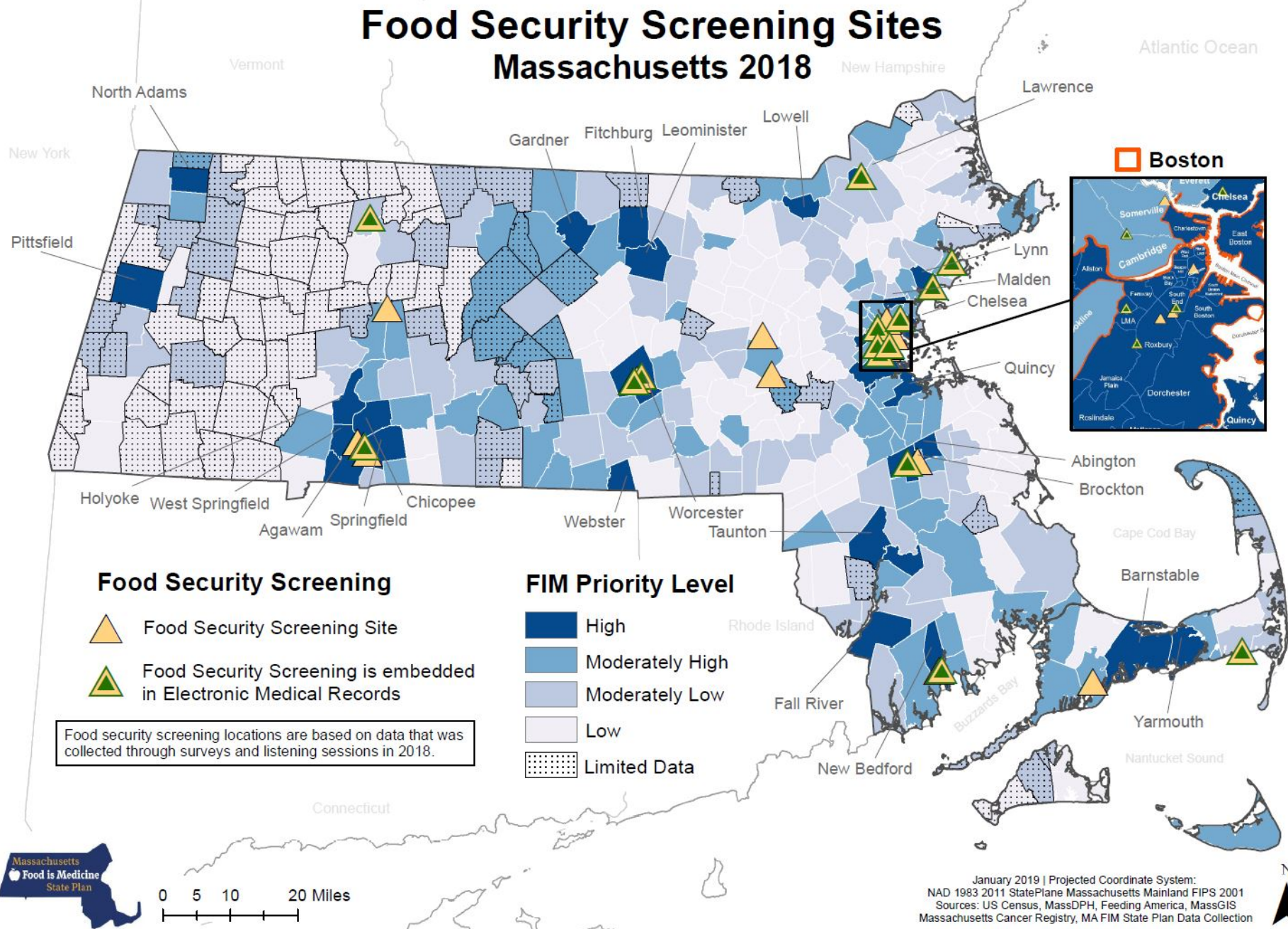
# Food is Medicine Programs and Food Security Screening Sites Massachusetts 2018

These are the food security screening sites we captured through our surveys and listening sessions. Our survey respondents included all major health systems in Massachusetts. As a result, the health systems mapped most likely screen at multiple sites within them.



The Food is Medicine Priority Level is determined through a weighted sum analysis that considers the burden of chronic disease and cancer prevalence, vehicle access, and food insecurity within each town. Towns with a high priority level indicate high suitability for Food is Medicine interventions due to high food insecurity, low vehicle access, and high prevalence of chronic diseases and cancer. According to our analysis, there are 26 high priority towns in Massachusetts. These areas should be explored at a more granular scale. Many towns are missing 3 or more chronic disease datasets. The priority level of these areas should be interpreted with caution.

