

Regional Health Status Indicators Boston Massachusetts



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NOTE TO READERS

Background

This report presents important health indicators for your region, which were developed as background material for the Regional Health Dialogues being held across the Commonwealth in May and June 2007. These dialogues offer an opportunity for you to have a conversation with the Commissioner of Public Health, learn the latest health information for your region, identify your resources and areas of need, and together, with the Massachusetts Department of Public Health, shape a public health partnership.

Contents

This report provides information about the socio-demographics, health care access, births, deaths, major chronic and infectious disease rates, substance abuse, and injury and violence for your region. Your region's indicators are compared with those of other regions and to the state as a whole in order to provide you with a sense of the relative health of your region. Many indicators for your region are stratified by race, Hispanic ethnicity, and age in order help determine specific population groups that may require targeted health interventions. We have also provided information about the health status of one or more large communities in your region, which may be influencing your regional outcomes. We hope that this collection of important and diverse health indicators will stimulate discussions of local health priorities, as well as serving as a resource for health information and a reference for data that are available from the Massachusetts Department of Public Health. Please contact us with your comments and suggestions.

INTRODUCTION

Goals for holding Regional Dialogues

- Introduce new DPH leadership
- Present latest health data on your particular region
- Talk with residents and providers about data and identify areas of need
- Gather feedback to inform process of setting DPH priorities

Goals of New DPH leadership

- Use data and community input to set new priorities & reshape the Department
- Rely on science and evidence-based process to guide the work
- Strengthen ties with and support for local health and local agencies
- Increase resources to and visibility of public health in Massachusetts

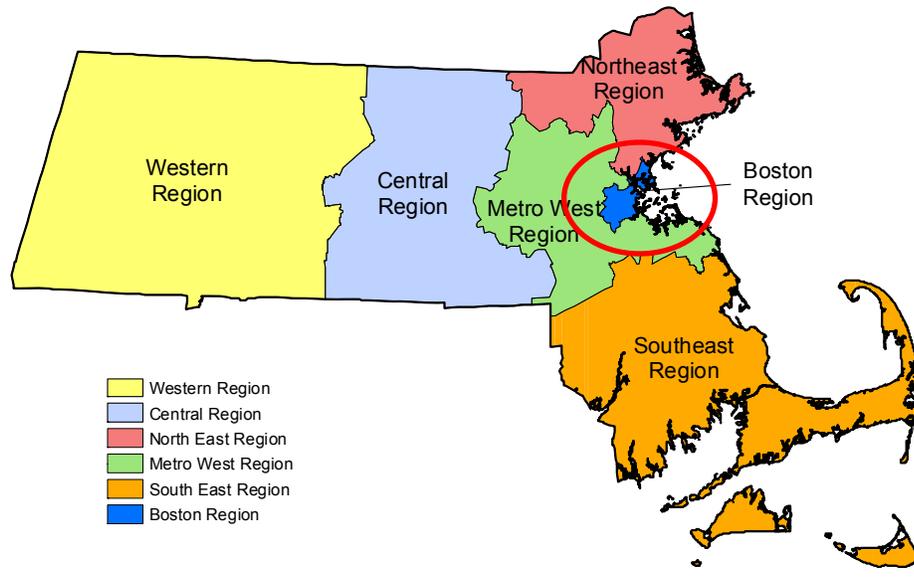
Timetable

- Hold 8 regional dialogues with comprehensive data review and identification of key health concerns (by July)
- Identify short list of top priorities by end of August
- Hold second round of community dialogues to discuss action plans/results by end of calendar year

SOCIODEMOGRAPHIC INDICATORS

Executive Office of Health and Human Services Regions

1

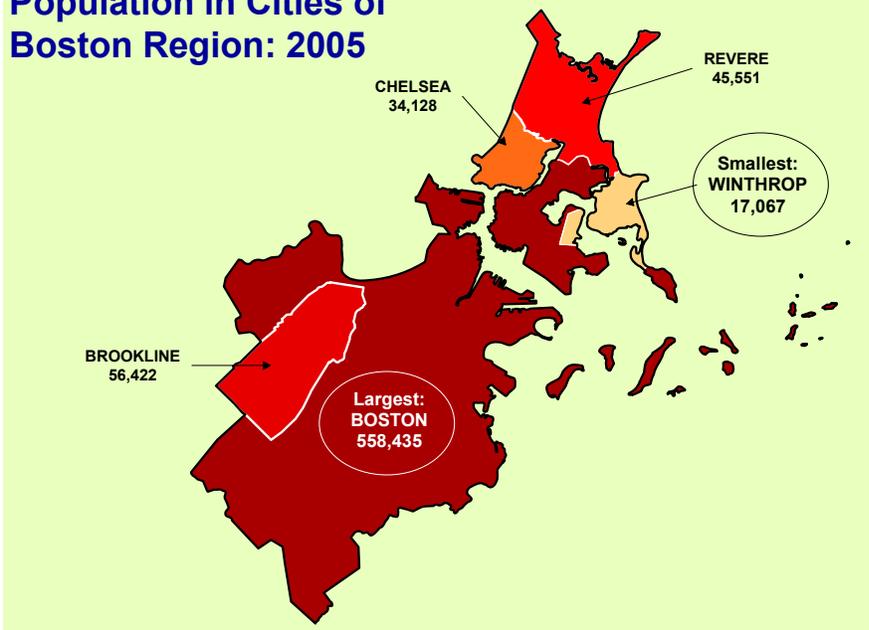


A few comments about the limitations of this presentation

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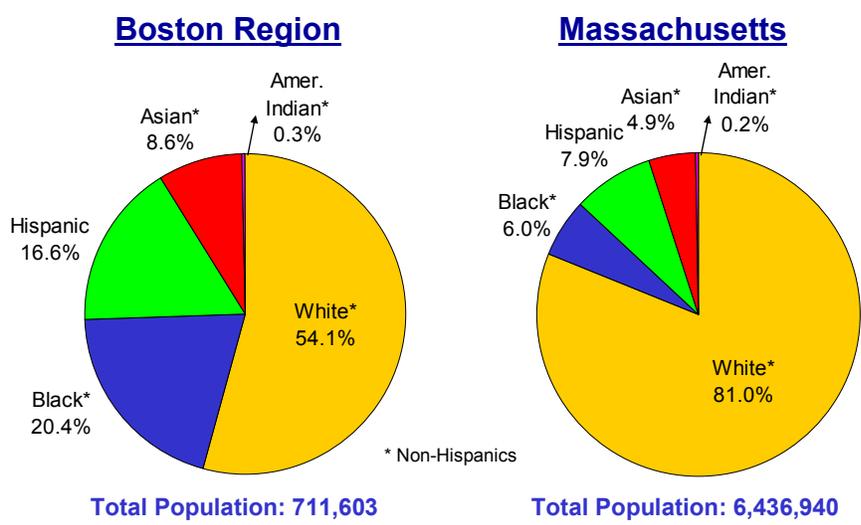
- A regional analysis has its drawbacks
- Variability within a region – urban vs. rural/suburban (i.e. Boston vs. the rest of the region)
- Variability by sub-population – race matters, poverty matters
- Our data don't reflect all the important health indicators

Population in Cities of Boston Region: 2005



Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Race and Ethnic Breakdown of Population Boston Region and Massachusetts: 2005



Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Race and Ethnic Breakdown of Population Cities in Boston Region and Massachusetts: 2005

Racial Hispanic Group	City of Boston	Brookline	Chelsea	Revere	Winthrop	Boston Region	MA Total
White*	49.9%	73%	35.9%	81.6%	93.9%	54.1%	81%
Black*	25%	4.2%	5.6%	2.5%	1.5%	20.4%	6%
Hispanic	16.4%	4.8%	53.3%	10.5%	3.1%	16.6%	7.9%
Asian*	8.4%	17.9%	5%	5.2%	1.3%	8.6%	4.9%
American Indian*	0.3%	0.1%	0.3%	0.2%	0.2%	0.3%	0.2%

* Non-Hispanics

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Population by Age Group Cities in Boston Region and Massachusetts: 2005

Ages	City of Boston	Brookline	Chelsea	Revere	Winthrop	Boston Region	MA Total
0-19 years	24%	19%	30%	23%	21%	23%	26%
20-24 years	11%	10%	7%	5%	5%	10%	7%
25-44 years	35%	34%	35%	33%	34%	35%	29%
45-64 years	20%	25%	18%	23%	25%	20%	25%
65+ years	11%	12%	11%	16%	16%	11%	13%

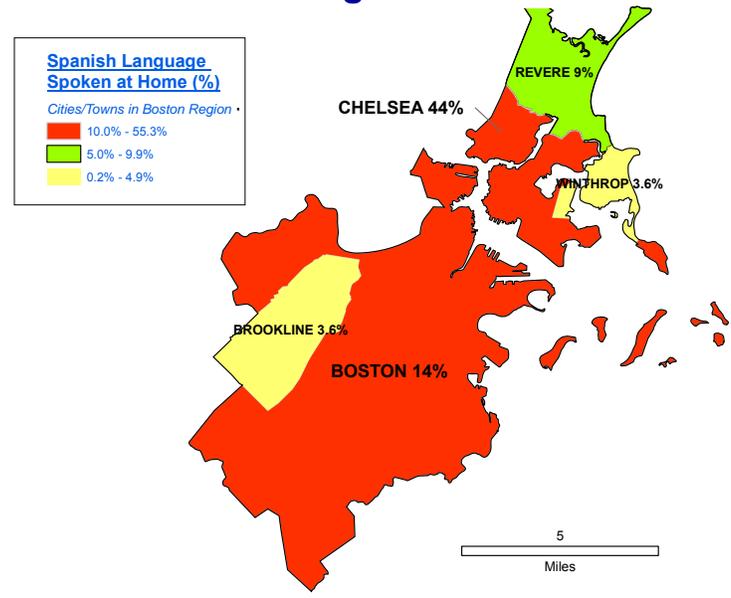
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Language Spoken at Home, Cities in Boston Region and Massachusetts: 2000

As % of all persons ages>5	City of Boston	Brookline	Chelsea	Revere	Winthrop	Boston Region	MA Total
Only English	66.6%	71%	41.6%	71%	87.1%	66.6%	81.3%
Spanish or Spanish Creole	13.6%	3.6%	43.8%	9%	3.6%	13.7%	6.2%
Chinese	3.2%	5.7%	0.6%	0.6%	0.1%	3%	1.2%
French Creole	3.5%	0.4%	0.8%	0.3%	0.1%	2.8%	0.7%
Portuguese or Port. Creole	2.3%	0.7%	2.1%	2.4%	1.4%	2.1%	2.7%
Vietnamese	1.8%	0.1%	1.9%	1%	0%	1.6%	0.5%
Italian	1.2%	0.4%	1%	6.8%	3%	1.5%	1%
French (Incl. Patois, Cajun)	1.4%	1.4%	0.9%	0.6%	1%	1.3%	1.4%
Russian	1.1%	4.4%	0.1%	0.5%	0%	1.2%	0.6%
Mon Khmer, Cambodian	0.1%	0.3%	0.9%	2.5%	0.1%	0.3%	0.4%
Hebrew	0.1%	2.1%	0.1%	0%	0.2%	0.3%	0.1%
Serbo Croatian	0.1%	0.1%	2%	0.9%	0%	0.2%	0.1%

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Spanish Spoken at Home Boston Region: 2000



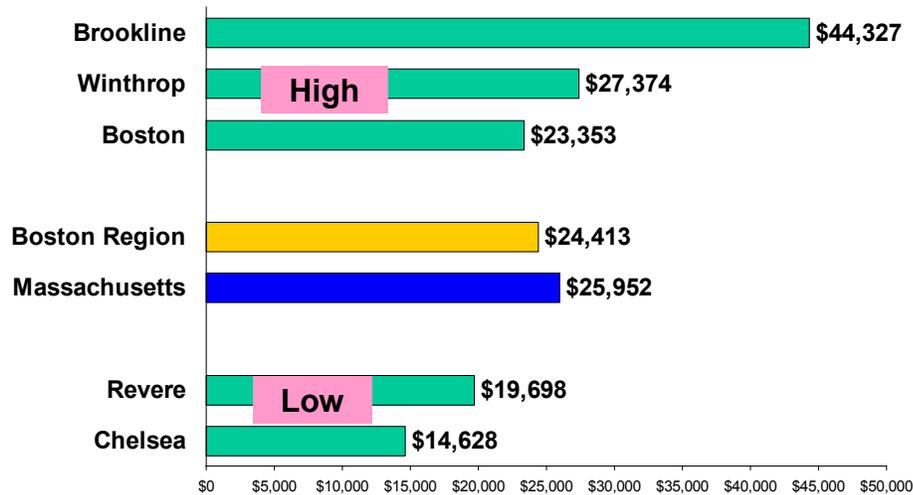
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Socio-Demographic Indicators Cities in Boston Region and Massachusetts: 2000

	City of Boston	Brookline	Chelsea	Revere	Winthrop	Boston Region	MA Total
Per Capita Income	\$23,353	\$44,327	\$14,628	\$19,698	\$27,374	\$24,413	\$25,952
Those living below 100% poverty	19.5%	9.3%	23.3%	14.6%	5.5%	18.2%	9.3%
Less than a High School Education	21.1%	3.7%	40.5%	23.3%	10%	20.3%	15.2%
Speak language other than English at home	33.4%	29.0%	58.4%	29.1%	12.9%	21.9%	18.7%
Foreign born	25.8%	26.6%	36.1%	21%	8.7%	25.6%	12.2%
Unemployed	5.5%	3%	7.5%	6.3%	5.1%	5.4%	5.1%

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

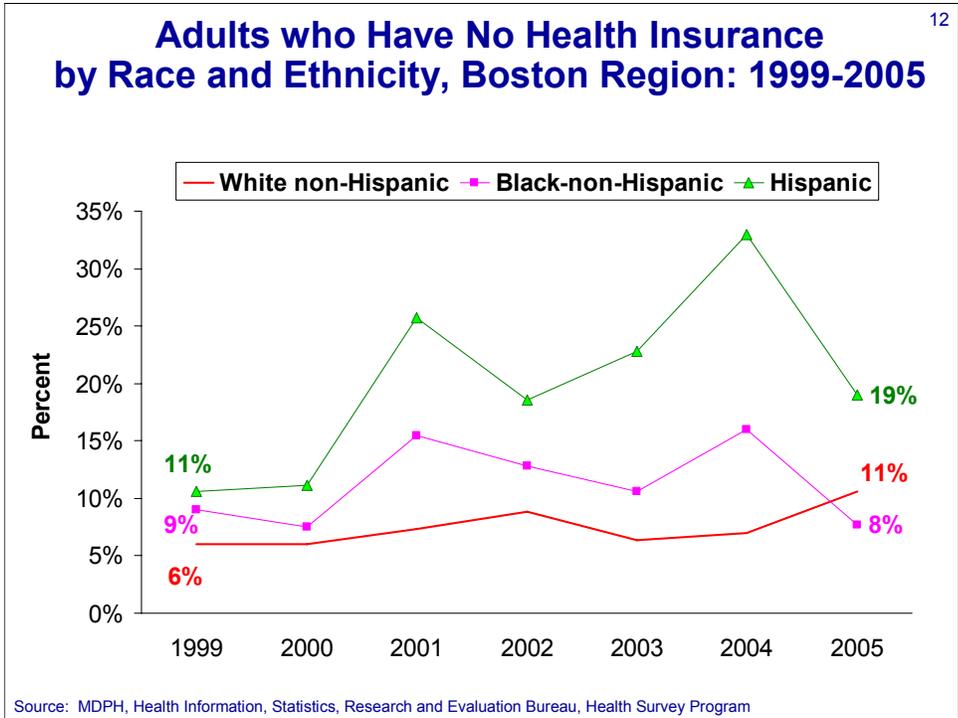
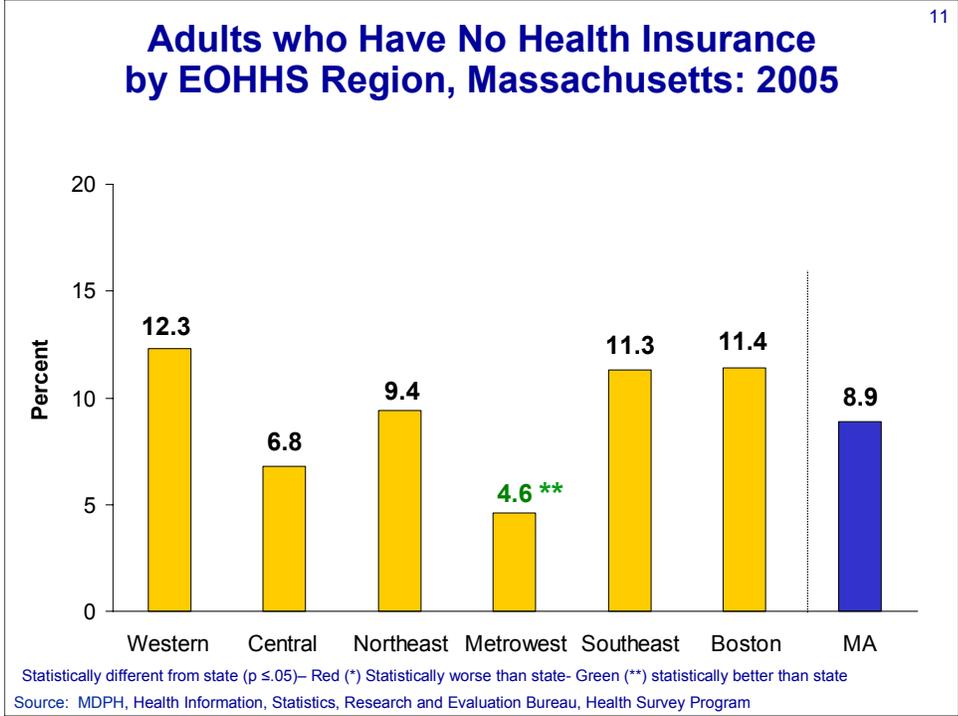
Highest and Lowest Per Capita Income Communities¹ in Boston Region: 2000



¹ Selected among communities with at least 10,000 population

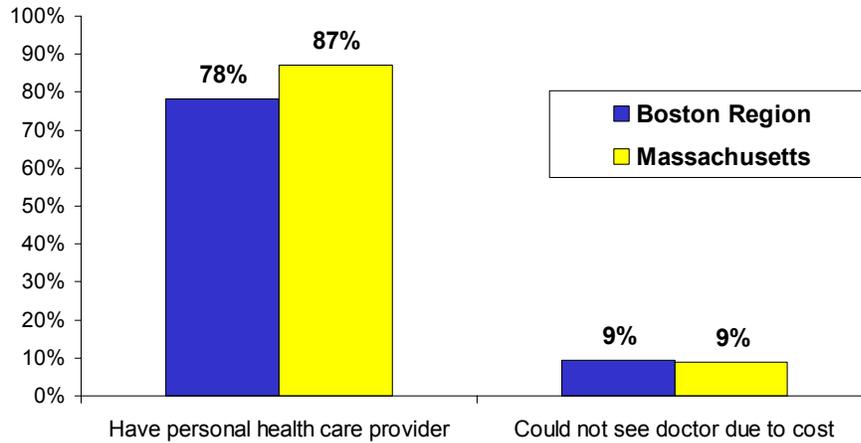
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

HEALTH CARE ACCESS



Health Insurance Access Boston Region and Massachusetts: 2005

13



* Statistically Significantly different from state ($p \leq .05$)– Red: Statistically worse than state- green: statistically better than state
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

Summary Indicators for Health Insurance by EOHHS Region, Massachusetts: 2005

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Indicator	MA Total	Western	Central	Northeast	Metro West	South East	Boston
% Adults with no health insurance	8.9	12.3	6.8	9.4	4.6	11.3	11.4
% Adults who have a personal health care provider	87.1	85.3	90.0	85.8	90.3	88.2	78.3
% Adults who were unable to see a doctor due to cost	8.8	10.4	10.4	7.8	7.0	9.2	9.4

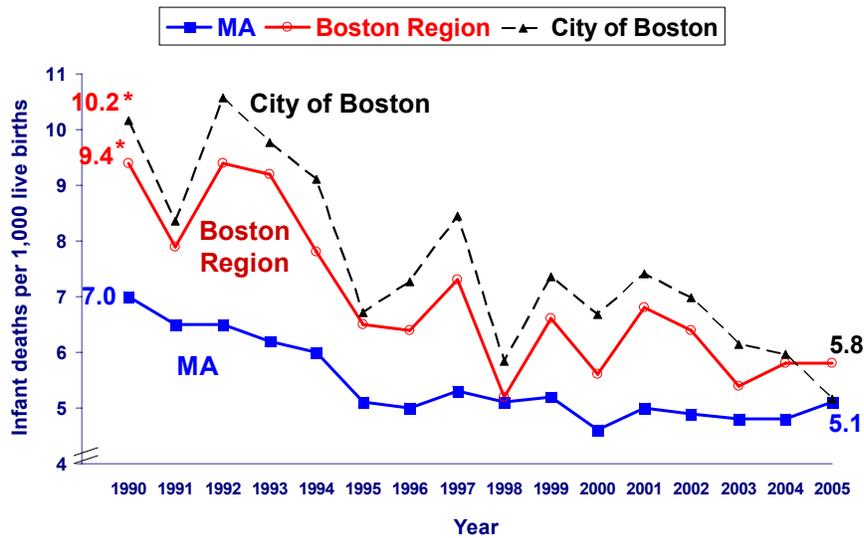
■ Better Outcome (significantly different from state)
 ■ Worse Outcome (significantly different from state)

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

BIRTH INDICATORS

Infant Mortality Rate (IMR) Boston Region and Massachusetts: 1990-2005

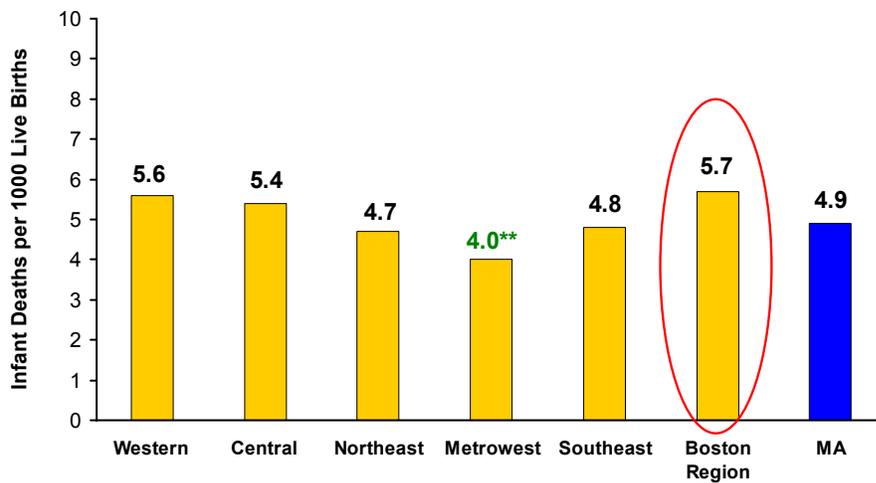
15



Infant Mortality Rate: deaths of infants less than one year of age per 1000 live births
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Infant Mortality Rates by EOHHS Region Massachusetts: 2003-2005

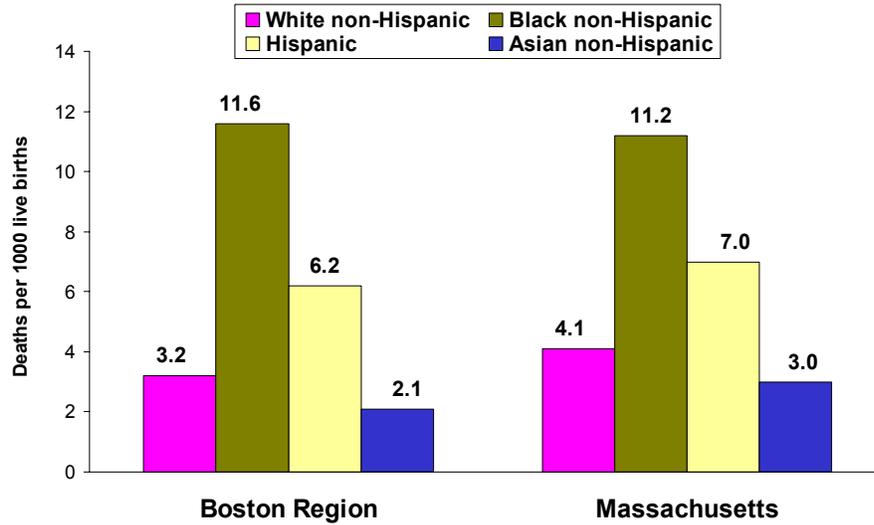
16



Statistically different from State ($p \leq .05$) Red (*) = Statistically worse; Green (**) = Statistically better
 Infant Mortality Rate: deaths of infants less than one year of age per 1000 live births
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

Infant Mortality Rates by Race/Ethnicity Boston Region and Massachusetts: 2003-2005

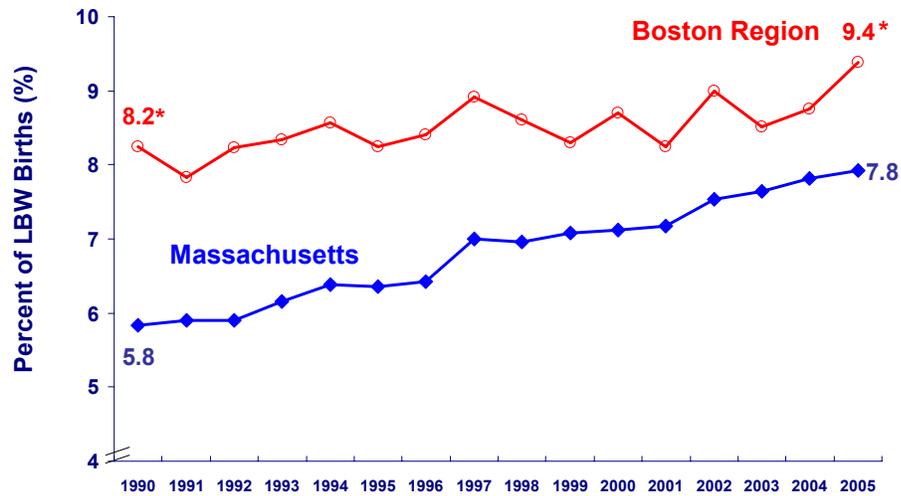
17



Statistically different from state ($p \leq .05$)— Red (*) Statistically worse than state- Green (**) statistically better than state
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Low Birthweight Boston Region and Massachusetts: 1990-2005

18

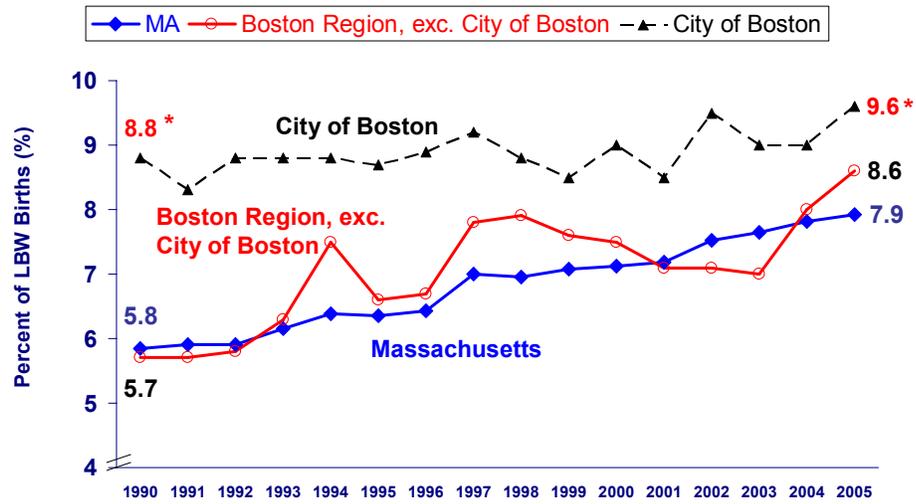


Low birthweight: less than 2,500 grams or 5.5 pounds

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Low Birthweight - Cities in Boston Region and Massachusetts: 1990-2005

19

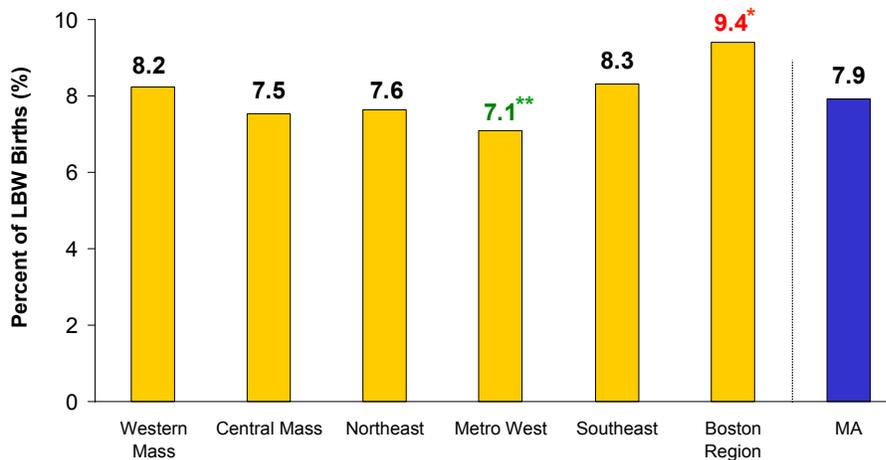


Low birthweight: less than 2,500 grams or 5.5 pounds

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Low Birthweight by EOHHS Region Massachusetts: 2005

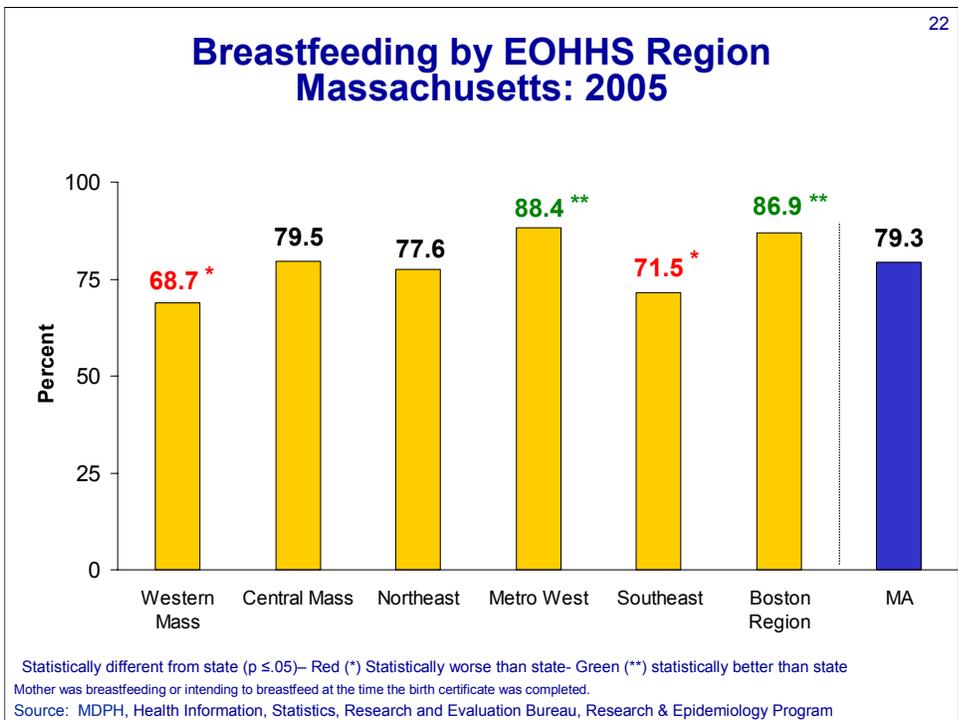
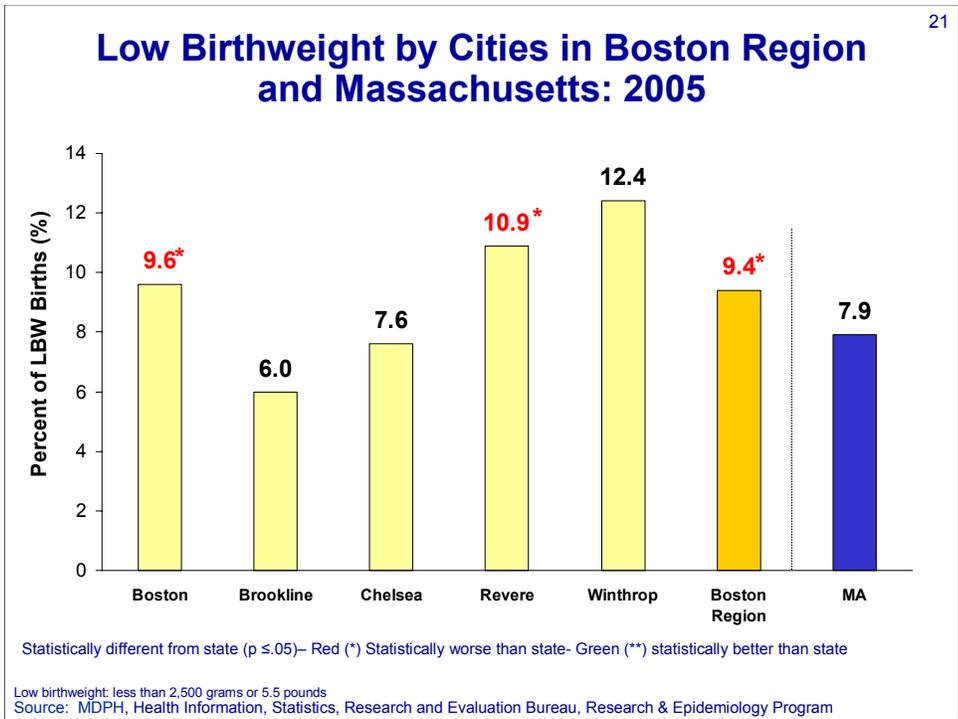
20

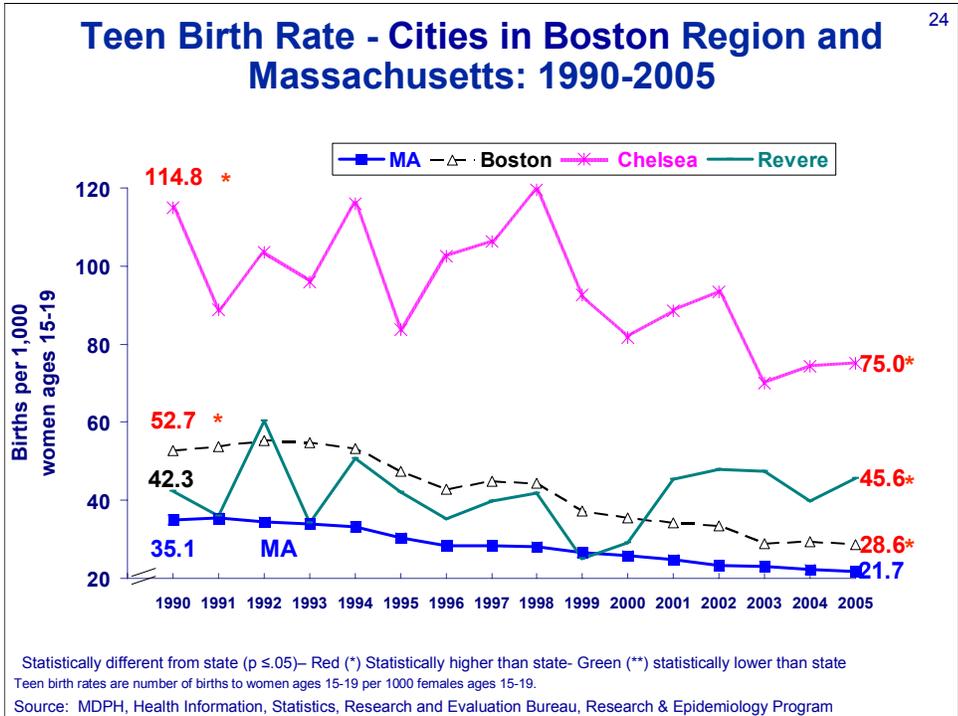
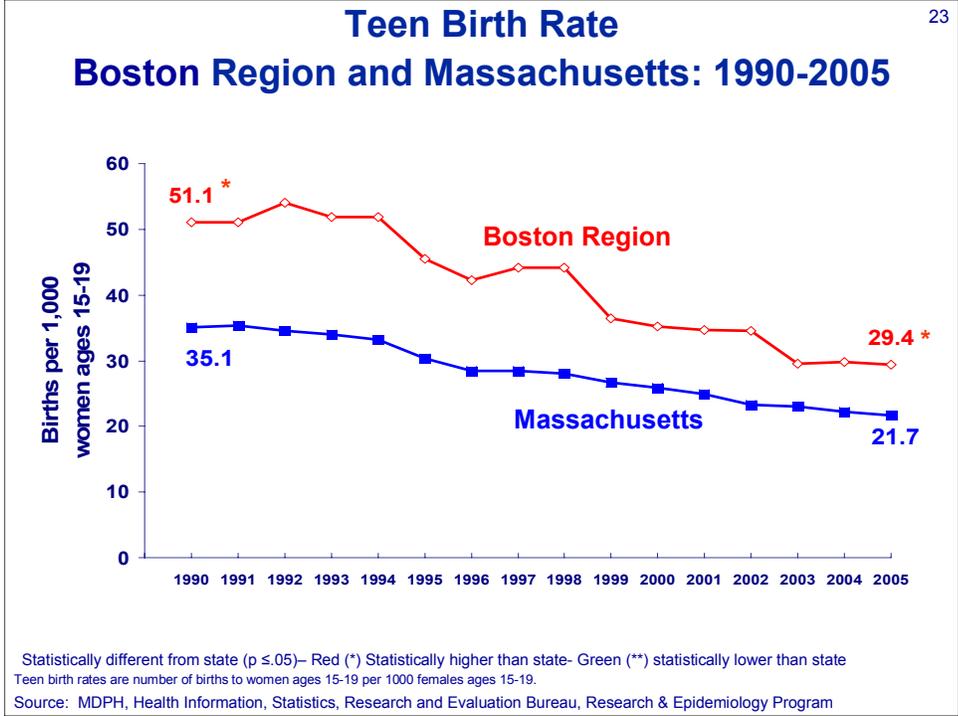


Statistically different from state ($p \leq 0.05$) - Red (*) Statistically worse than state - Green (**) statistically better than state

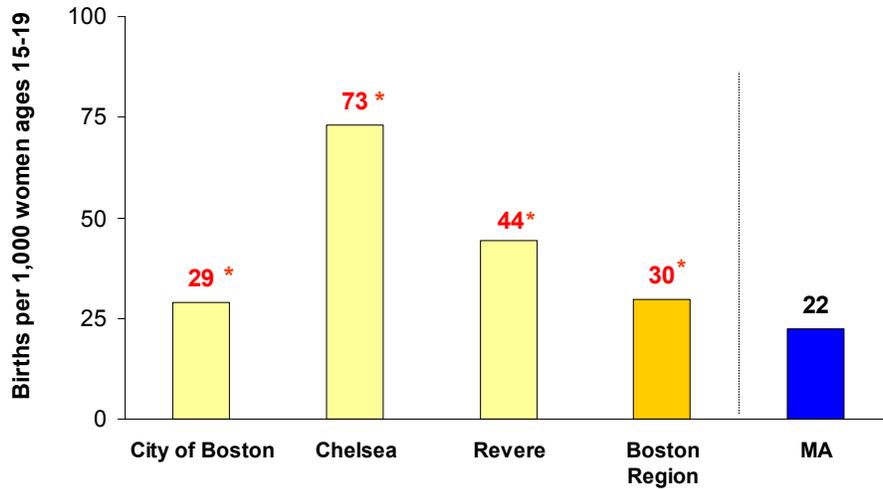
Low birthweight: less than 2,500 grams or 5.5 pounds

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program



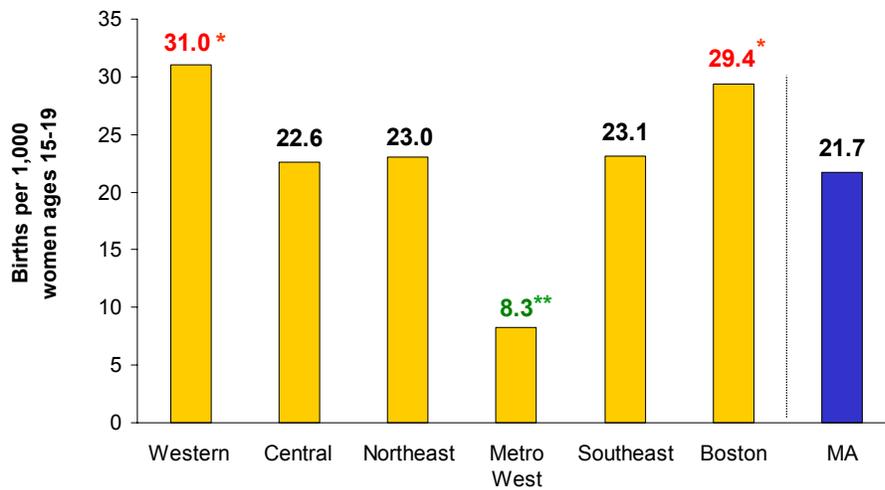


Teen Birth Rates by Cities in Boston Region & Massachusetts: 2003-2005



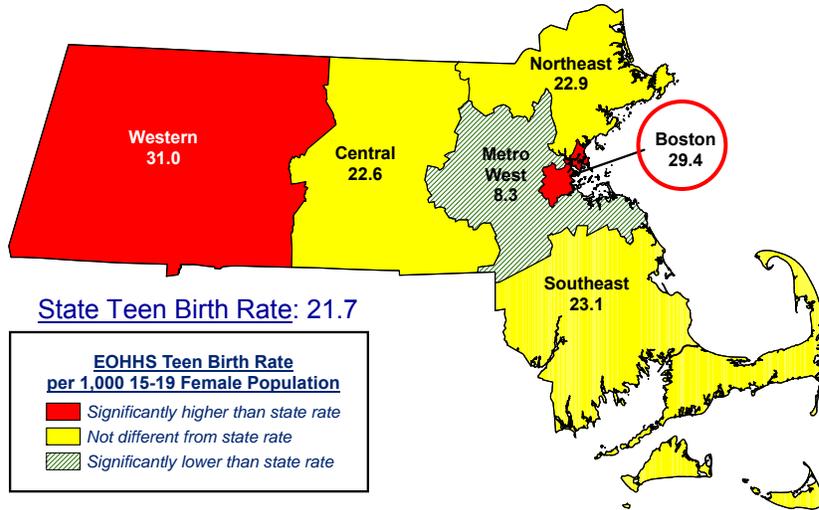
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Teen birth rates are number of births to women ages 15-19 per 1000 females ages 15-19.
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Teen Birth Rates by EOHS Regions Massachusetts: 2005



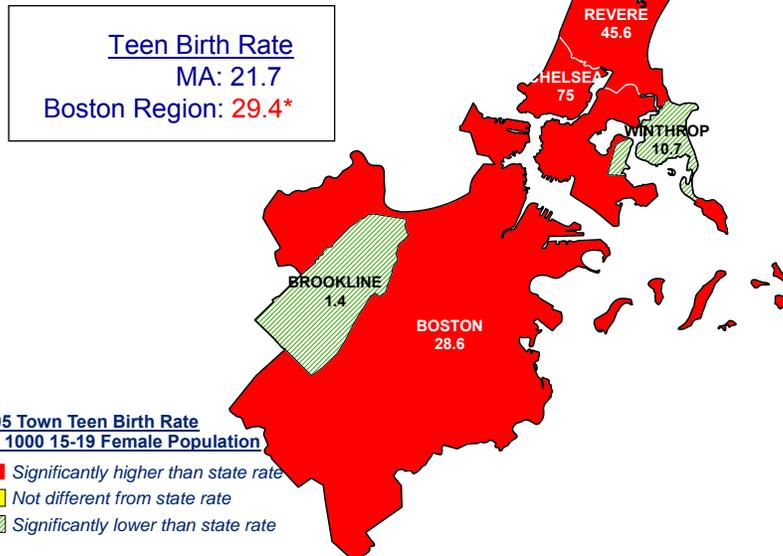
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Teen birth rates are number of births to women ages 15-19 per 1000 females ages 15-19.
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Teen Birth Rates by EOHHS Region Massachusetts: 2005



Teen birth rates are number of births to women ages 15-19 per 1000 females ages 15-19.
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

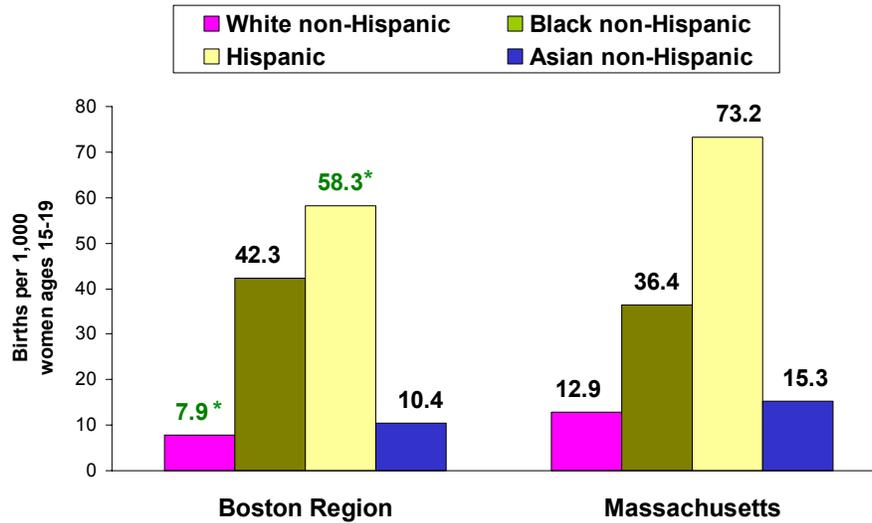
Teen Birth Rates by City/Town Boston Region: 2005



Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Teen Birth Rates by Race and Ethnicity Boston Region and Massachusetts: 2005

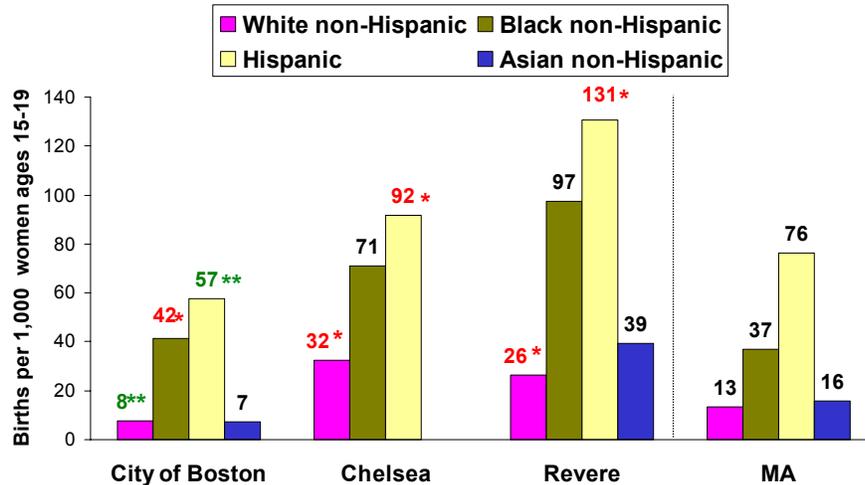
29



* Statistically Significant different from state ($p \leq .05$)– Red: Statistically higher than state- green: statistically lower than state
 Teen birth rates are number of births to women ages 15-19 per 1000 females ages 15-19.
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Teen Birth Rate by Race and Ethnicity Cities in Boston Region & Massachusetts: 2003-2005