# Food Security Screening Sites Massachusetts 2018



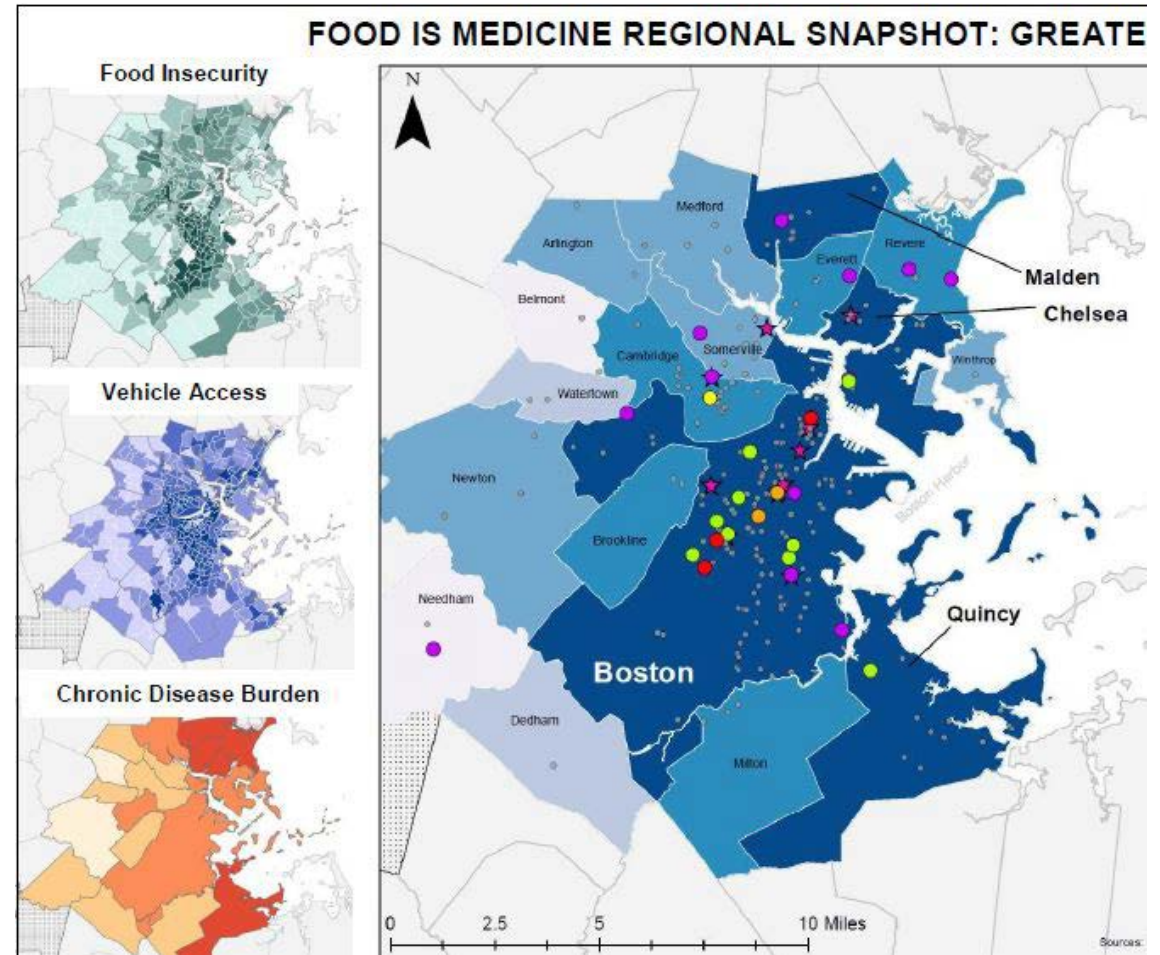
For more information on food insecurity screening in Massachusetts, see last week's webinar:

[You Spoke, We Listened Webinar on Data Collection January 24, 2019](#)

The Food is Medicine Priority Level is determined through a weighted sum analysis that considers the burden of chronic disease and cancer prevalence, vehicle access, and food insecurity within each town. Towns with a high priority level indicate high suitability for Food is Medicine interventions due to high food insecurity, low vehicle access, and high prevalence of chronic diseases and cancer. According to our analysis, there are 26 high priority towns in Massachusetts. These areas should be explored at a more granular scale. Many towns are missing 3 or more chronic disease datasets. The priority level of these areas should be interpreted with caution.