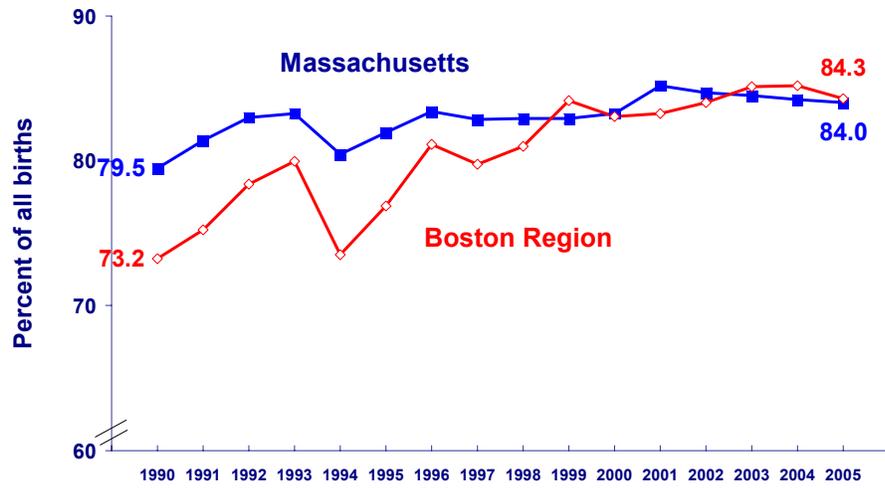
30



Statistically different from state ($p \leq .05$)– Red (*) Statistically higher than state- Green (**) statistically lower than state
 Teen birth rates are number of births to women ages 15-19 per 1000 females ages 15-19.
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Adequate Prenatal Care Boston Region and Massachusetts: 1990-2005

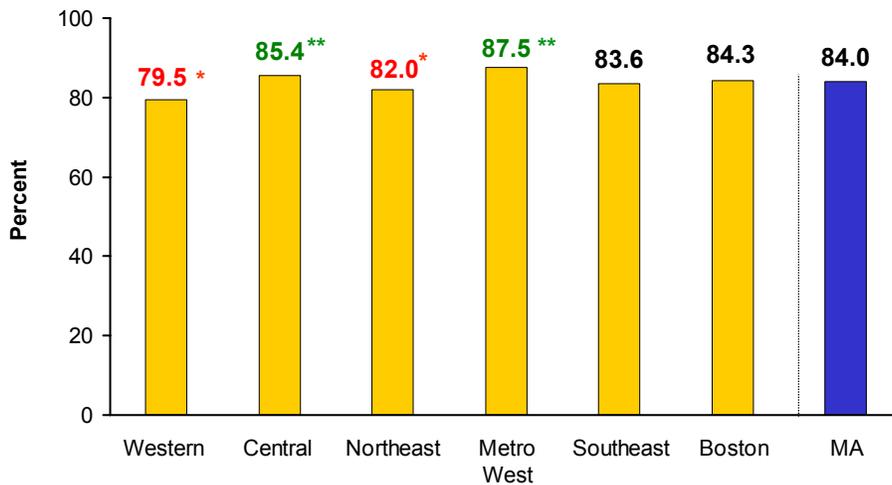
31



Based on Adequacy of Prenatal Care Utilization (APNCU) Index.
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Adequate Prenatal Care by EOHHS Regions Massachusetts: 2005

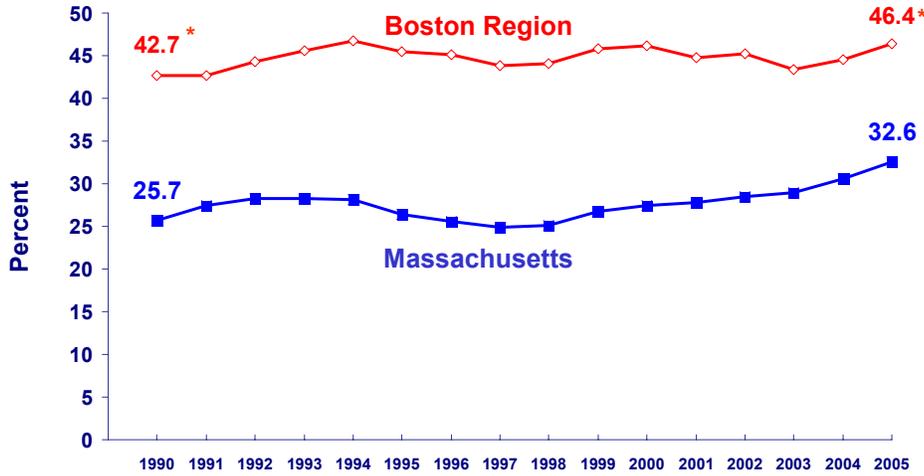
32



Statistically different from state ($p \leq .05$)— Red (*) Statistically worse than state- Green (**) statistically better than state
Based on Adequacy of Prenatal Care Utilization (APNCU) Index.
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Public Source of Payment for Prenatal Care Boston Region and Massachusetts: 1990-2005

33

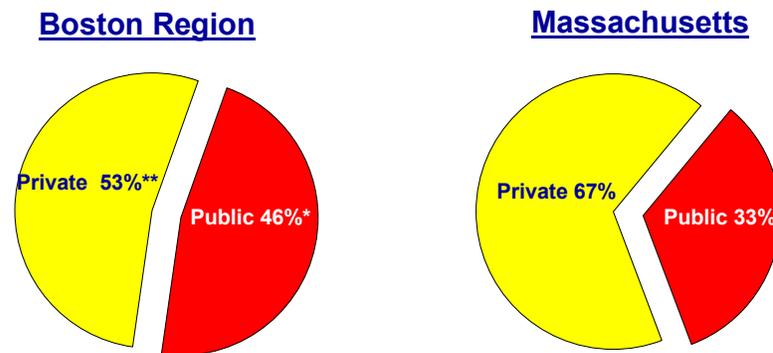


*Public: Government programs including Commonhealth, Healthy Start, Medicaid/MassHealth, or free care. Private: Commercial indemnity plan, commercial Managed care (HMO, PPO, IPP, IPA and other) or other private insurance.

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Public Source of Payment for Prenatal Care¹ Boston Region and Massachusetts: 2005

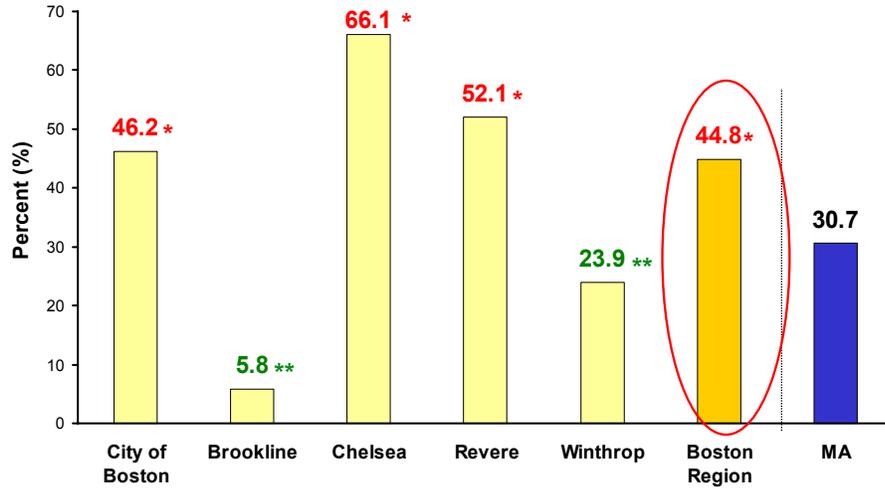
34



¹Public: Government programs including Commonhealth, Healthy Start, Medicaid/MassHealth, or free care. Private: Commercial indemnity plan, commercial Managed care (HMO, PPO, IPP, IPA and other) or other private insurance.

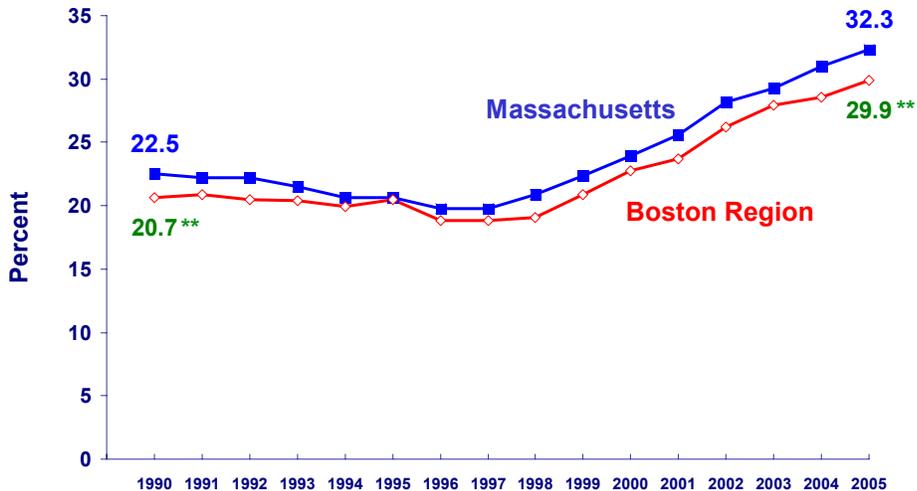
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Public Source of Prenatal Care Payment by Cities in Boston Region & Massachusetts: 2003-2005



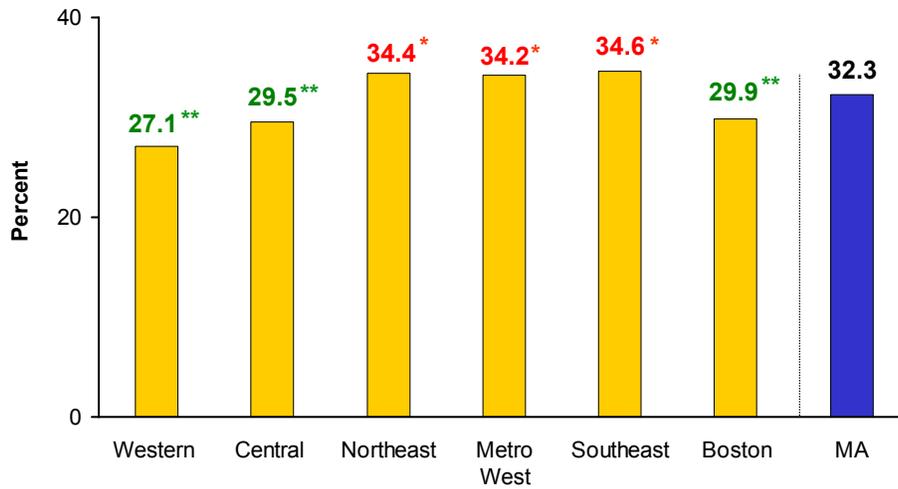
Statistically different from state ($p \leq .05$)– Red (*) Statistically higher than state- Green (**) statistically lower than state
 Public: Government programs including Commonhealth, Healthy Start, Medicaid/MassHealth, or free care
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Infants Delivered by C-Section Boston Region and Massachusetts: 1990-2005



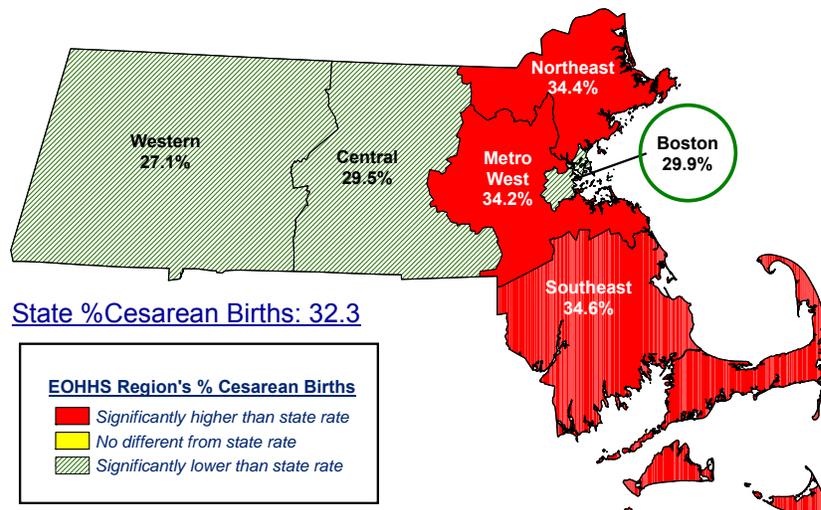
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Infants Delivered by C-Section by EOHHS Region, Massachusetts: 2005



Statistically different from state ($p \leq .05$)— Red (*) Statistically worse than state— Green (**) statistically better than state
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

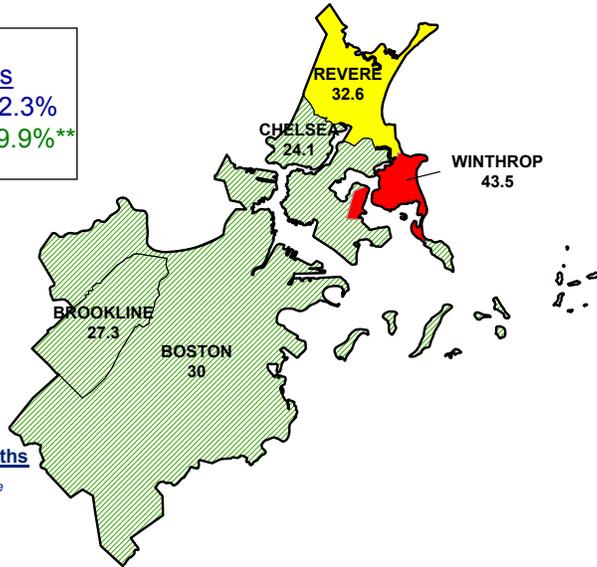
Infants Delivered by C-Section by EOHHS Region, Massachusetts: 2005



Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Percent of Cesarean Deliveries by City/Town Boston Region: 2005

% Cesarean Births
 State: 32.3%
 Boston Region: 29.9%**



2005 Town's % of Cesarean Births

- Significantly higher than state rate
- No different from state rate
- Significantly lower than state rate

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Summary Birth Indicators by EOHHS Region, Massachusetts:2005

Indicator (as % of race group births)	MA Total (n=76,824)	Western (n=8,935)	Central (n=10,532)	Northeast (n=15,939)	Metro West (n=17,093)	South East (n=14,681)	Boston (n=9,644)
Adequate Prenatal Care (Kotelchuck index)	84.0	79.5	85.4	82.0	87.5	83.6	84.3
C-section deliveries	32.3	27.1	29.5	34.4	34.2	34.6	29.9
Low Birth weight (<5.5 lb)	7.9	8.2	7.5	7.6	7.1	8.3	9.4
Breastfeeding	79.3	68.7	79.5	77.6	88.4	71.5	86.9
Public Pay for Prenatal Care	32.6	47.4	27.9	33.7	17.2	34.7	46.4
Smoking during pregnancy	7.1	13.5	7.6	7.2	3.2	10.2	3.9

- Better Outcome (significantly different from state)
- Worse Outcome (significantly different from state)

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Summary Birth Indicators by EOHHS Region

Indicator	MA Total	Western	Central	Northeast	Metro West	South East	Boston
Infant Mortality Rate (2002-2005) (infant deaths per 1000 live births)	4.9	5.6	5.4	4.7	4.0	4.8	5.7
Teen birth rate (2005) (births to women ages 15-19 per 1000 women ages 15-19)	21.7	31.0	22.9	23.0	8.3	23.1	29.4

■ Better Outcome (significantly different from state)
 ■ Worse Outcome (significantly different from state)

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

LEADING CAUSES OF DEATH

Leading Causes of Death Boston Region and Massachusetts:2005

<u>Boston Region</u> N=5,394			<u>Massachusetts</u> N=53,776		
Cancer	1,293	24.0%	Heart Disease	13,248	24.6%
Heart Disease	1,180	21.9%**	Cancer	13,159	24.5%
All Injuries	315	5.8%*	Stroke	2,979	5.5%
Stroke	292	5.4%	All Injuries	2,657	4.9%
Chronic Lower Respiratory Disease	230	4.3%	Chronic Lower Respiratory Disease	2,643	4.9%
Influenza and Pneumonia	212	3.9%	Influenza and Pneumonia	1,932	3.6%
Nephritis	165	3.1%	Alzheimer's	1,635	3.0%
Septicemia	140	2.6%*	Nephritis	1,403	2.6%
Diabetes	139	2.6%	Diabetes	1,271	2.4%
Alzheimer's	107	2.0%	Septicemia	982	1.8%

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

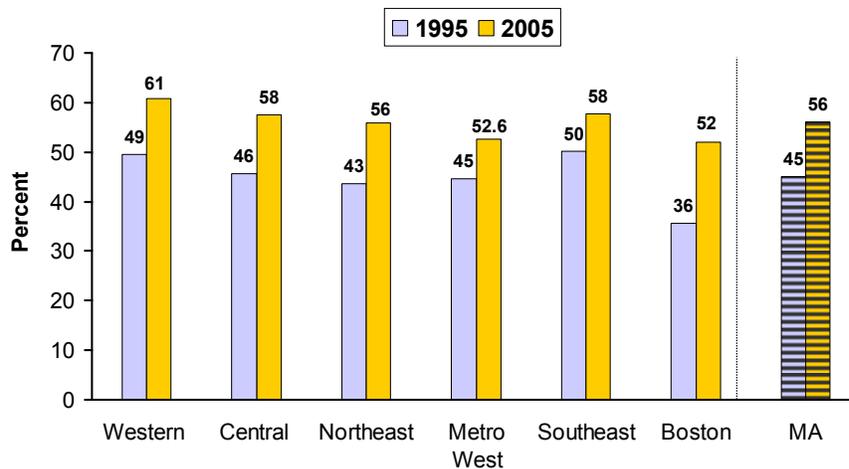
CHRONIC DISEASE OUTCOMES AND OVERWEIGHT/OBESITY

Thresholds for Defining Overweight and Obesity

<u>Height</u>	<u>Overweight</u> BMI 25.0-29.9	<u>Obesity</u> BMI > 30
5'	128 lbs.	153 lbs.
5'2"	136	164
5'4"	145	174
5'6"	155	186
5'8"	164	197
6'	184	221
6'2"	195	234

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Adults who are Overweight¹ by EOHHS Region, Massachusetts: 1995 & 2005

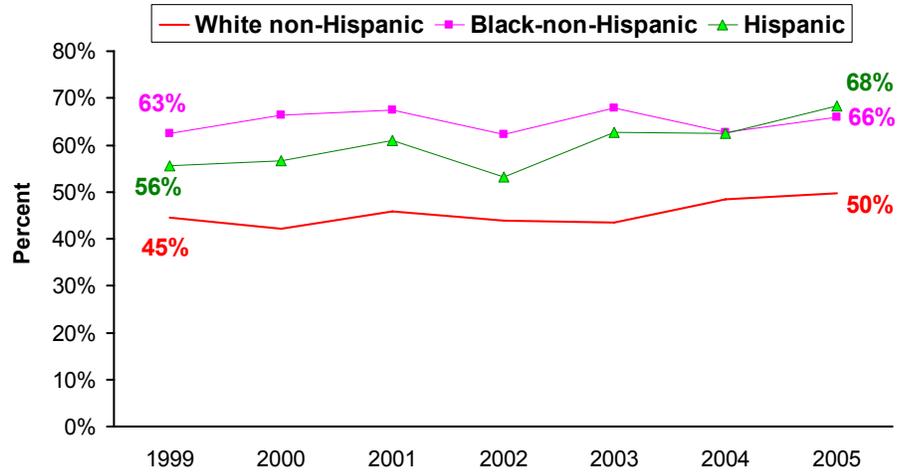


Statistically different from state (p ≤ .05)– Red (*) Statistically worse than state- Green (**) statistically better than state

¹ Overweight: BMI greater than or equal to 25

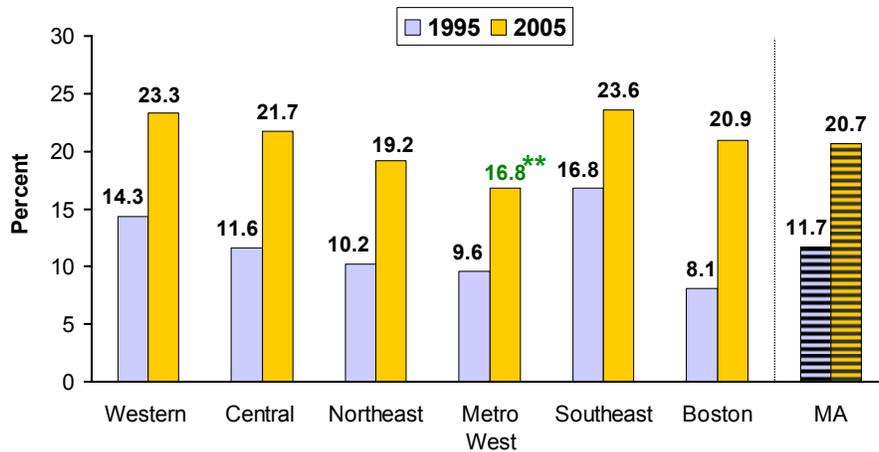
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), Health Survey Program

Adults who are Overweight by Race and Ethnicity Boston Region: 1999-2005



Overweight: BMI greater than or equal to 25
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

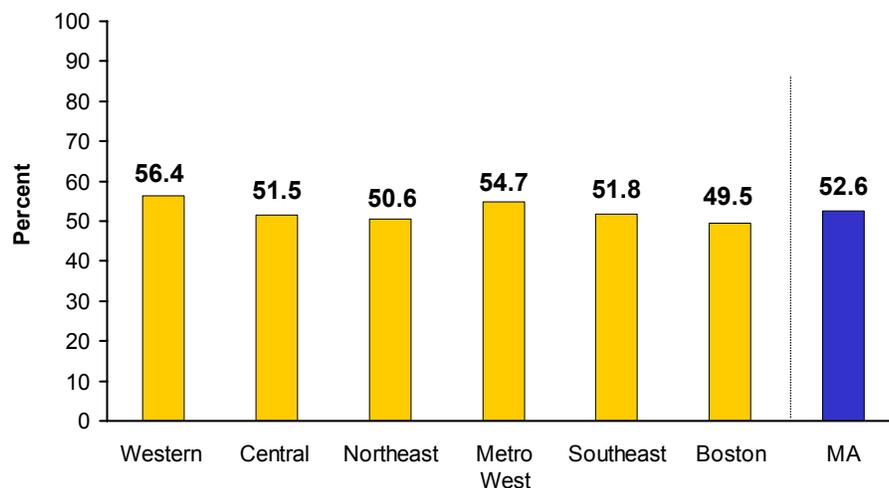
Adults who are Obese¹ by EOHHS Region, Massachusetts: 1995 & 2005



Statistically different from state ($p \leq .05$) – Red (*) Statistically worse than state- Green (**) statistically better than state

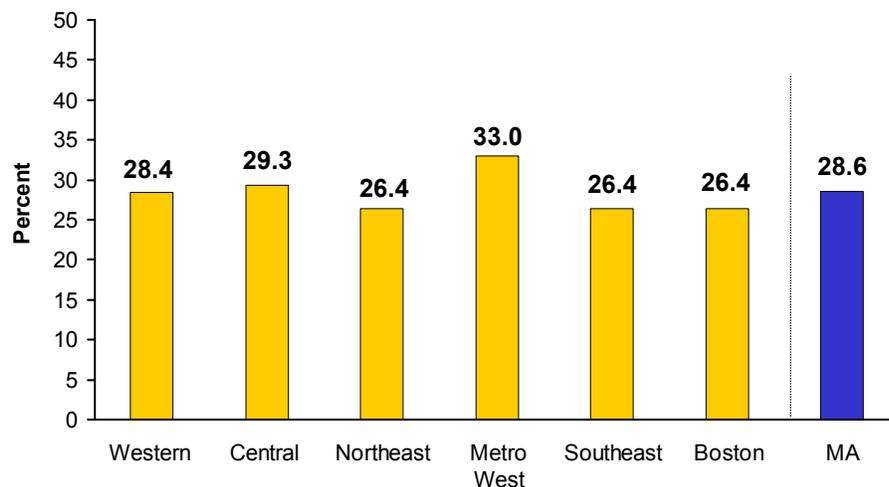
¹ Obesity: BMI greater than or equal to 30
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), Health Survey Program

Adults who Participate in Regular Physical Activity⁴⁷ by EOHHS Region, Massachusetts: 2005



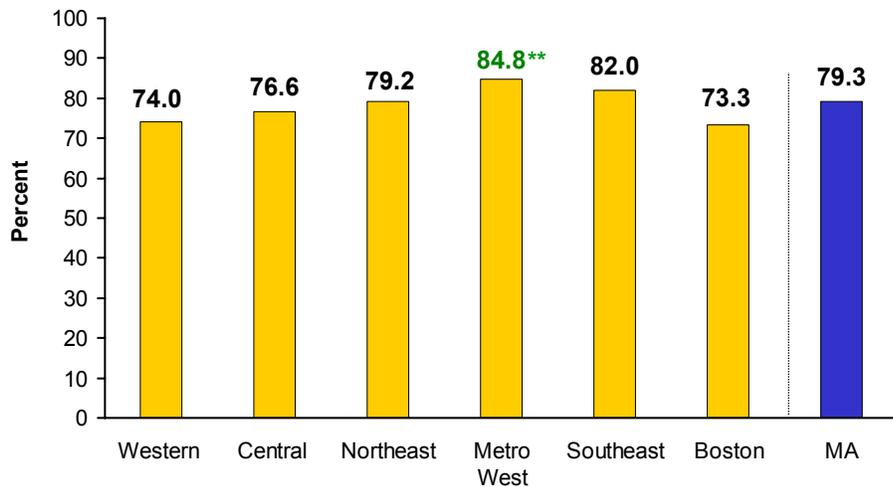
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

Adults who have 5+ Servings of Fruit or Vegetables⁴⁸ by EOHHS Region, Massachusetts: 2005



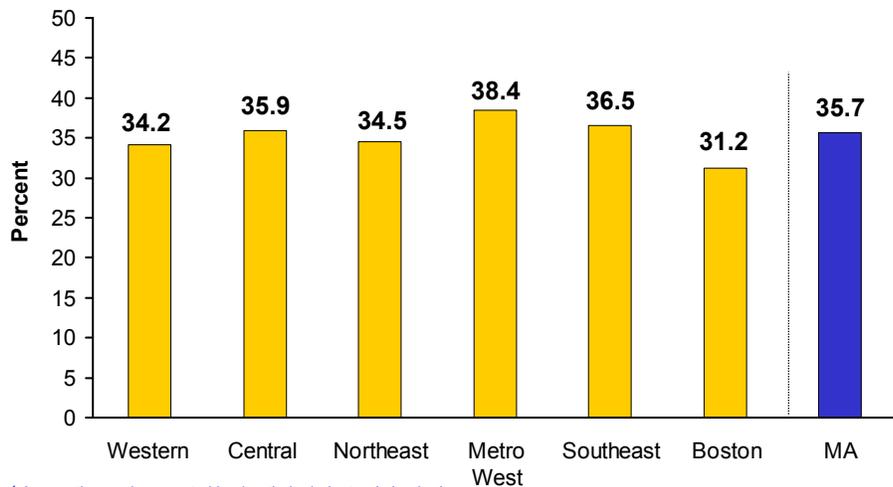
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

49
Adults who had their cholesterol checked in Past 5 Years by EOHHS Region Massachusetts: 2005



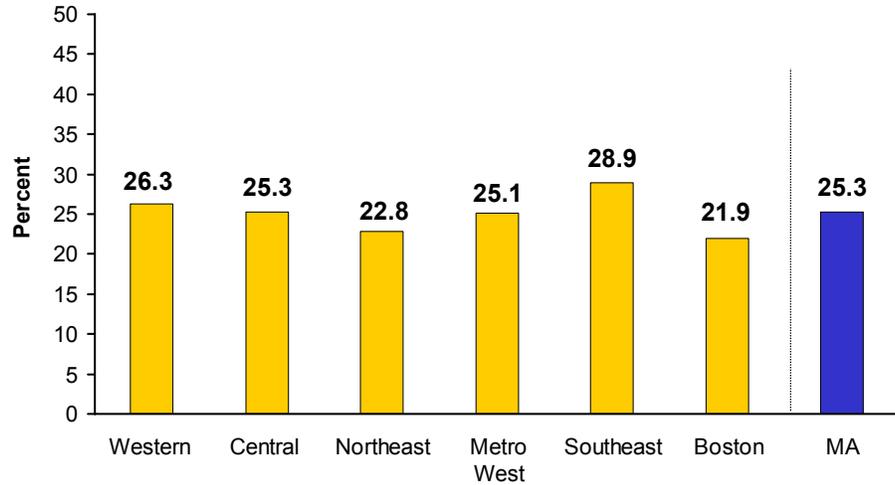
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

50
Adults who were told by a health care provider that they have high cholesterol¹ by EOHHS Region Massachusetts: 2005



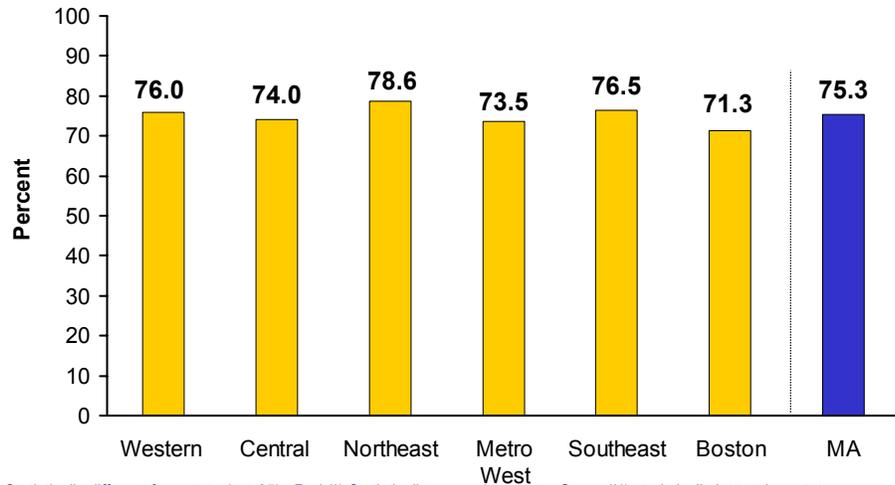
¹ Among those who reported having their cholesterol checked
 Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

Adults who were told by a health care provider to have high blood pressure by EOHHS Region Massachusetts: 2005 ⁵¹



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

Adults who take Medicine for High Blood Pressure¹ by EOHHS Region Massachusetts: 2005 ⁵²

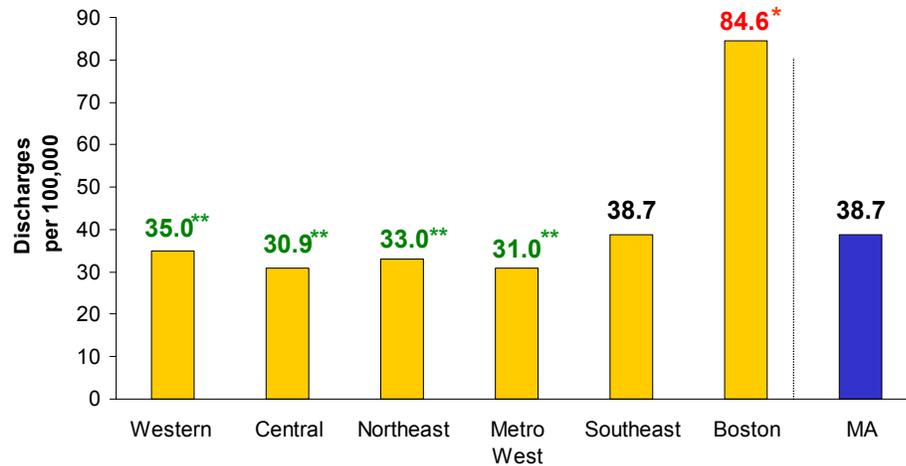


Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
¹ Among those who reported having high blood pressure

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

Hospital Discharge Rates for Hypertension by EOHHS Regions and Massachusetts: 2003-2005

53



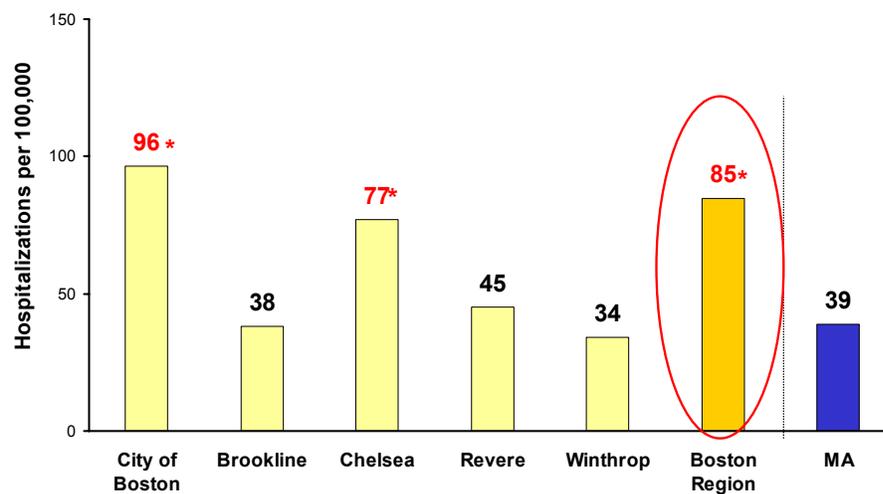
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state

Age-adjusted to the 2000 US standard population.

Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Inpatient Hospital Discharge Database

Hospital Discharge Rates for Hypertension by Cities in Boston Region & Massachusetts: 2003-2005

54

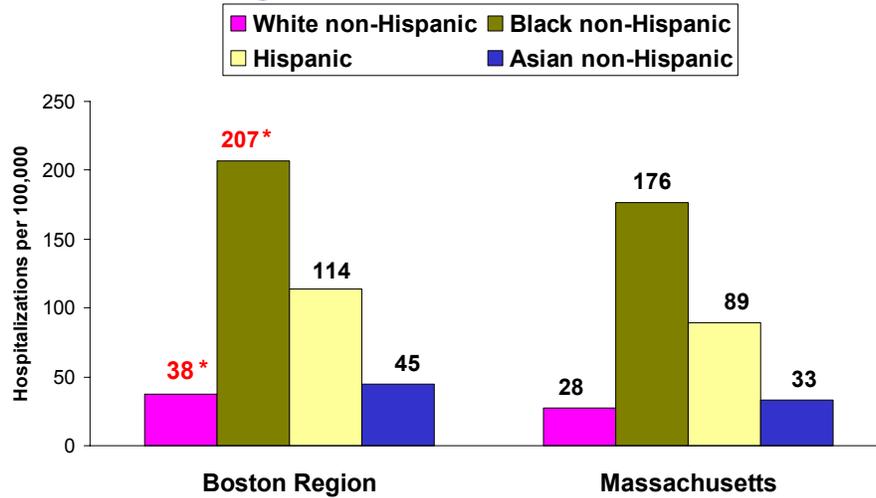


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Age-adjusted to the 2000 US standard population.

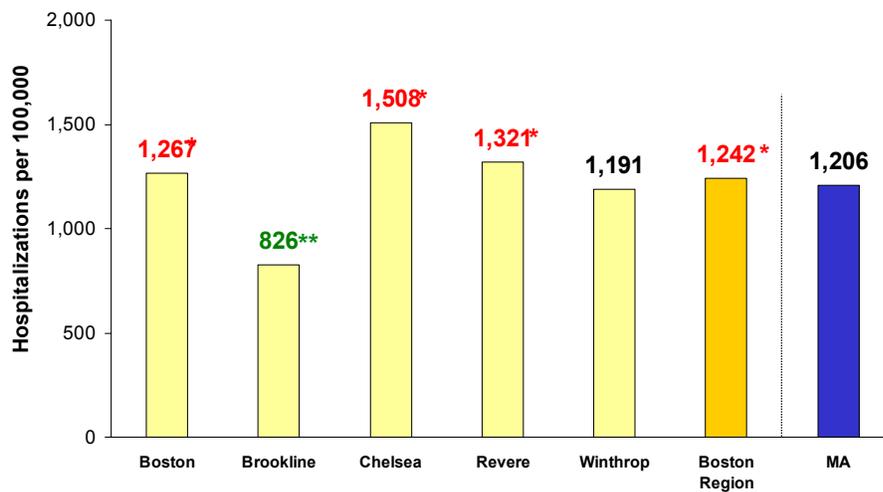
Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Inpatient Hospital Discharge Database

Hospital Discharge Rate for Hypertension by Race/Ethnicity Boston Region & Massachusetts: 2003-2005



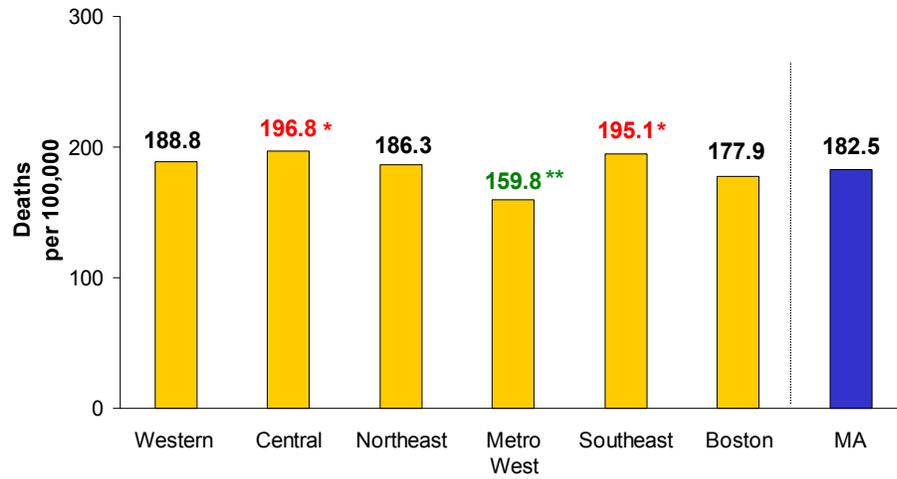
Statistically different from state (p ≤ .05)– Red (*) Statistically worse than state- Green (**) statistically better than state
Age-adjusted to the 2000 US standard population.
Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Inpatient Hospital Discharge Database

Hospital Discharge Rates for Heart Disease by Cities in Boston Region & Massachusetts: 2003-2005



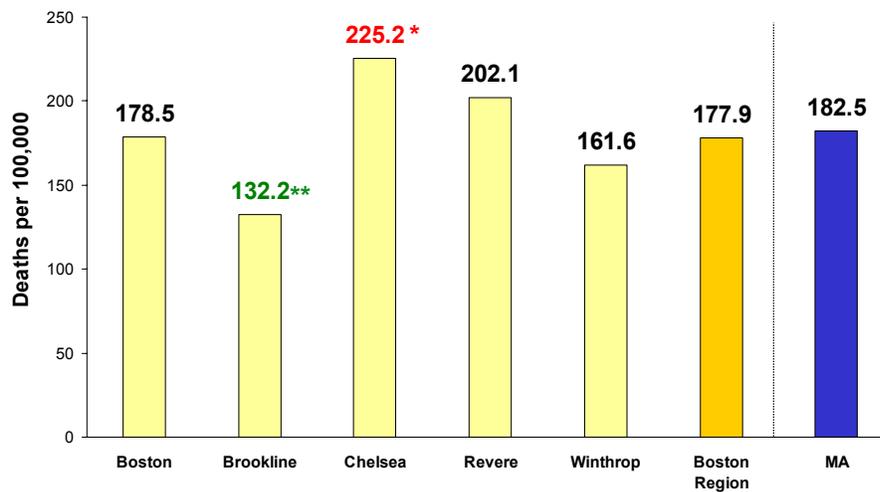
Statistically different from state (p ≤ .05)– Red (*) Statistically worse than state- Green (**) statistically better than state
Age-adjusted to the 2000 US standard population.
Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Inpatient Hospital Discharge Database

Heart Disease Mortality Rates by EOHHS Region, Massachusetts: 2003-2005



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

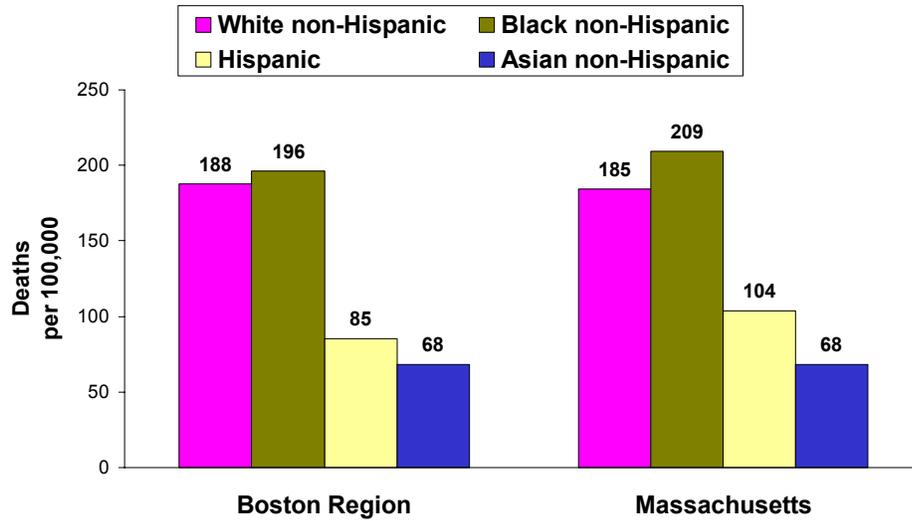
Heart Disease Mortality Rate by Cities in Boston Region & Massachusetts: 2003-2005



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Age-adjusted to the 2000 US standard population
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Heart Disease Death Rate by Race/Ethnicity Boston Region and Massachusetts: 2003-2005

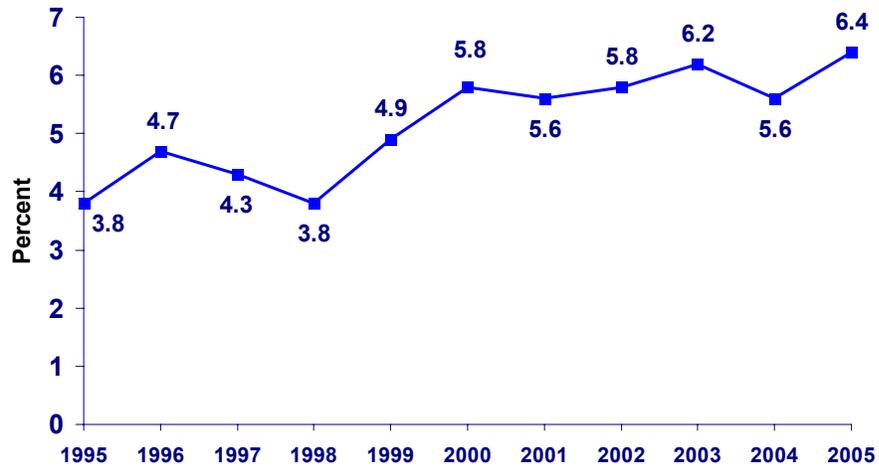
59



Statistically different from state ($p \leq .05$)— Red (*) Statistically worse than state- Green (**) statistically better than state
Age-adjusted to the 2000 US standard population.
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

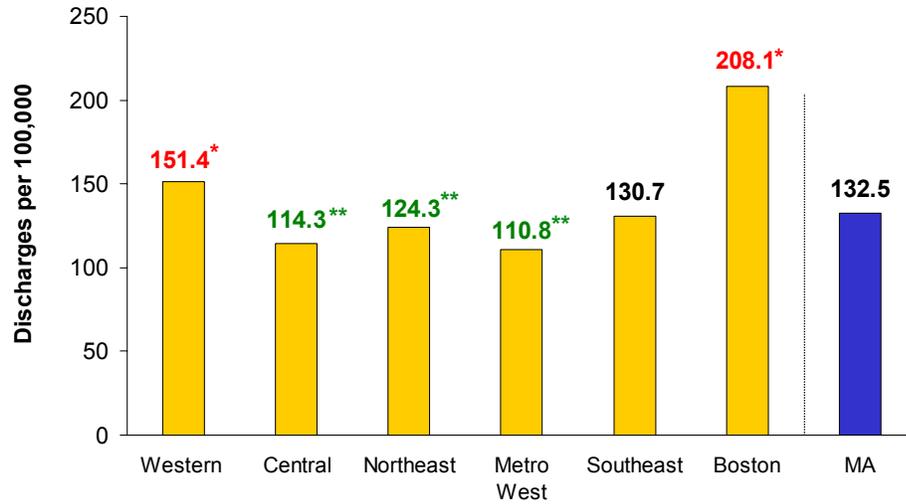
Prevalence of Diabetes Massachusetts: 1994-2005

60



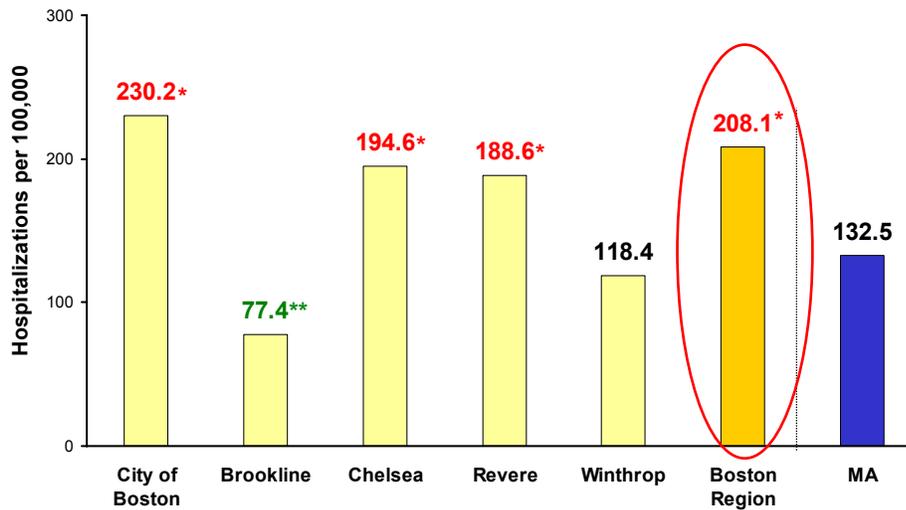
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), Health Survey Program

Diabetes Hospital Discharges by EOHHS Region, Massachusetts: 2003-2005



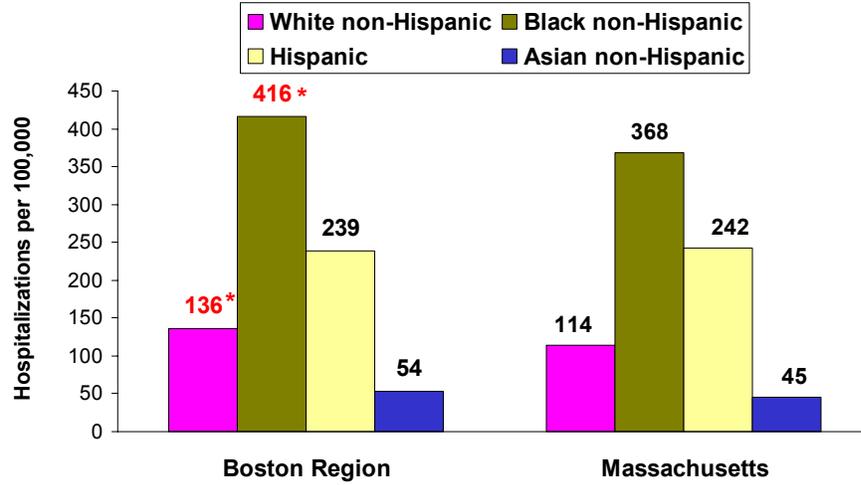
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Inpatient Hospital Discharge Database

Diabetes Hospital Discharges by Cities in Boston Region & Massachusetts: 2003-2005