# Next Steps & Map Applications

- Regional Snap Shots
- State Plan expected Spring 2019
- Policy Applications
  - Locations for Food is Medicine Demonstration Pilot
  - Locations for Produce Prescription Programs (Gus Schumacher Funds)
  - Opportunities to scale up geographic FIM offerings
- Partnership Opportunities
  - Healthy pantries forming a community of practice themselves or learning from medically tailored food delivery orgs on how to scale up
  - Health care resource networks
  - Food providers finding new health care partners



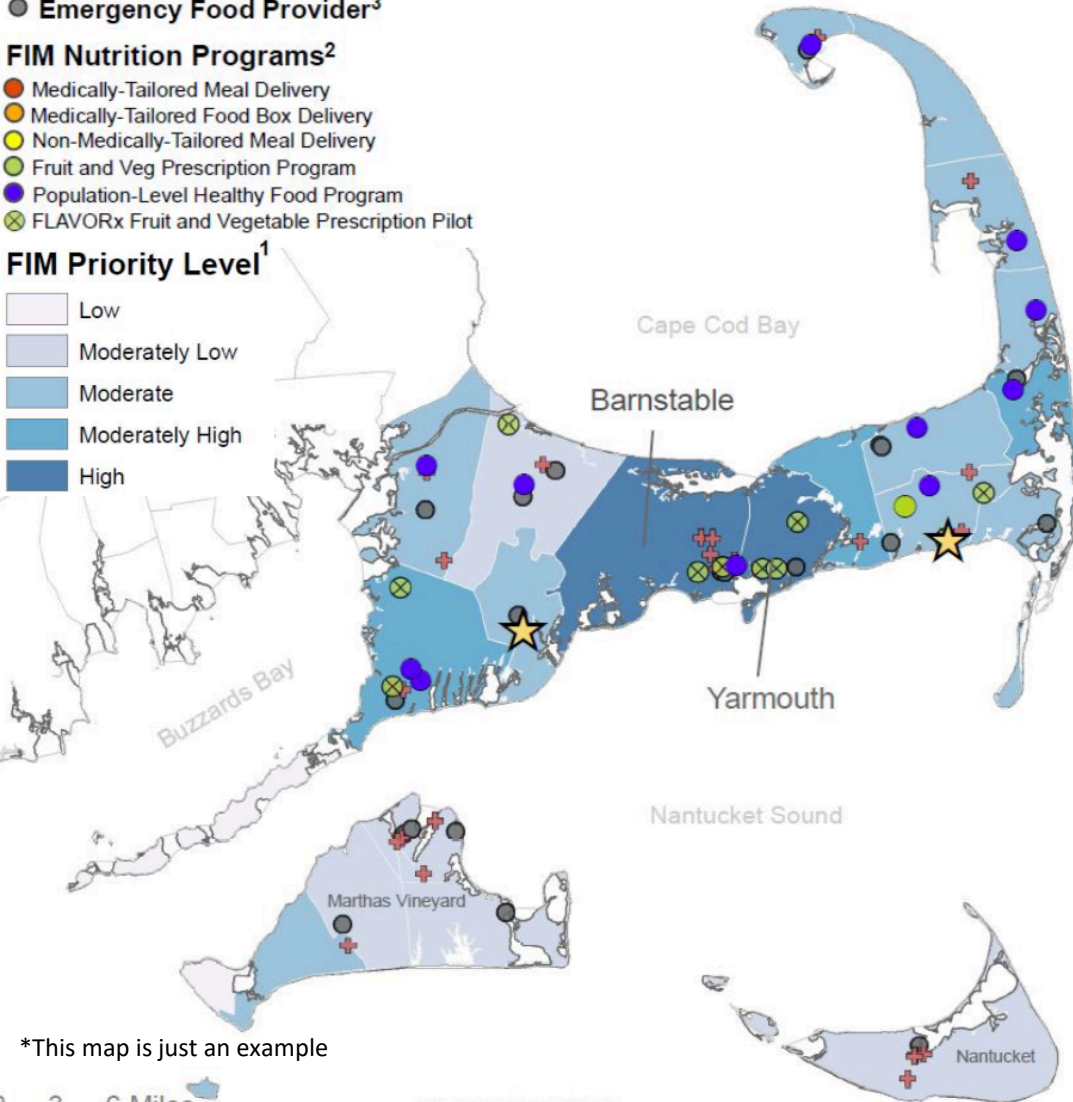
\*This map is just an example

# REGIONAL SNAPSHOT: CAPE COD & ISLANDS

- ★ Food Security Screening Site<sup>2</sup>
  - ⊕ Health Care Institution
  - Emergency Food Provider<sup>3</sup>
- FIM Nutrition Programs<sup>2</sup>**
- Medically-Tailored Meal Delivery
  - Medically-Tailored Food Box Delivery
  - Non-Medically-Tailored Meal Delivery
  - Fruit and Veg Prescription Program
  - Population-Level Healthy Food Program
  - FLAVORx Fruit and Vegetable Prescription Pilot