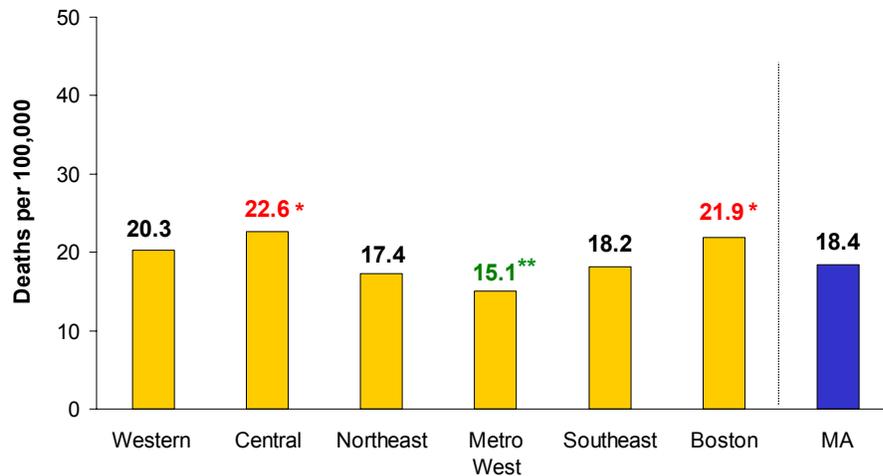
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Inpatient Hospital Discharge Database

Diabetes Hospital Discharge Rate by Race/Ethnicity Boston Region Massachusetts: 2003-2005



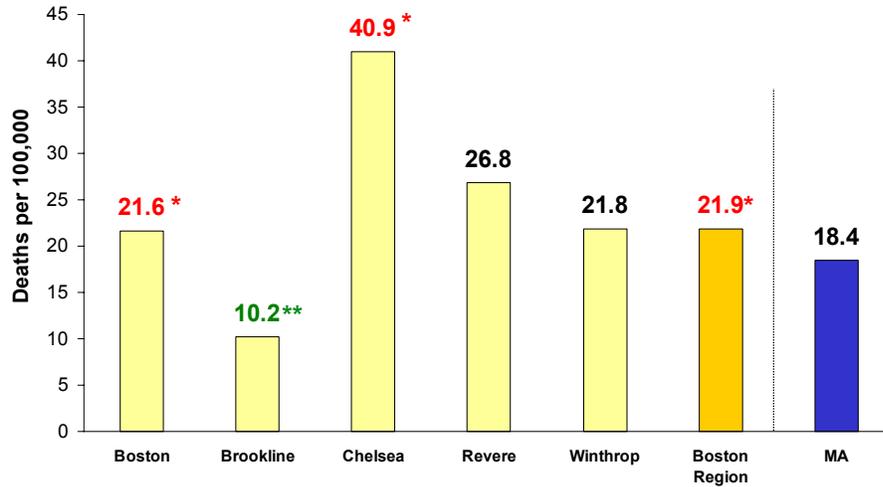
Statistically different from state (p ≤ .05)– Red (*) Statistically worse than state- Green (**) statistically better than state
Age-adjusted to the 2000 US standard population.
Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Inpatient Hospital Discharge Database

Diabetes Mortality Rates by EOHHS Region Massachusetts: 2003-2005



Statistically different from state (p ≤ .05)– Red (*) Statistically worse than state- Green (**) statistically better than state
Age-adjusted to the 2000 US standard population.
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Diabetes Mortality Rate by Cities in Boston Region & Massachusetts: 2003-2005

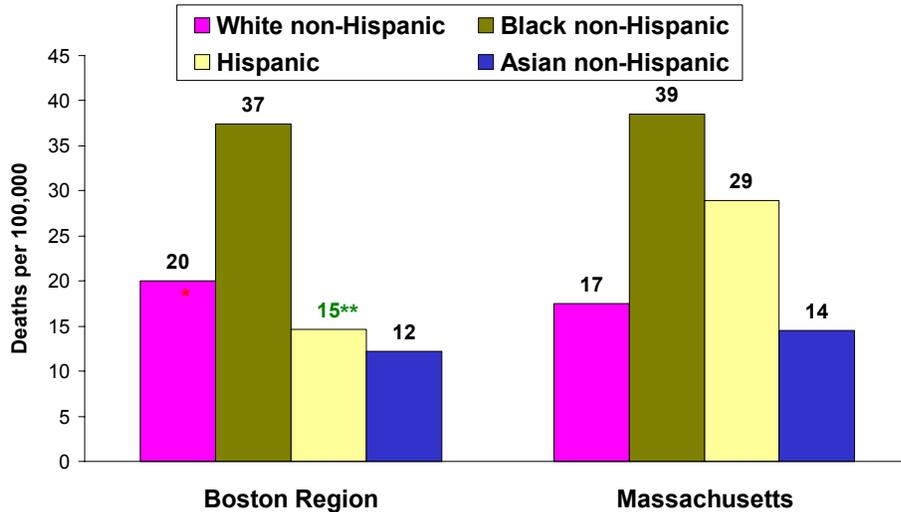


Statistically different from state (p ≤.05)– Red (*) Statistically worse than state- Green (**) statistically better than state

Age-adjusted to the 2000 US standard population

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Diabetes Death Rate by Race/Ethnicity Boston Region and Massachusetts: 2003-2005



* Statistically Significant different from state (p ≤.05)– Red: Statistically worse than state- green: statistically better than state

Age-adjusted to the 2000 US standard population.

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Summary Indicators for Overweight/Obesity by EOHHS Region, Massachusetts:2005

Indicator	MA Total	Western	Central	Northeast	Metro West	South East	Boston
% Obese Adults	20.7	23.3	21.7	19.2	16.8	23.6	20.9
% Adults Participation in regular PA	52.6	56.4	51.5	50.6	54.7	51.8	49.5
% Adults with 5+ servings fruits/vegetables	28.6	28.4	29.3	26.4	33.0	26.4	26.4
% Adults who had cholesterol checked	79.3	74.0	76.6	79.2	84.8	82.0	73.3
% Adults with high cholesterol	35.7	34.2	35.9	34.5	38.4	36.5	31.2

 Better Outcome (significantly different from state)  Worse Outcome (significantly different from state)

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

Summary Indicators for Chronic Disease Outcomes by EOHHS Region

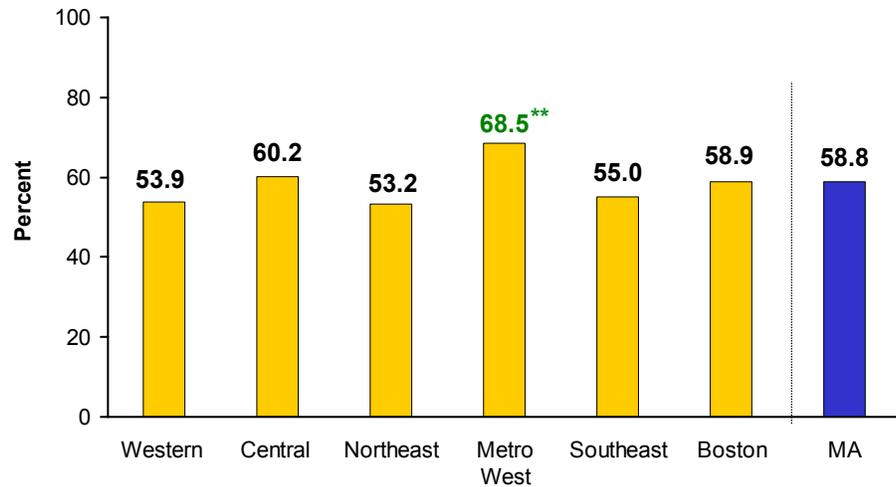
Indicator	MA Total	Western	Central	Northeast	Metro West	South East	Boston
% Adults with HBP	25.3	26.3	25.3	22.8	25.1	28.9	21.9
% Adults take HBP medications	75.3	76.0	74.0	78.6	73.5	76.5	71.3
Hypertension Hospital Discharges (2003-2005)	38.7	35.0	30.9	32.9	31.0	38.7	84.6
Heart Disease Death Rate (2003-2005)	182.5	188.8	196.8	186.3	159.8	195.1	177.9
Diabetes Hospital Discharges (2003-2005)	132.5	151.4	114.3	124.3	110.8	130.7	208.1
Diabetes Death Rate (2003-2005)	18.4	20.3	22.6	17.3	15.1	18.2	21.9

 Better Outcome (significantly different from state)  Worse Outcome (significantly different from state)

CANCER

69

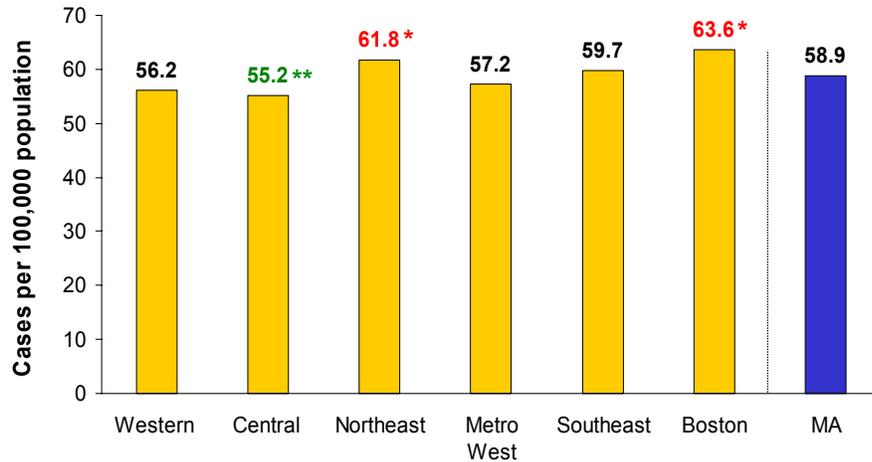
Adults Ages 50+ who have had a Sigmoidoscopy or Colonoscopy in Past 5 Years by EOHHS Region Massachusetts: 2005



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

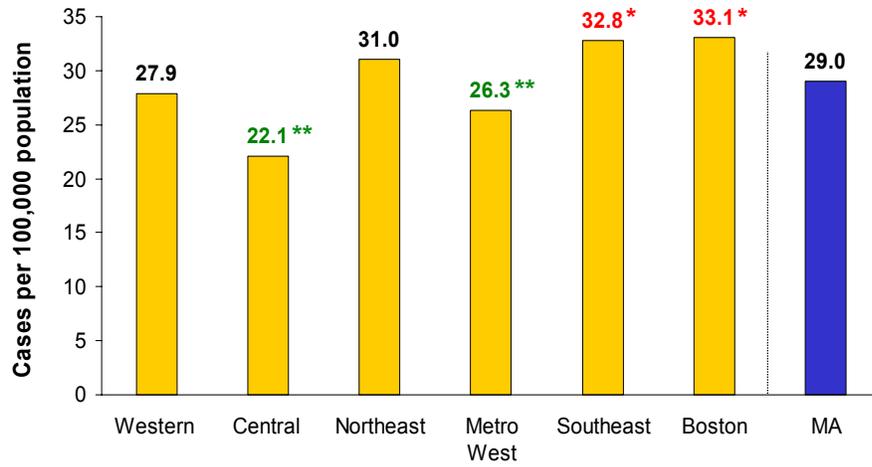
70

Incidence Rates for Invasive Colorectal Cancer by EOHHS Region, Massachusetts: 1999-2003



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Cancer Registry

Incidence Rates for Early Stage Colorectal Cancer⁷¹ **MALES** by EOHHS Region, Massachusetts: 1999-2003

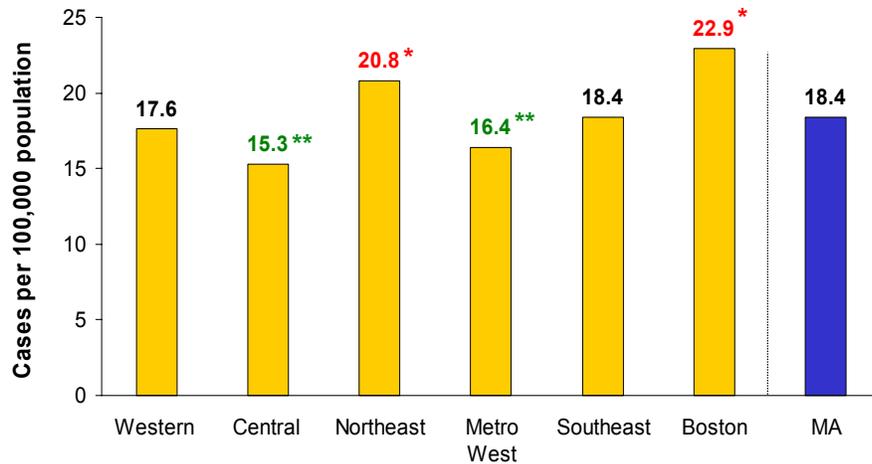


Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state

Age-adjusted to the 2000 US standard population.

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Cancer Registry

Incidence Rates for Early Stage Colorectal Cancer⁷² **FEMALES** by EOHHS Region, Massachusetts: 1999-2003

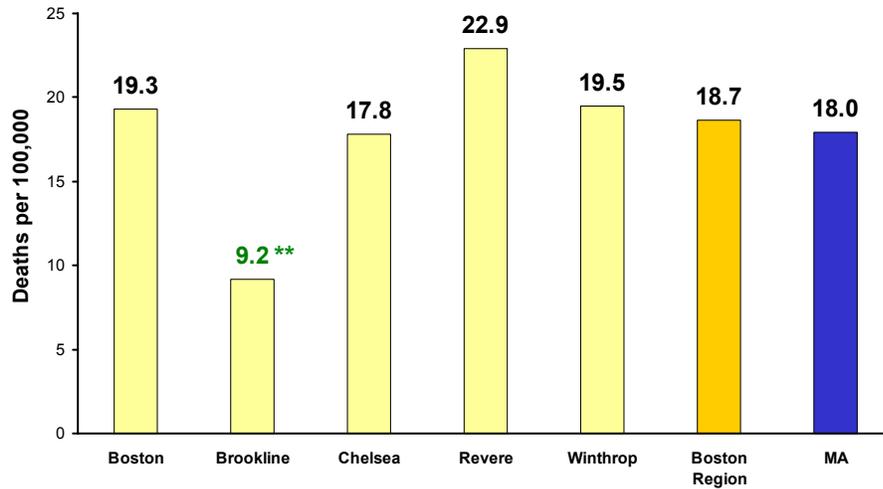


Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state

Age-adjusted to the 2000 US standard population.

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Cancer Registry

Colorectal Cancer Mortality Rate by Cities in Boston Region & Massachusetts: 2003-2005

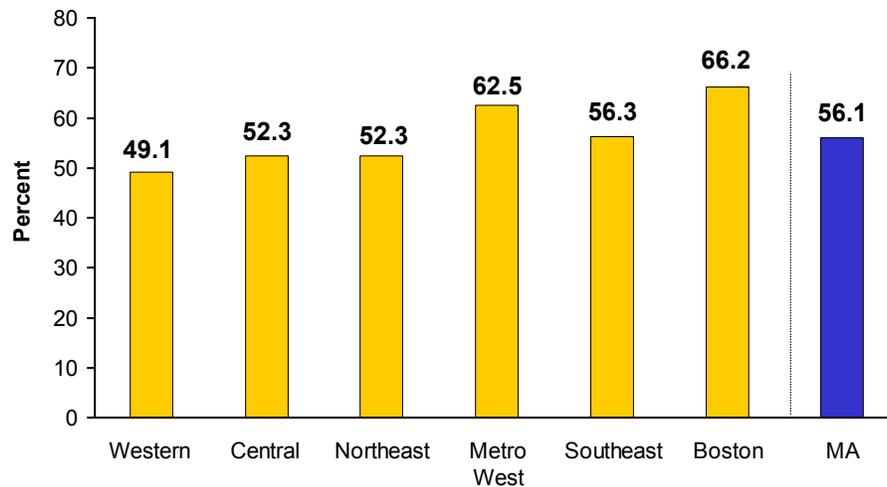


Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state

Age-adjusted to the 2000 US standard population

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

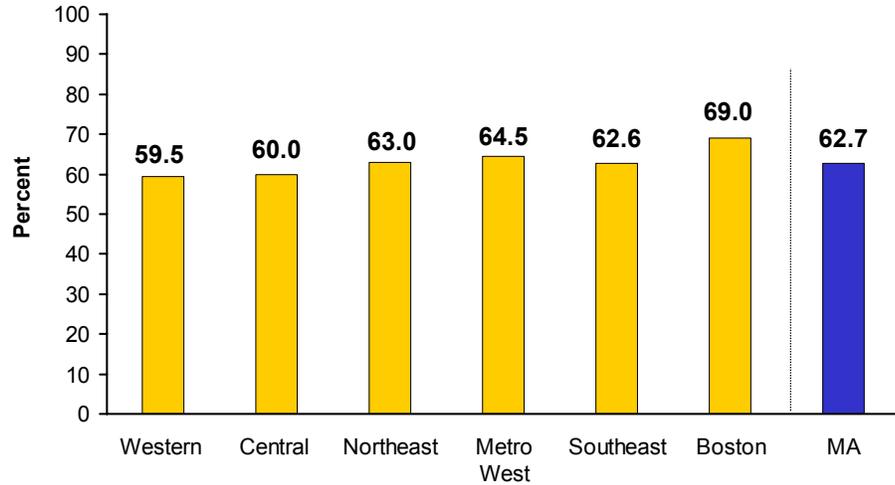
Men Ages 50 and Older who had a Prostate-Specific Antigen Test in the Past Two Years by EOHHS Region, Massachusetts: 2004



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state

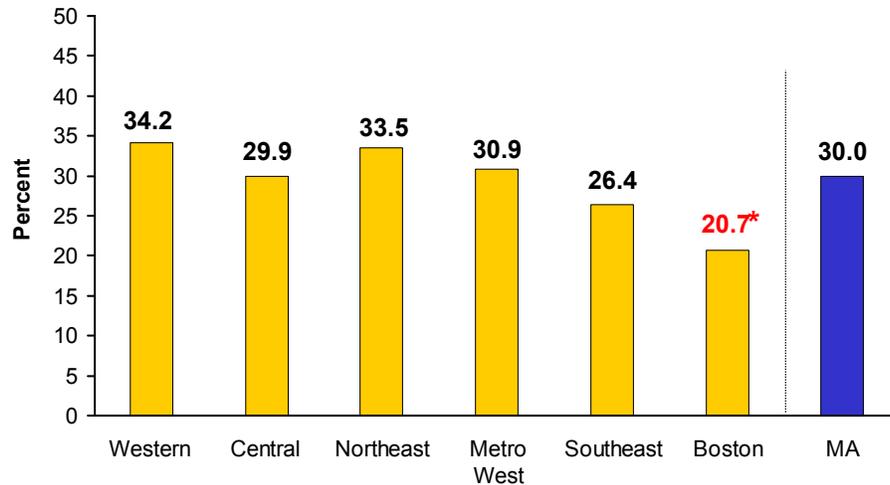
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

Men Ages 50 and Older who had a Digital Rectal Exam in the Past Two Years by EOHHS Region Massachusetts: 2004 ⁷⁵



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

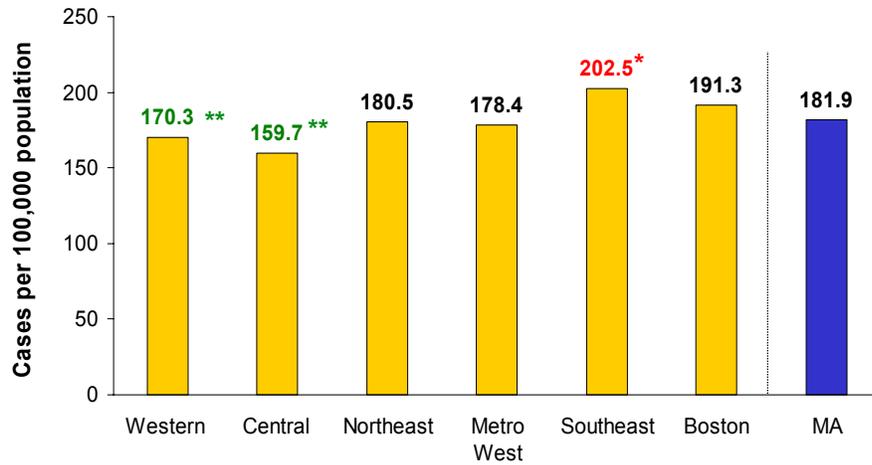
Adults Ages 50 and Older who had a Blood Stool Test in the Past Two Years by EOHHS Region Massachusetts: 2005 ⁷⁶



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

Incidence Rates for Invasive Prostate Cancer by EOHHS Region, Massachusetts: 1999-2003

77



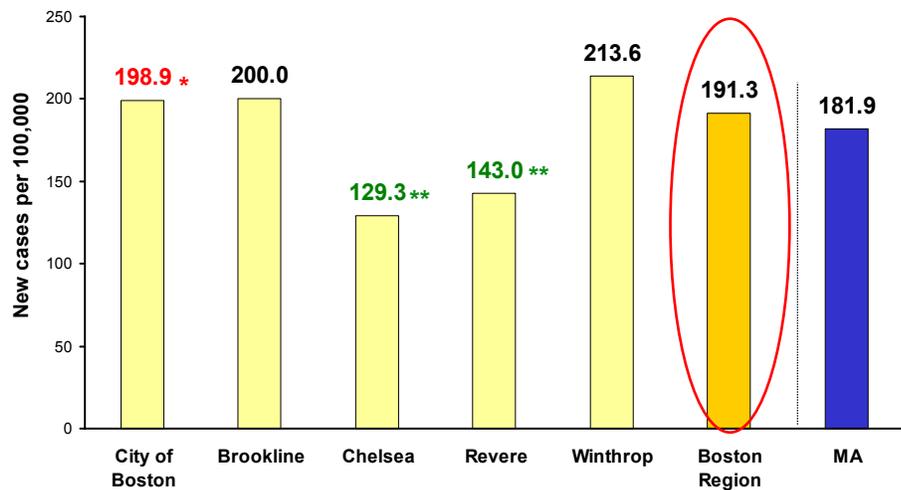
Statistically different from state ($p \leq .05$)— Red (*) Statistically worse than state- Green (**) statistically better than state

Age-adjusted to the 2000 US standard population.

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Cancer Registry

Prostate Cancer Incidence Rates by Cities in Boston Region & Massachusetts: 1999-2003

78

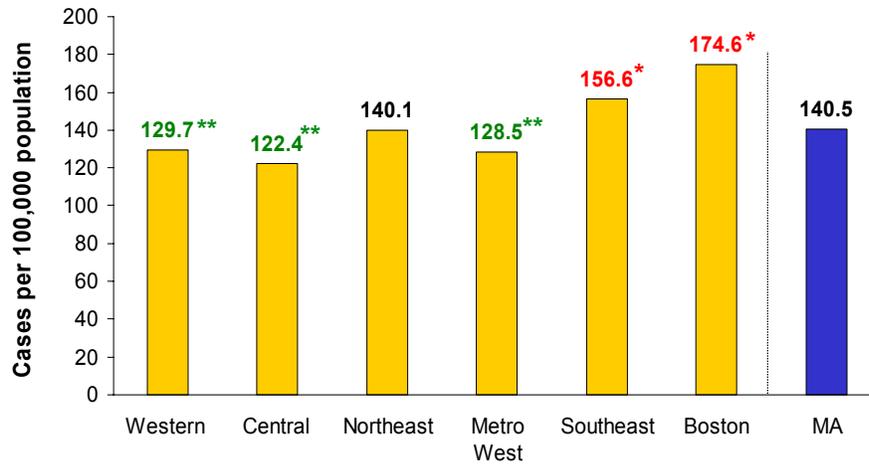


Statistically different from state ($p \leq .05$)— Red (*) Statistically worse than state- Green (**) statistically better than state

Age-adjusted to the 2000 US standard population.

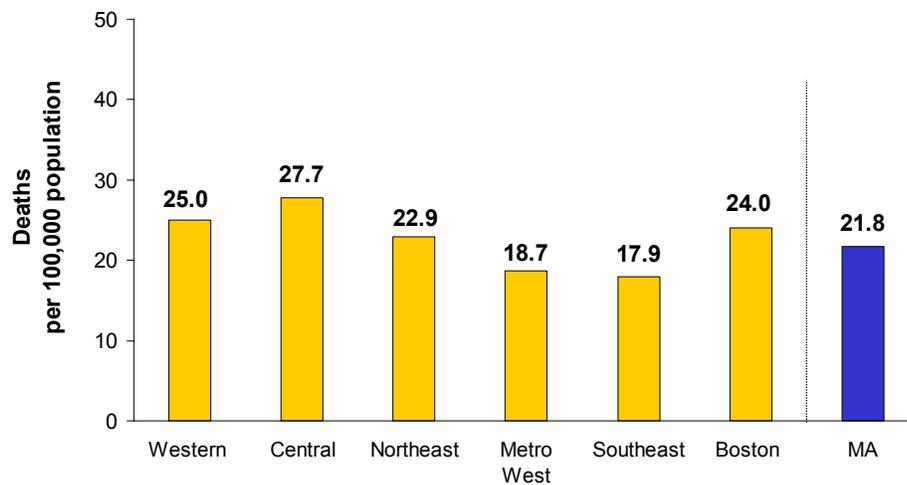
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Incidence Rates for Early Stage Prostate Cancer by EOHHS Region, Massachusetts: 1999-2003



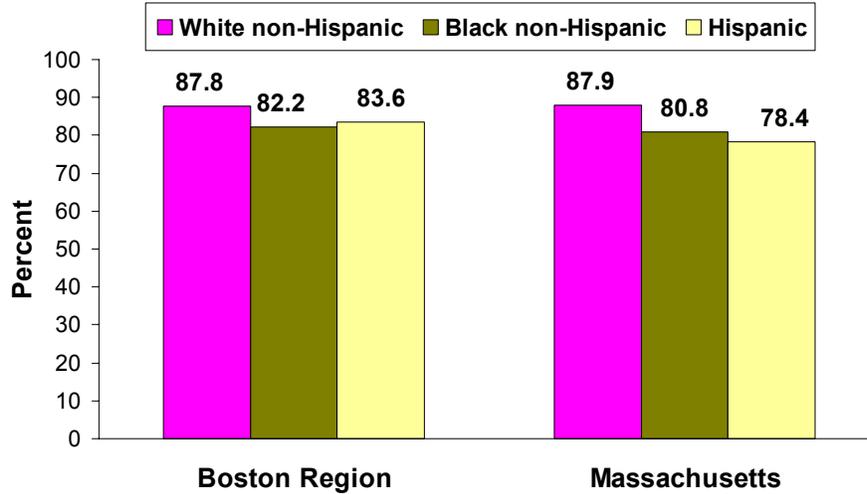
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Cancer Registry

Prostate Cancer Mortality Rates by EOHHS Region, Massachusetts: 2005



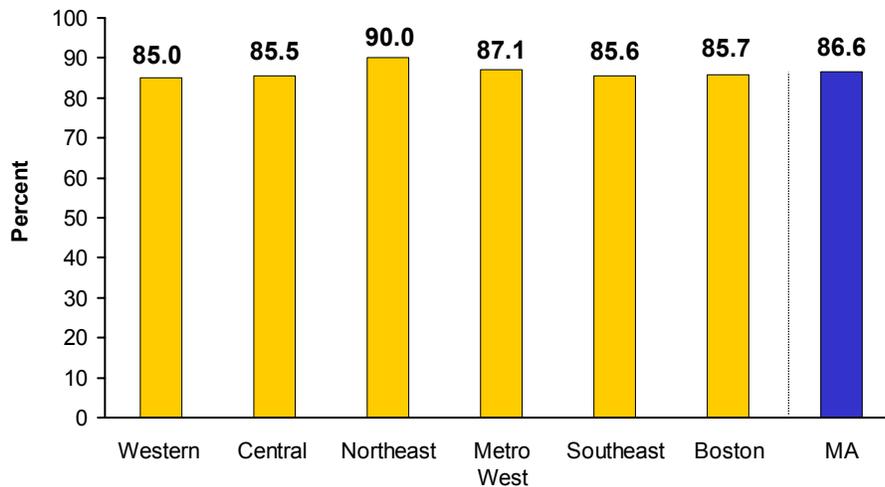
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Women who had a Clinical Breast Exam in the Past Two Years by Race and Ethnicity Boston Region and Massachusetts: 2004 81



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

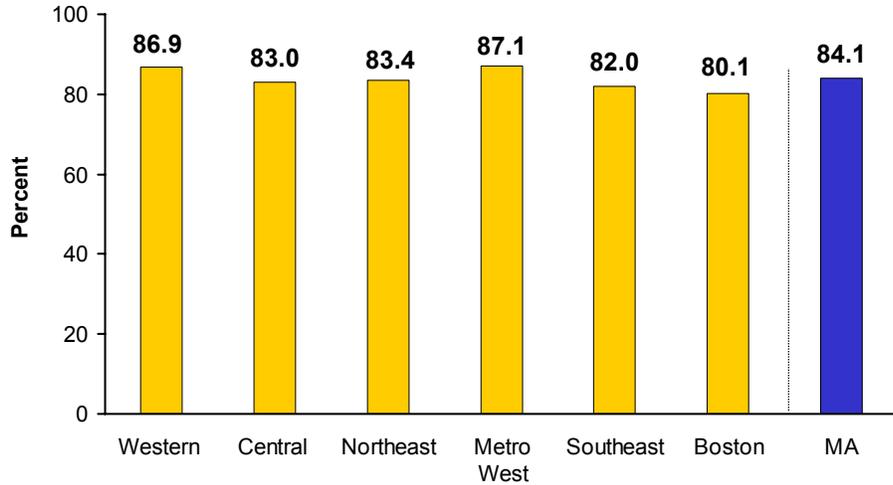
Women Ages 40 and Older who had a Clinical Breast Exam in the Past Two Years by EOHHS Region, Massachusetts: 2004 82



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

83

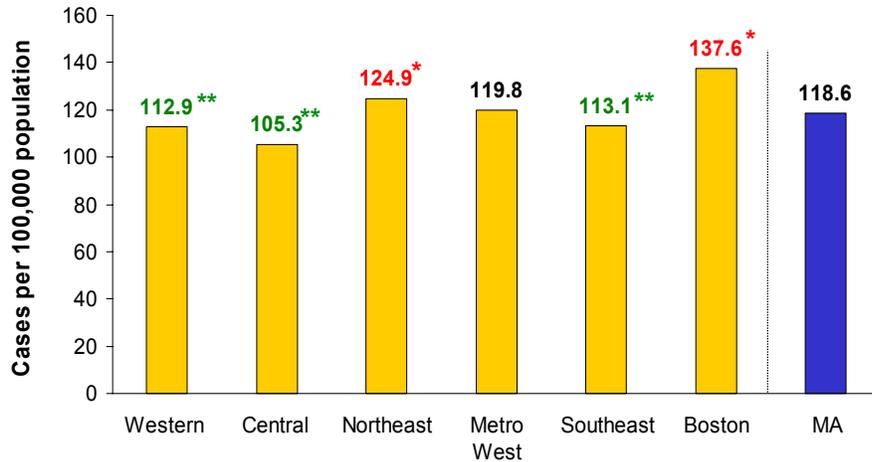
Women Ages 40+ who have had a mammography in Past 2 Years by EOHHS Region Massachusetts: 2005



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

84

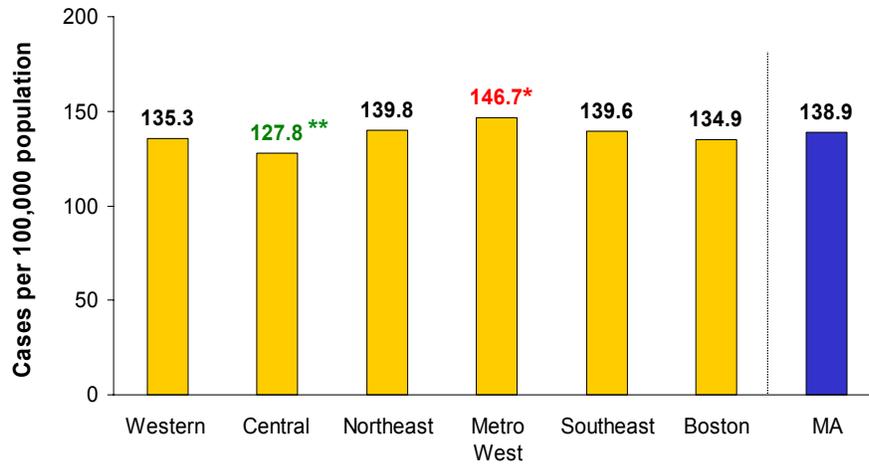
Incidence Rates for Early Stage Female Breast Cancer by EOHHS Region, Massachusetts: 1999-2003



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Cancer Registry

Incidence Rates for Invasive Female Breast Cancer by EOHHS Region, Massachusetts: 1999-2003

85



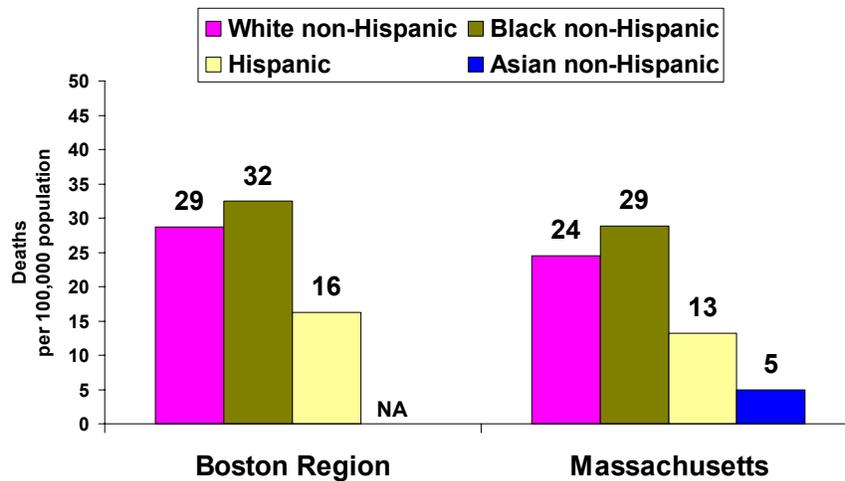
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state

Age-adjusted to the 2000 US standard population.

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Cancer Registry

Female Breast Cancer Mortality Rates by Race and Ethnicity, Boston Region & Massachusetts: 2003-2005

86



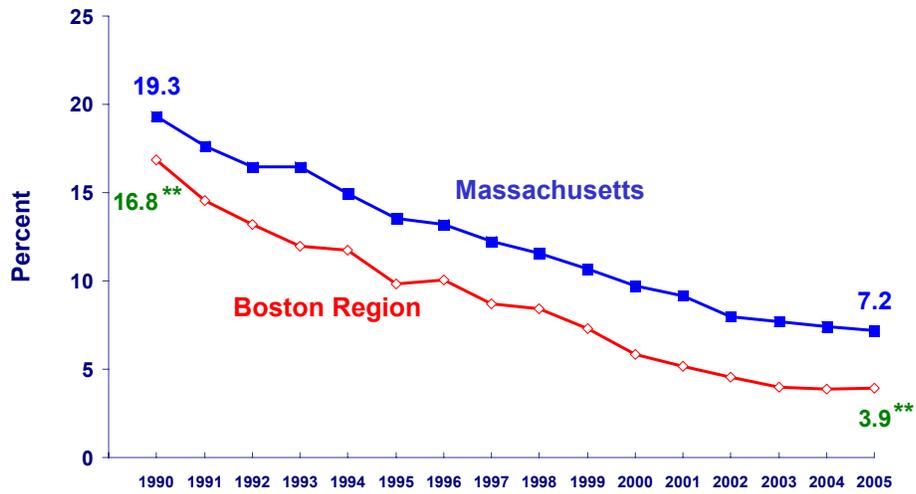
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state

Age-adjusted to the 2000 US standard population.

Source: Division of Health Care Finance and Policy, Calendar Year 2003- 2005, Hospital Discharges

Smoking During Pregnancy Boston Region and Massachusetts: 1990-2005

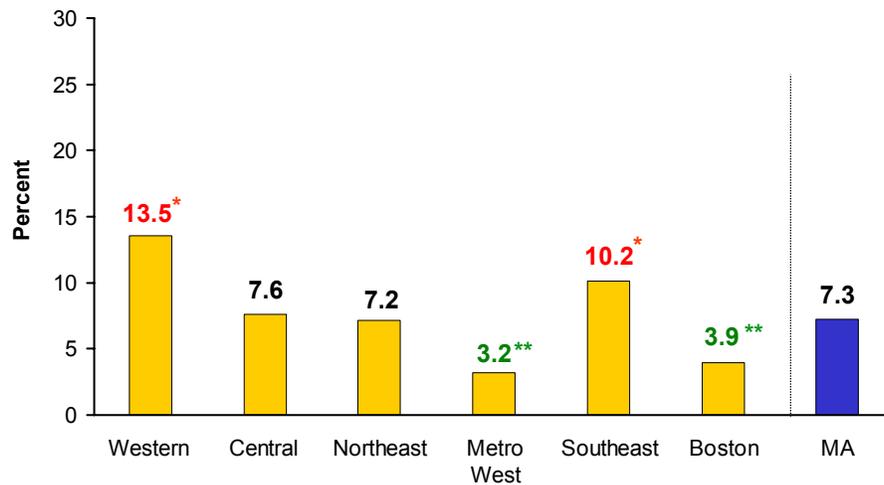
87



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Smoking During Pregnancy by EOHHS Regions Massachusetts: 2005

88



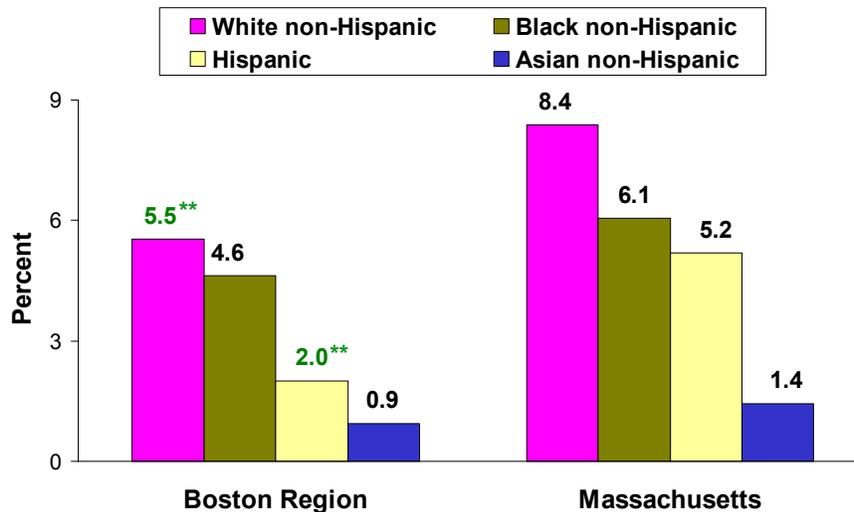
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Percent of Mothers Smoking During Pregnancy for Cities in Boston Region: 2005

	<u>%</u>	<u>Smokers</u>	<u>Births</u>
Massachusetts	7.2%	5,555	76,653
<u>Boston Region</u>	3.9%**	378	9,627
City of Boston	3.6%**	273	7,540
Brookline	<1%	<5	613
Chelsea	4.8%**	31	648
Revere	9.7%	62	641
Winthrop	4.8%	9	186

Statistically different from state (p ≤.05)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

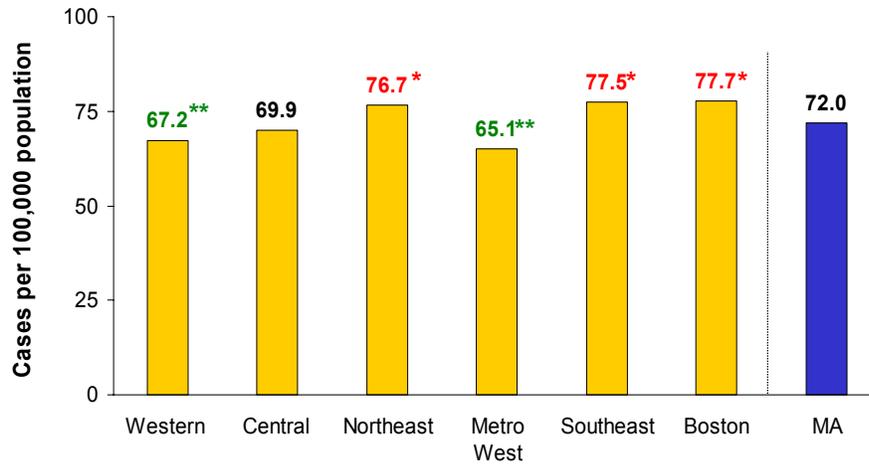
Smoking During Pregnancy by Race and Ethnicity Boston Region and Massachusetts: 2005



Statistically different from state (p ≤.05)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Incidence Rates for Invasive Lung Cancer by EOHHS Region, Massachusetts: 1999-2003

91



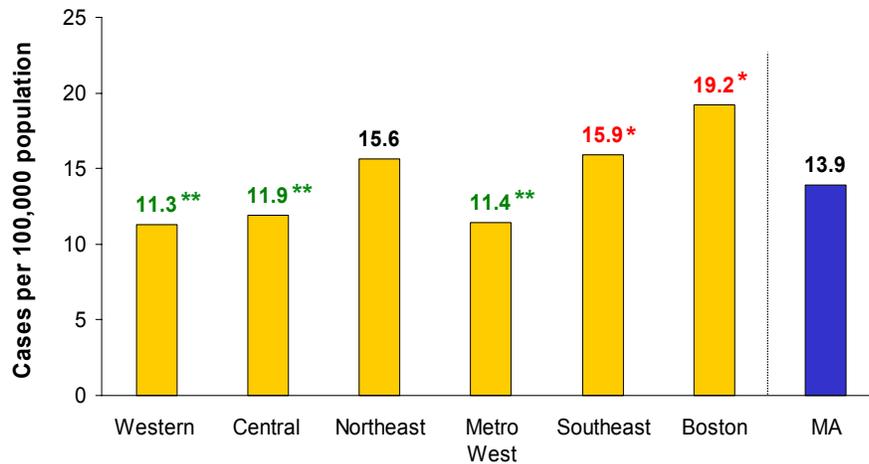
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state

Age-adjusted to the 2000 US standard population.

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Cancer Registry

Incidence Rates for Early Stage Lung Cancer MALES by EOHHS Region, Massachusetts: 1999-2003

92



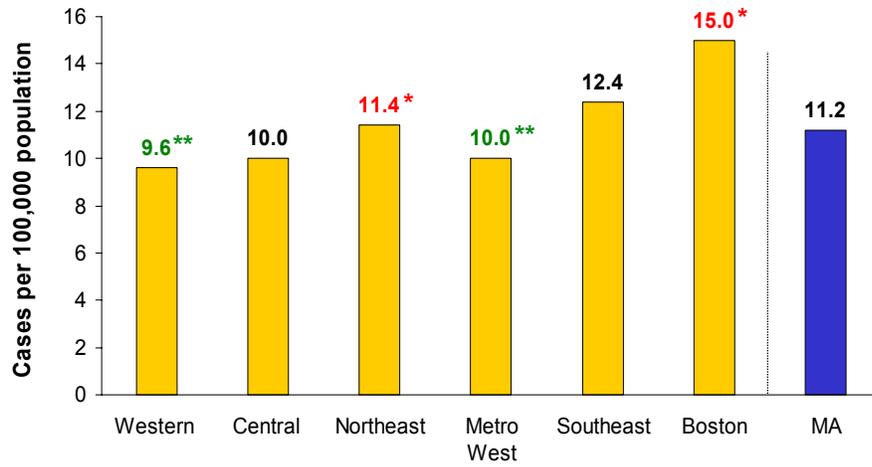
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state

Age-adjusted to the 2000 US standard population.

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Cancer Registry

Incidence Rates for Early Stage Lung Cancer FEMALES by EOHHS Region, Massachusetts: 1999-2003

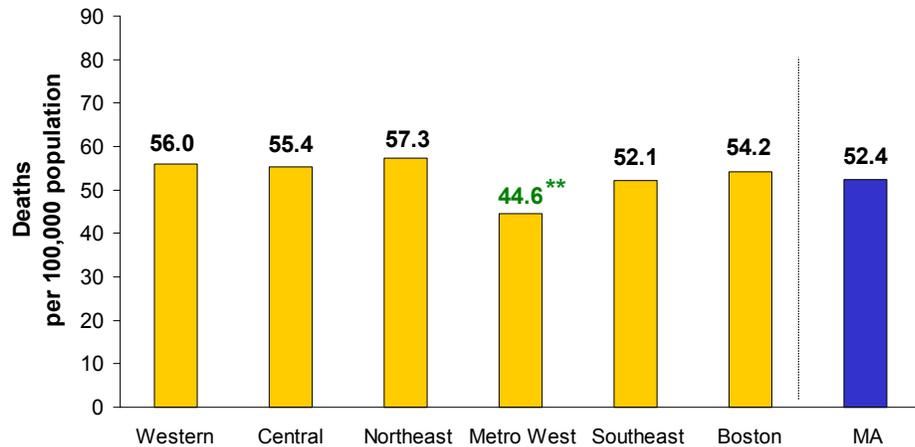
93



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
Age-adjusted to the 2000 US standard population.
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Cancer Registry

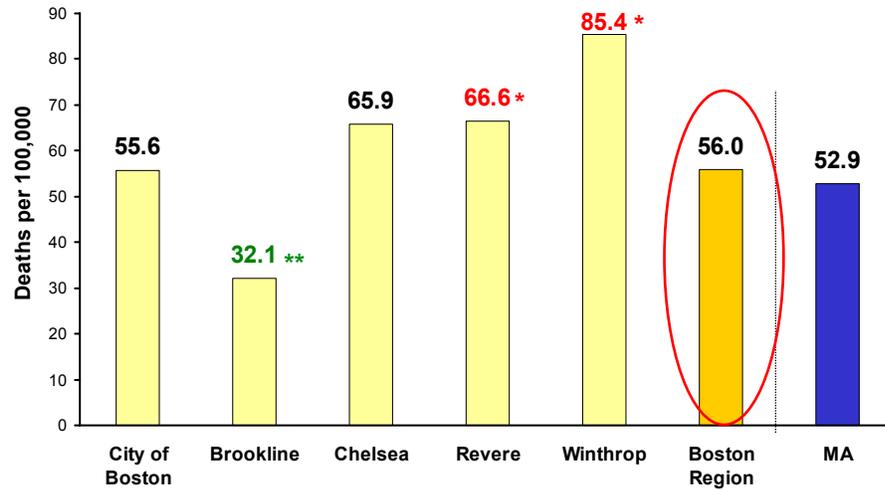
Lung Cancer Mortality Rates by EOHHS Region, Massachusetts: 2005

94



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
Age-adjusted to the 2000 US standard population.
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Lung Cancer Mortality Rate by Cities in Boston Region & Massachusetts: 2003-2005

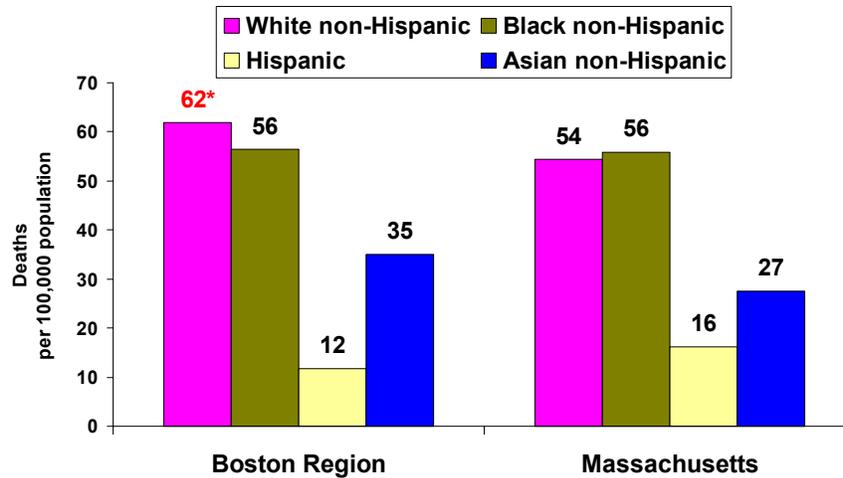


Statistically different from state (p ≤ .05)– Red (*) Statistically worse than state- Green (**) statistically better than state

Age-adjusted to the 2000 US standard population

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Lung Cancer Mortality Rates by Race and Ethnicity, Boston Region & Massachusetts: 2003-2005

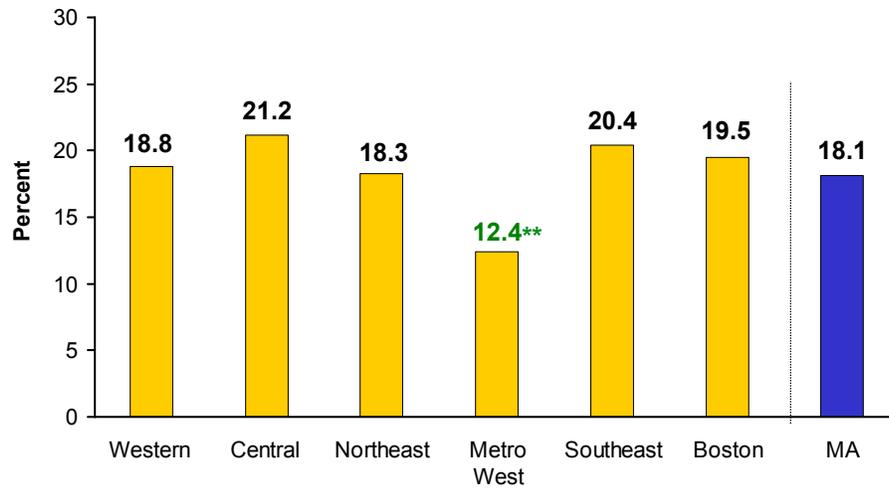


Statistically different from state (p ≤ .05)– Red (*) Statistically worse than state- Green (**) statistically better than state

Age-adjusted to the 2000 US standard population.