## FIM Priority Level<sup>1</sup>

- Low
- Moderately Low
- Moderate
- Moderately High
- High



## Compelling stats

- Food insecurity ~9%, reaching up to 21.7% in some towns
- Up to 23% of Cape Cod residents have no vehicle access
- 8.5% of adults in Barnstable County have diabetes
- Dukes County has the highest rate of hospitalizations from stroke across the state, at 284 per 100,000
- 159 out of 100,000 adults in Barnstable County have breast cancer

## Challenges specific to the region

### Tourism-based economy means seasonal employment

- In February 2018, 15% of Barnstable jobs were in leisure and hospitality, compared with 25% in July 2018. Lowest paying sector in Barnstable Co.

### Aging population

- Barnstable County is the oldest county in Massachusetts, with 29.9% of its population aged 65 and over, compared to the MA average of 16.2%.

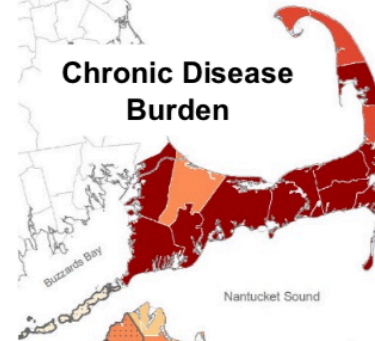
## Case Study: FLAVORx

Launched in 2016 throughout 6 physicians' offices across Cape Cod, FlavorX is a fruit and vegetable prescription pilot program that provides a weekly prescription of \$30 worth of produce for 12 weeks. Prescriptions can be redeemed at local farmers' markets or farm stands. In addition, patients receive 4 free cooking classes and 2 additional check-up visits. While the availability of the service depends strictly on funding, the eligibility criteria for the program are having a risk factor for chronic disease, being overweight or obese, and low income. After a single-blind trial in which participants were recruited to participate in nutrition education classes, the group that was also given the FlavorX produce prescription saw better outcomes in BMI, LDL cholesterol, and patient well-being than the group that was given gas cards for the equivalent amount (\$30/weekly, 12 week period).

## Food Insecurity



## Chronic Disease Burden



## Transportation



\*This map is just an example

# THANK YOU PLANNING COUNCIL ORGANIZATIONS

- Alliance of Massachusetts YMCAs
- Blue Cross Blue Shield of MA Foundation
- Blue Cross Blue Shield of Massachusetts
- Boston Medical Center HealthNet Plan
- Boston Medical Center
- Boston Public Health Commission
- Brockton Neighborhood Health Center
- Children's Health Watch
- Center for Health Law and Policy Innovation (CHLPI)
- Commonwealth Care Alliance
- Community Health Center of Franklin County
- Community Servings
- DentaQuest Foundation
- Elder Services of Merrimack Valley
- Emerald Physician Services
- Executive Office of Elder Affairs
- Feeding America
- Greater Boston Food Bank
- Harvard School of Public Health
- Health Care Without Harm
- Just Roots
- Krupp Family Foundation
- Massachusetts Healthy Aging Collaborative
- Massachusetts Department of Transitional Assistance
- Massachusetts Food System Collaborative
- Massachusetts League of Community Health Centers
- Massachusetts Medical Society
- Mayor's Office of Food Access, Boston
- Meals on Wheels America
- Minuteman Senior Services
- New England States Consortium Systems Organization (NESCSO)
- Project Bread
- The Food Bank of Western MA
- Tufts Friedman School of Nutrition Science and Policy
- UMass Medical School
- UMass Memorial Medical Center
- Wholesome Wave

**& DPH!!!!**

# Questions?



**With gratitude to our funders:**



[Check out last week's webinar](#) on data collected through our survey, listening sessions and consumer interviews

**Kristin Sukys**  
GIS Analyst- MA FIM State Plan  
Policy Analyst

Center for Health Law and Policy Innovation  
Harvard Law School  
ksukys@law.harvard.edu

**Jean Terranova**  
Director of Food and Health Policy  
Community Servings  
jterranova@servings.org

**Sarah Downer**  
Associate Director  
Whole Person Care  
Center for Health Law and Policy Innovation  
Harvard Law School  
sdowner@law.harvard.edu

**Katie Garfield**  
Staff Attorney  
Center for Health Law and Policy Innovation  
Harvard Law School  
kgarfield@law.harvard.edu