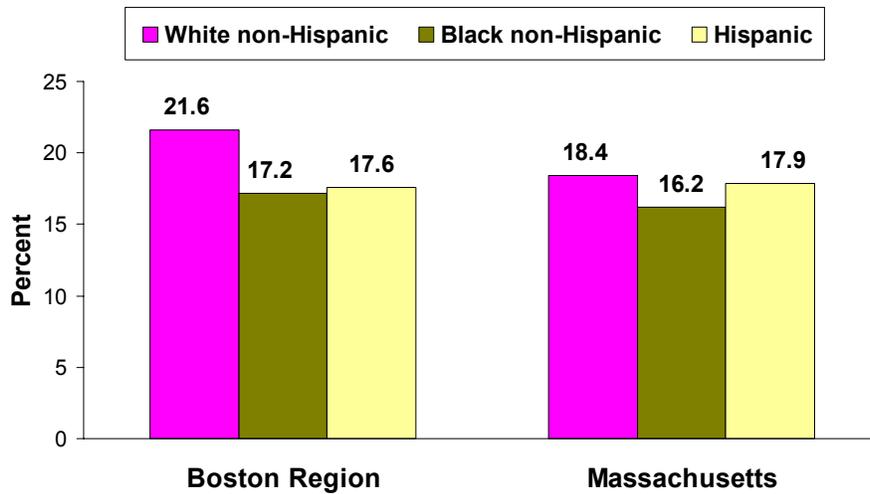
Source: Division of Health Care Finance and Policy, Calendar Year 2003- 2005, Hospital Discharges

Adults who Currently Smoke by EOHHS Region, Massachusetts: 2005



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

Current Smoker by Race and Ethnicity Boston Region and Massachusetts: 2005



* Statistically Significant different from state ($p \leq .05$)– Red: Statistically worse than state- green: statistically better than state
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

Summary Indicators for Cancer Screening by EOHHS Region, Massachusetts: 2005

Indicator	MA Total	Western	Central	North East	Metro West	South East	Boston
% Men† PSA (2004)	56.1	49.1	52.3	52.3	62.5	56.3	66.2
% Men† DRE (2004)	62.7	59.5	60.0	63.0	64.5	62.6	69.0
% Blood Stool Test †	30.0	34.2	29.9	33.5	30.9	26.4	20.7
% Adults Sigmoidoscopy or Colonoscopy†	58.8	53.9	60.2	53.2	68.5	55	58.9
% Women Clinical Breast Exam (2004)	86.6	85.0	85.5	90.0	87.1	85.6	85.7
% Women* Mammography	84.1	86.9	83.0	83.4	87.1	82.0	80.1

*40 years and older, † 50 years and older



Better Outcome (significantly different from state)



Worse Outcome (significantly different from state)

Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Health Survey Program

Summary Cancer Indicators (Early Stage) by EOHHS Region, Massachusetts: 1999-2003

Indicator	MA Total	Western	Central	Northeast	Metro West	South East	Boston
Prostate Cancer Incidence	140.5	129.7	122.4	140.1	128.5	156.6	174.6
Female Breast Cancer Incidence	118.6	112.9	105.3	124.9	119.8	113.1	137.6
Colorectal Cancer Incidence	26.9	25.9	21.3	29.5	24.3	28.7	32.0
Lung Cancer Incidence	14.4	12.0	12.7	15.3	12.4	16.1	19.6



Better Outcome (significantly different from state)



Worse Outcome (significantly different from state)

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Cancer Registry

Summary Cancer Indicators (Late Stage) by EOHHS Region, Massachusetts: 1999-2003

Indicator	MA Total	Western	Central	Northeast	Metro West	South East	Boston
Prostate Cancer Incidence	5.5	4.9	5.2	5.9	3.9	6.2	8.7
Female Breast Cancer Incidence	37.8	37.9	31.7	37.0	36.8	38.4	47.3
Colorectal Cancer Incidence	33.8	30.6	32.9	35.2	30.6	34.4	42.7
Lung Cancer Incidence	50.3	45.8	48.6	54.1	41.4	55.1	63.2

Better Outcome (significantly different from state) Worse Outcome (significantly different from state)

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Cancer Registry

Summary Invasive Cancer Incidence Rates by EOHHS Region, Massachusetts: 1999-2003

Indicator	MA Total	Western	Central	Northeast	Metro West	South East	Boston
Prostate Cancer Incidence	181.9	170.3	159.7	180.5	178.4	202.5	191.3
Female Breast Cancer Incidence	138.9	135.3	127.8	139.8	146.7	139.6	134.9
Colorectal Cancer Incidence	58.9	56.2	55.2	61.8	57.2	59.7	63.6
Lung Cancer Incidence	72.0	67.2	69.9	76.7	65.1	77.5	77.7

Better Outcome (significantly different from state) Worse Outcome (significantly different from state)

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Cancer Registry

Summary Cancer Mortality Indicators by EOHHS Region, Massachusetts: 2005

Indicator	MA Total	Western	Central	Northeast	Metro West	South East	Boston
Prostate Cancer Death Rate	21.8	25.0	27.7	22.9	18.7	17.9	24.0
Colorectal Cancer Death Rate	17.4	18.2	18.3	17.5	16.4	17.2	18.4
Female Breast Cancer Death Rate	23.0	25.5	23.1	23.1	20.9	22.5	24.6
Lung Cancer Death Rate	52.4	56.0	55.4	57.3	44.6	52.1	54.2

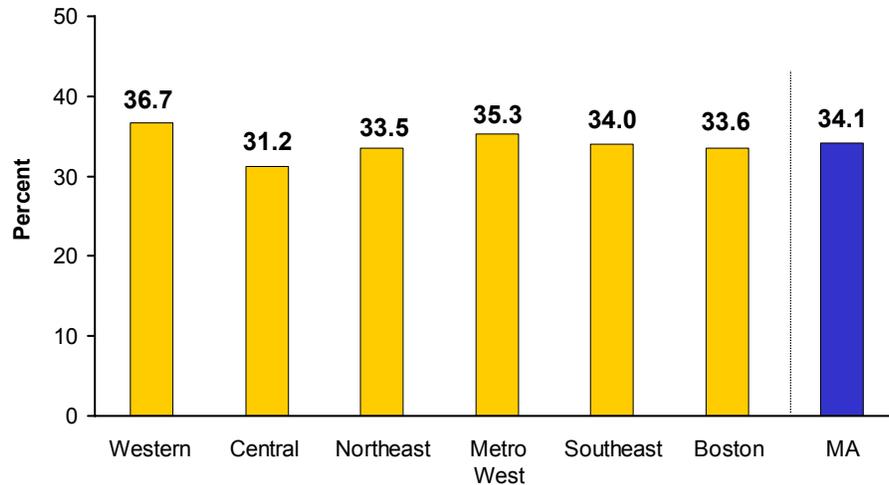
■ Better Outcome (significantly different from state)
 ■ Worse Outcome (significantly different from state)

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

SUBSTANCE ABUSE

Alcohol Use in Past Month Persons Aged 12 to 20 by EOHHS Region, Massachusetts: 2002, 2003, 2004

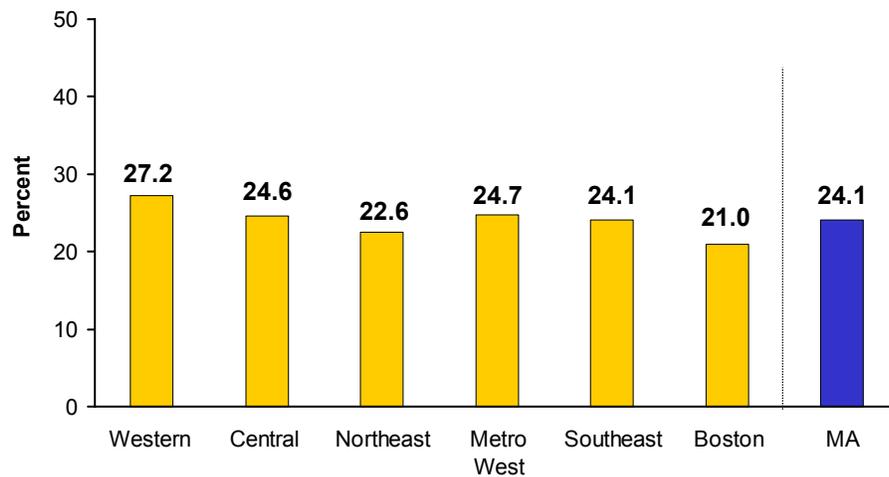
104



Statistically different from state ($p \leq .05$)— Red (*) Statistically worse than state- Green (**) statistically better than state
 Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, and 2004.

Binge Drinking¹ in Past Month Persons Aged 12 to 20 by EOHHS Region, Massachusetts: 2002, 2003, 2004

105

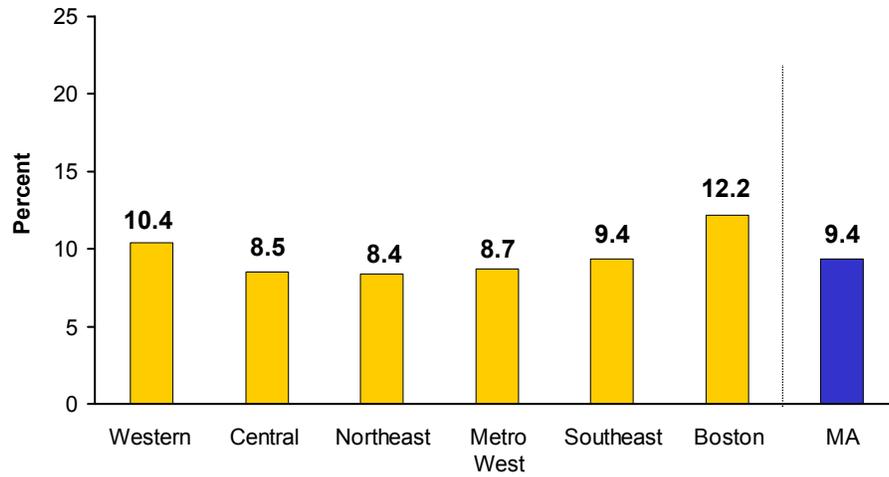


Statistically different from state ($p \leq .05$)— Red (*) Statistically worse than state- Green (**) statistically better than state

¹ Binge Alcohol use is defined as drinking 5+ drinks on the same occasion on at least 1 day in the past 30 days

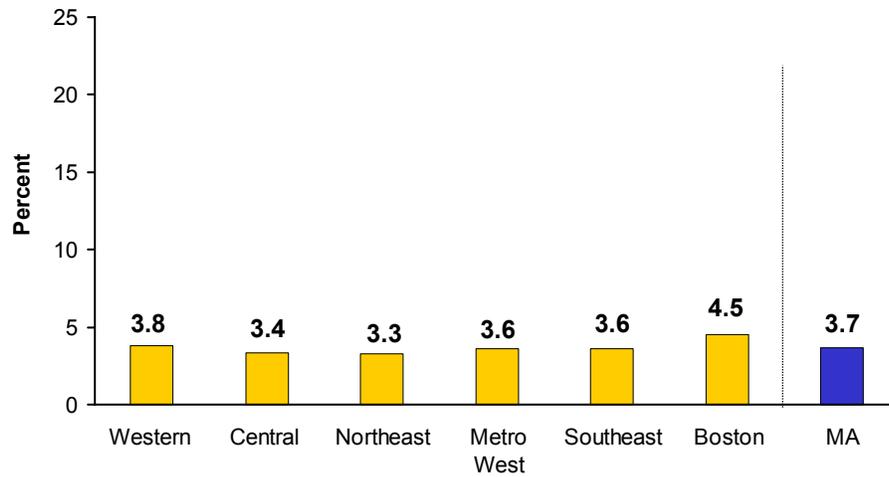
Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, and 2004.

Any Illicit Drug Use in Past Month Persons Aged 12+ by EOHHS Region, Massachusetts: 2002, 2003, 2004 106



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, and 2004.

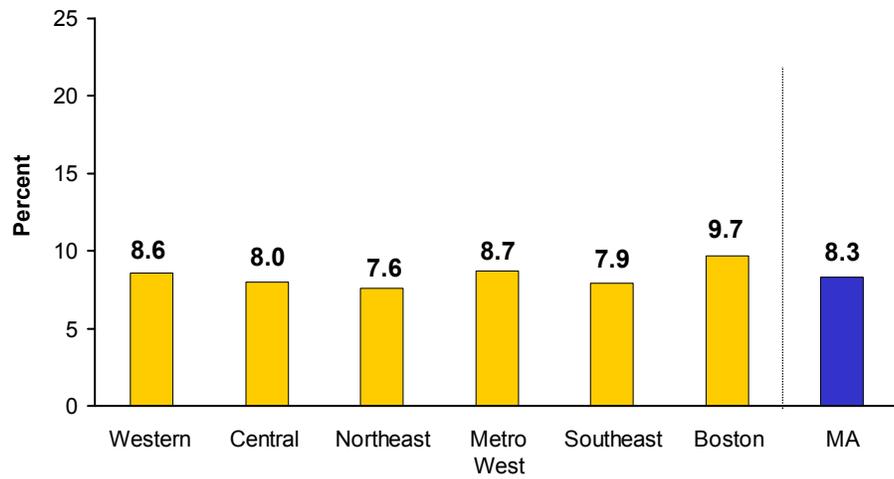
Any Illicit Drug Use Other than Marijuana in Past Month Persons Aged 12+ by EOHHS Region Massachusetts: 2002, 2003, 2004 107



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, and 2004.

108

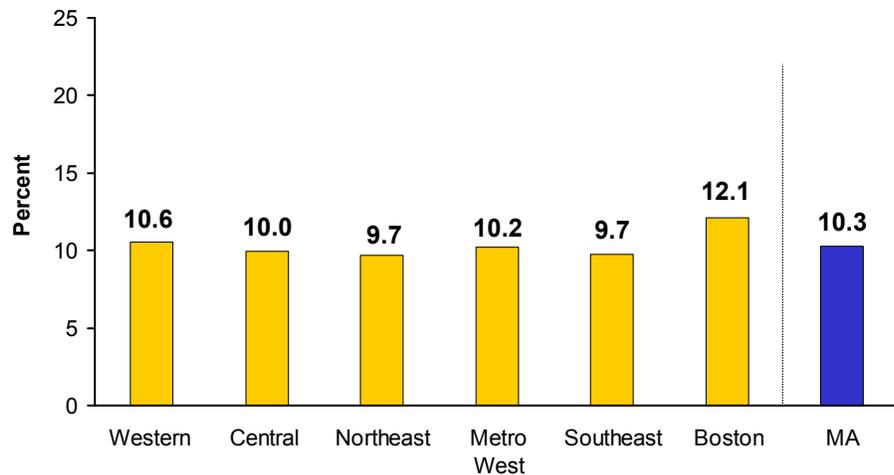
Alcohol Dependence or Abuse in Past Year Persons Aged 12+ by EOHHS Region Massachusetts: 2002, 2003, 2004



Statistically different from state ($p \leq .05$) – Red (*) Statistically worse than state- Green (**) statistically better than state
Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, and 2004.

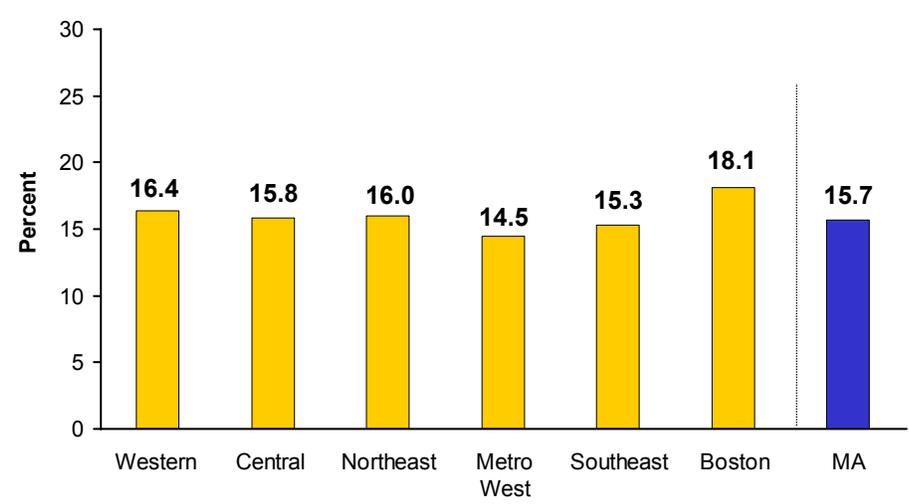
109

Dependence or Abuse of Any Illicit Drug or Alcohol in Past Year Persons Aged 12+ by EOHHS Region Massachusetts: 2002, 2003, 2004



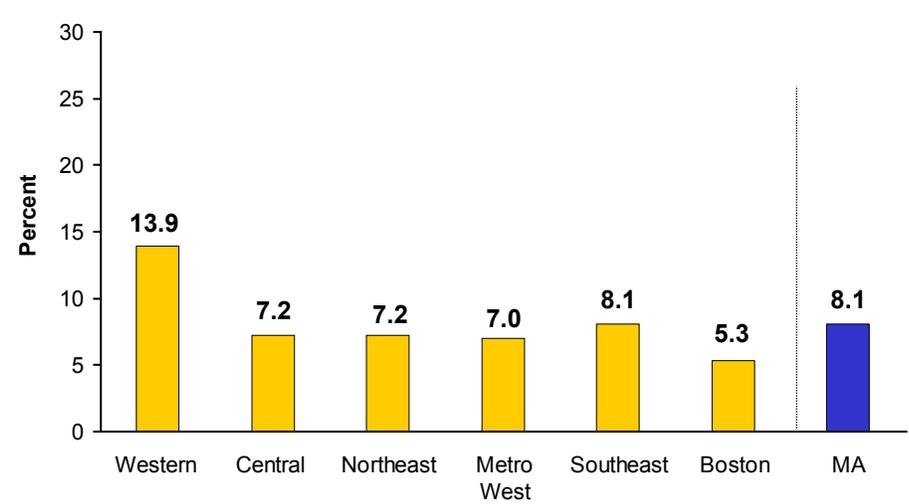
Statistically different from state ($p \leq .05$) – Red (*) Statistically worse than state- Green (**) statistically better than state
Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, and 2004.

Adults who Binge Drink by EOHHS Region, Massachusetts: 2005



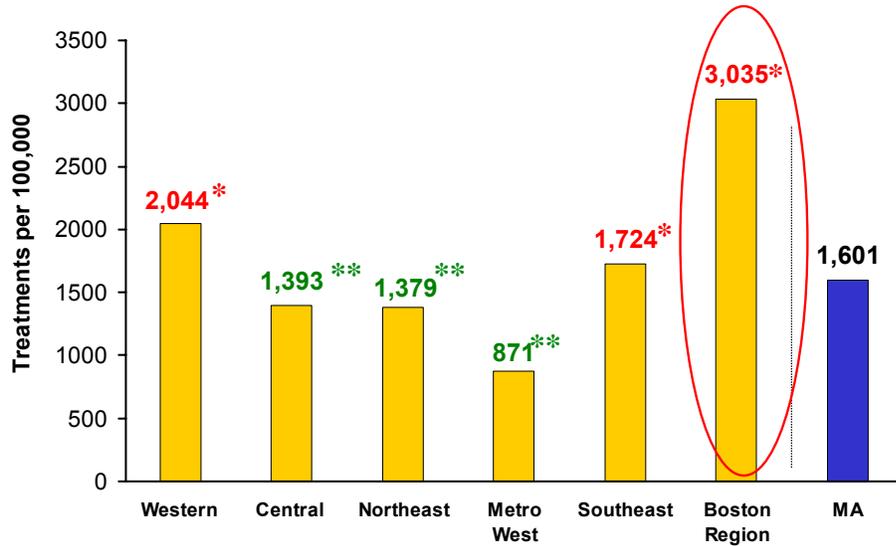
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

Adults who Used Illicit Drugs in Past Month by EOHHS Region, Massachusetts: 2005



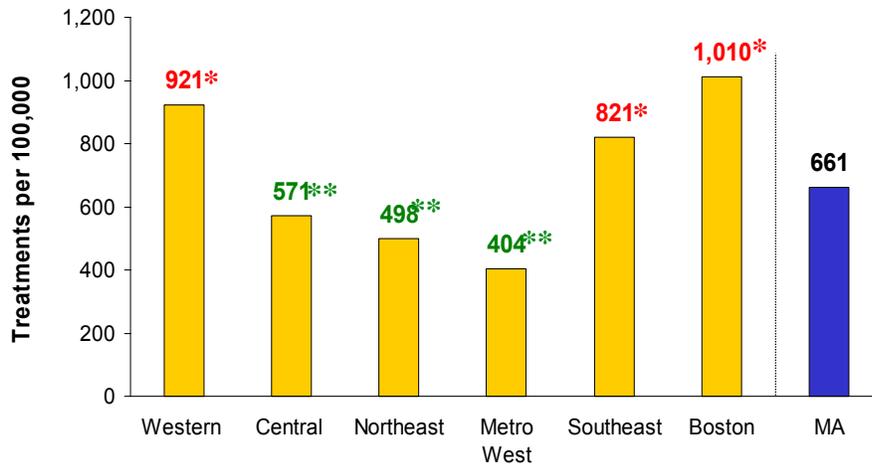
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

Substance Abuse Treatments by EOHHS Region, Massachusetts: 2005



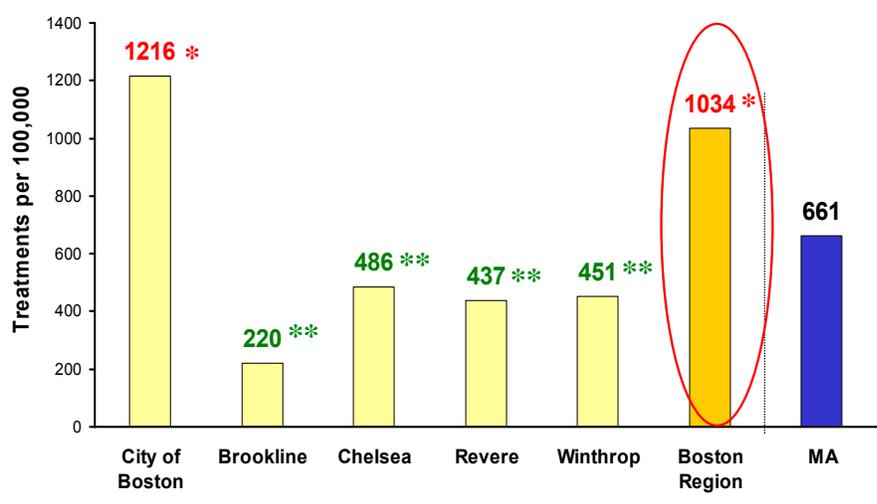
Statistically different from state ($p \leq .05$)— Red (*) Statistically higher than state- Green (**) statistically lower than state
 Crude rates
 Source: Massachusetts Department of Public Health. BSAS Substance Abuse Treatment Programs 2005.

Substance Abuse Treatments Alcohol Primary Substance by EOHHS Region, Massachusetts: 2005



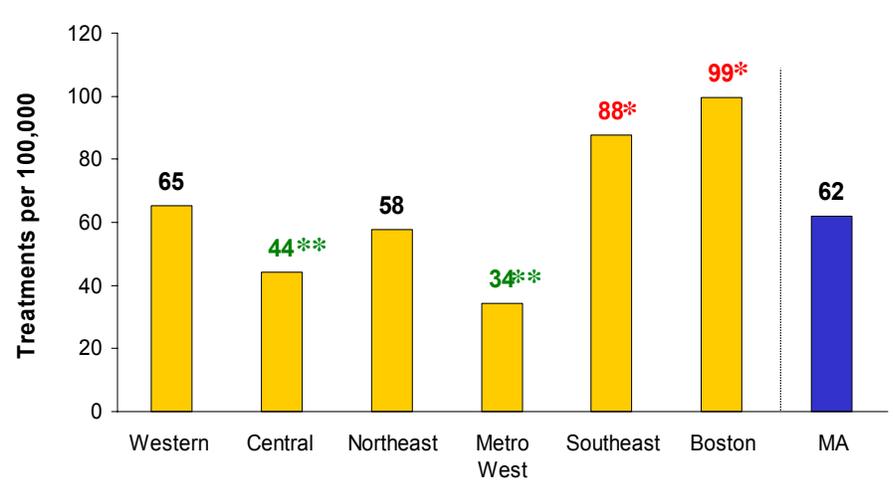
Statistically different from state ($p \leq .05$)— Red (*) Statistically higher than state- Green (**) statistically lower than state
 Crude rates
 Source: Massachusetts Department of Public Health. BSAS Substance Abuse Treatment Programs 2005.

Substance Abuse Treatments Alcohol Primary Substance by Cities in Boston Region & Massachusetts: 2005

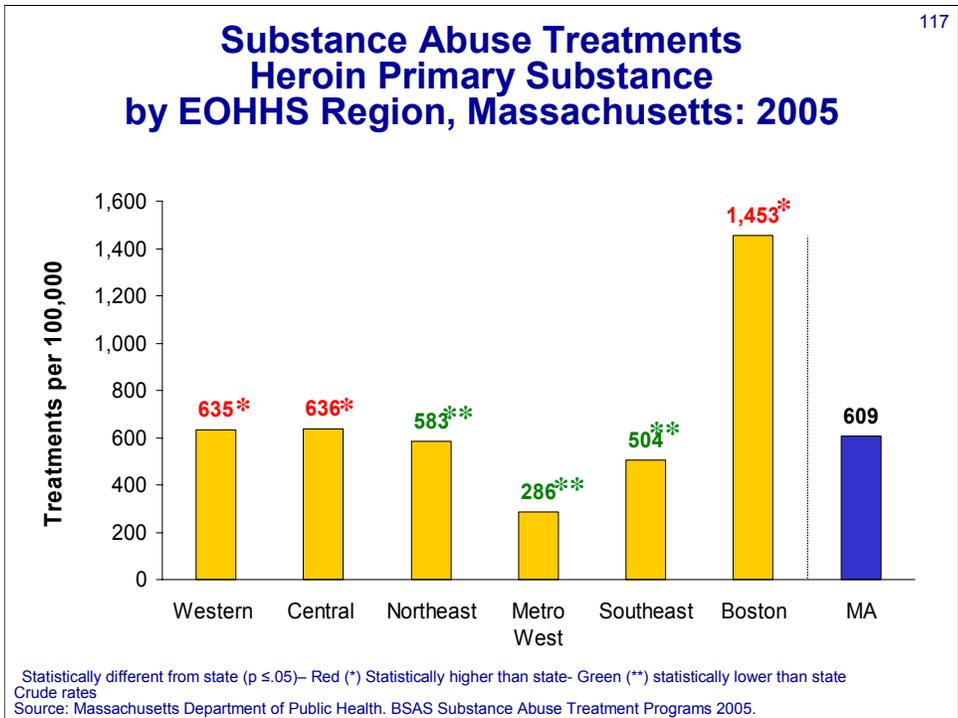
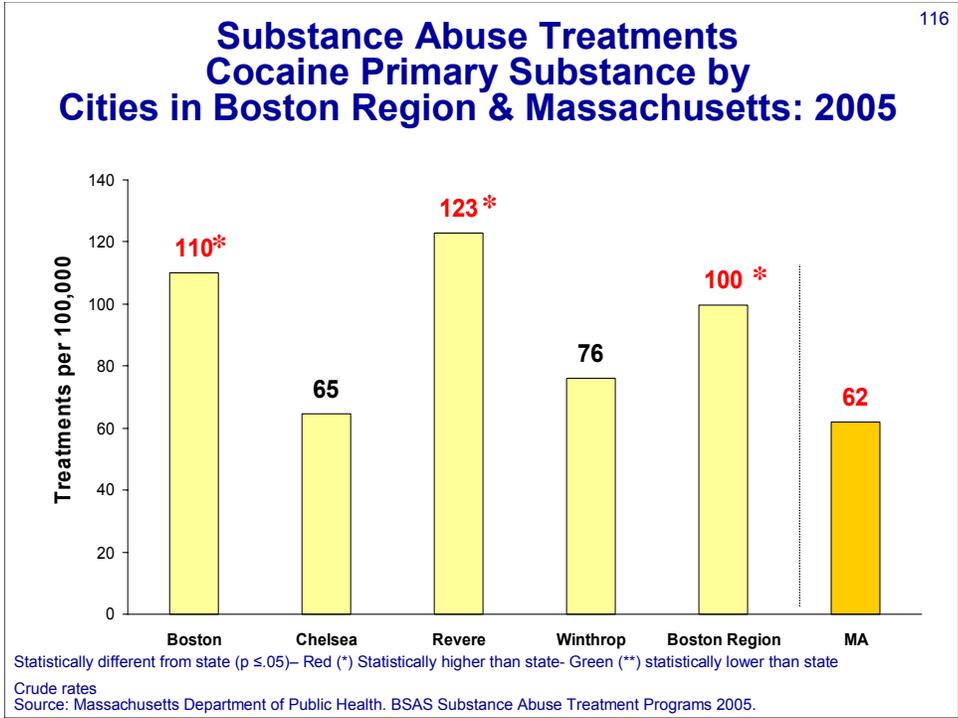


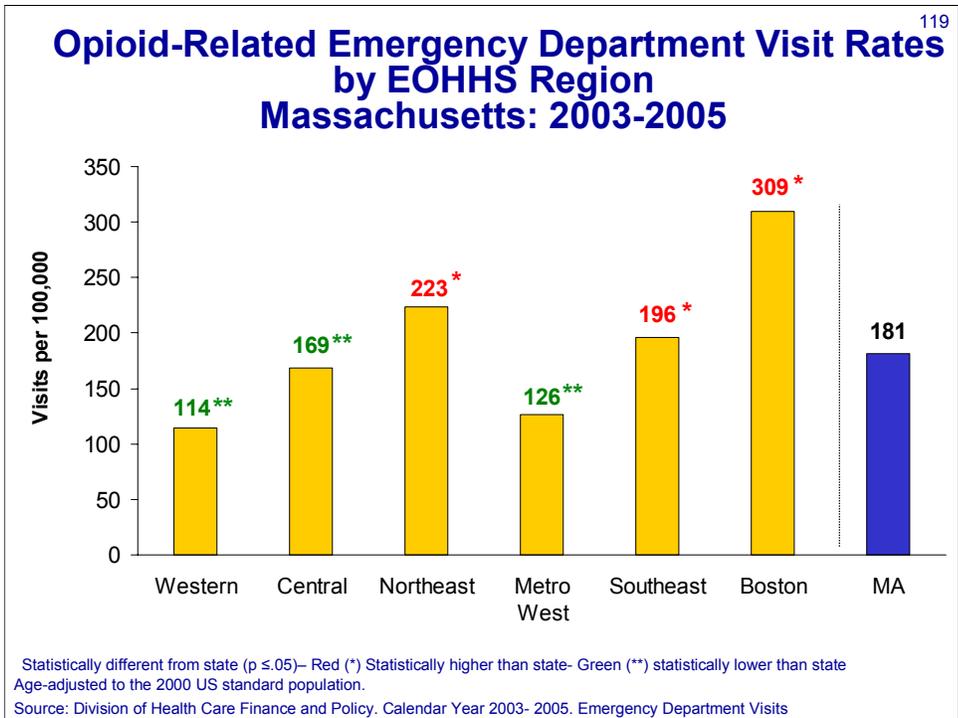
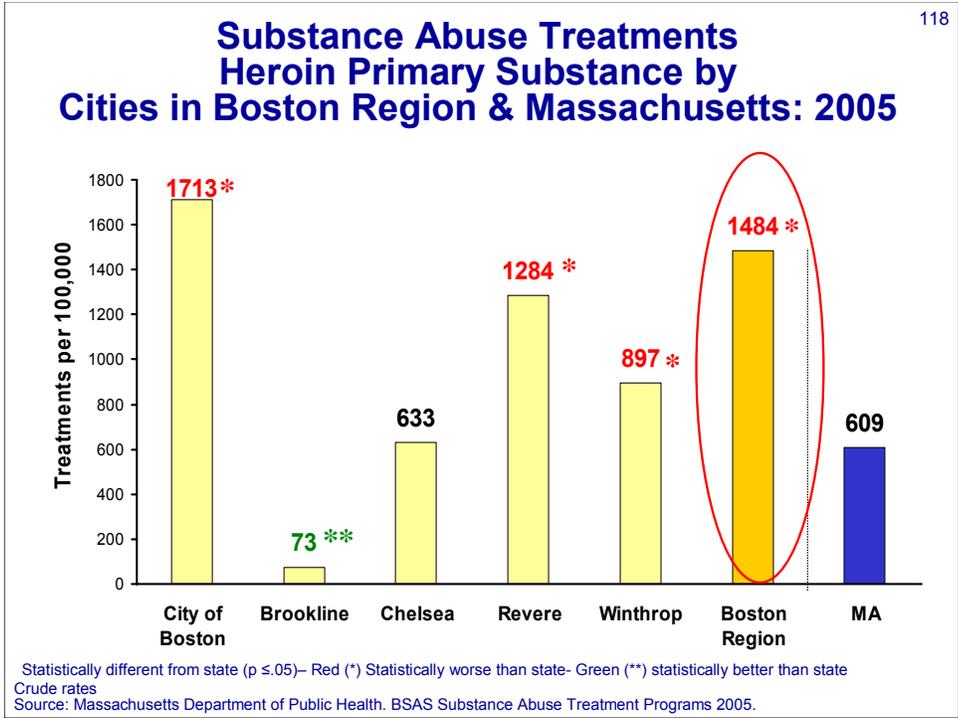
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Crude rates
 Source: Massachusetts Department of Public Health. BSAS Substance Abuse Treatment Programs 2005.

Substance Abuse Treatments Cocaine Primary Substance by EOHHS Region, Massachusetts: 2005



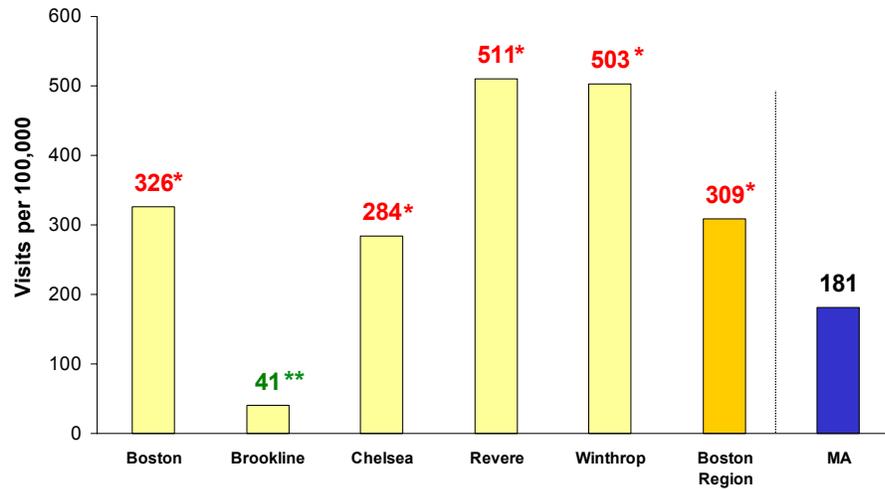
Statistically different from state ($p \leq .05$)– Red (*) Statistically higher than state- Green (**) statistically lower than state
 Crude rates
 Source: Massachusetts Department of Public Health. BSAS Substance Abuse Treatment Programs 2005.





Opioid-Related Emergency Department Visit Rates by Boston Cities and Massachusetts: 2005

120



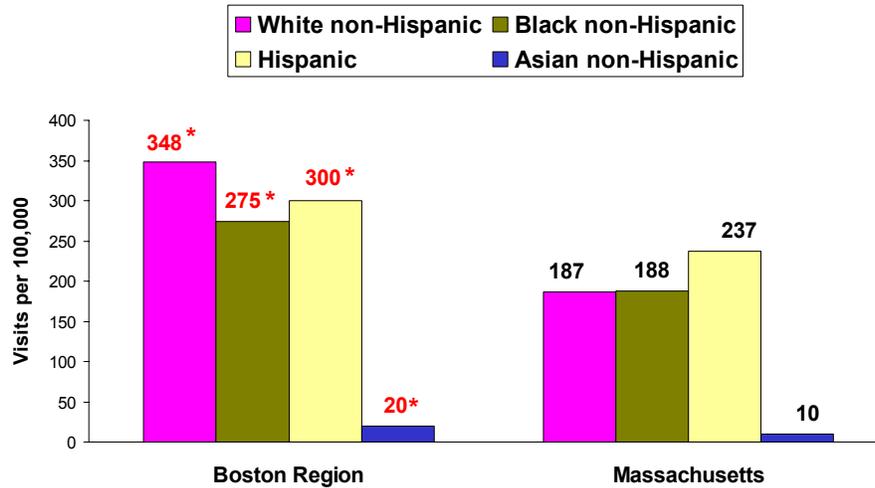
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state

Age-adjusted to the 2000 US standard population

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Opioid-related Emergency Visit Rates by Race/Ethnicity Boston Region and Massachusetts: 2003-2005

121

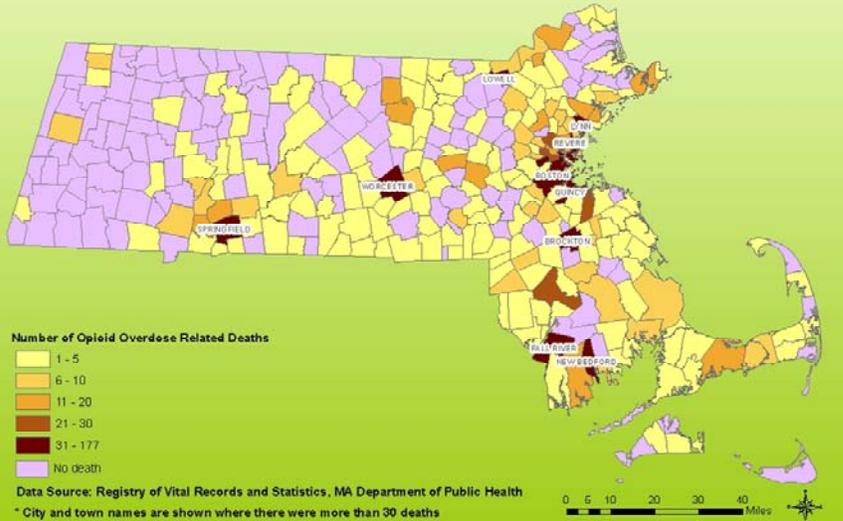


Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
Age-adjusted to the 2000 US standard population.

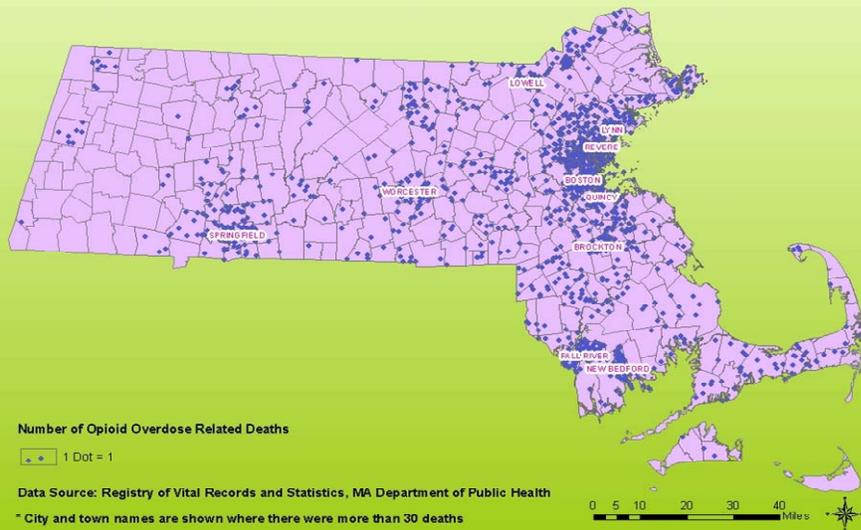
Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Emergency Department Visits



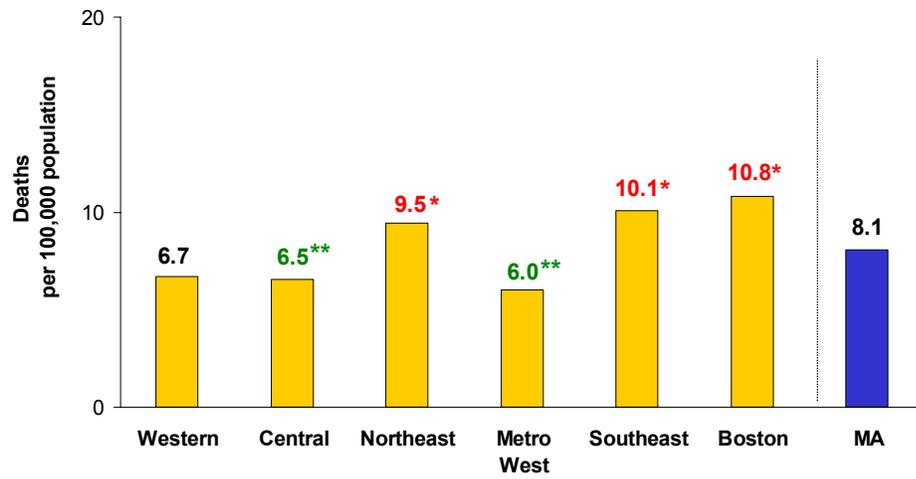
Massachusetts City and Town FY03-05 Total Number Of Opioid Overdose Related Deaths



Massachusetts City and Town FY03-05 Total Number Of Opioid Overdose Related Deaths

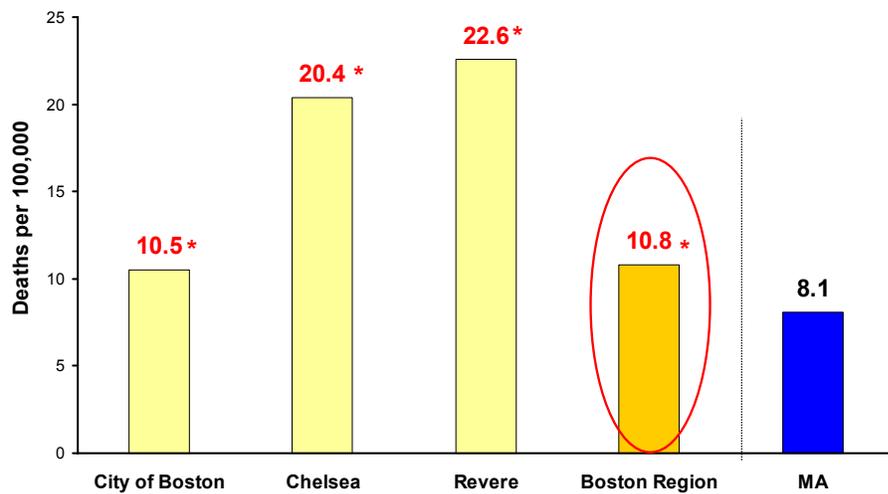


Opioid-Related Fatal Overdoses by EOHHS Region, Massachusetts: 2003-2005



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

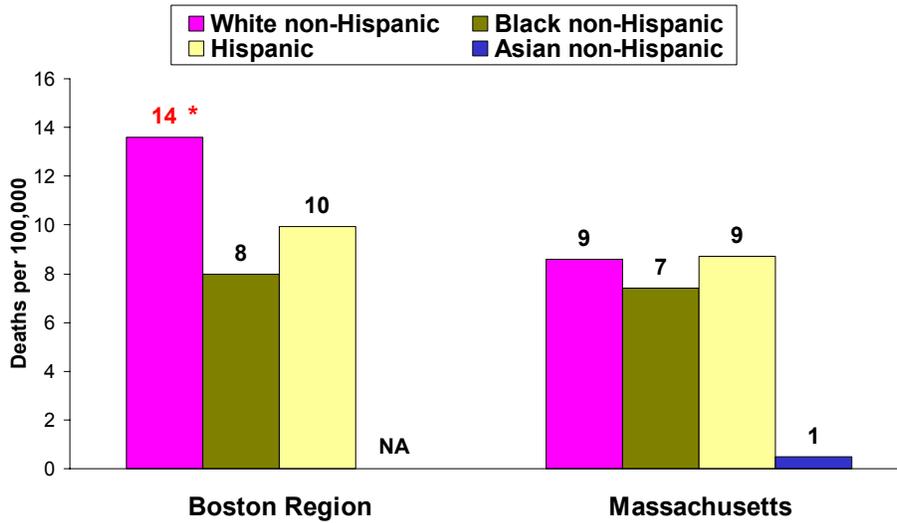
Opioid-Related Fatal Overdoses by Cities in Boston Region & Massachusetts: 2003-2005



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Opioid-related Fatal Overdoses by Race/Ethnicity Boston Region and Massachusetts: 2003-2005

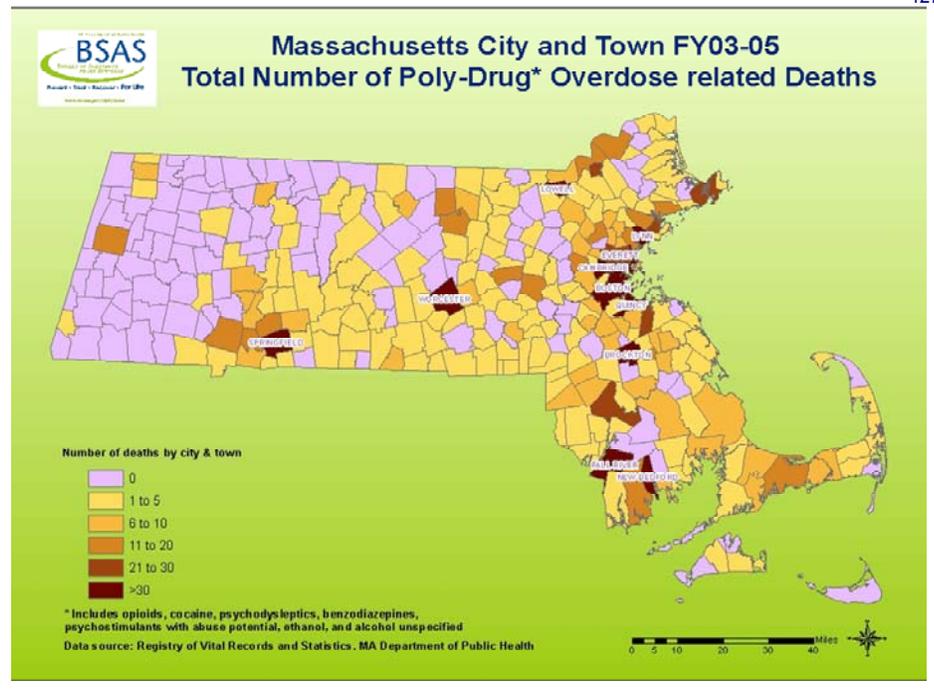
126

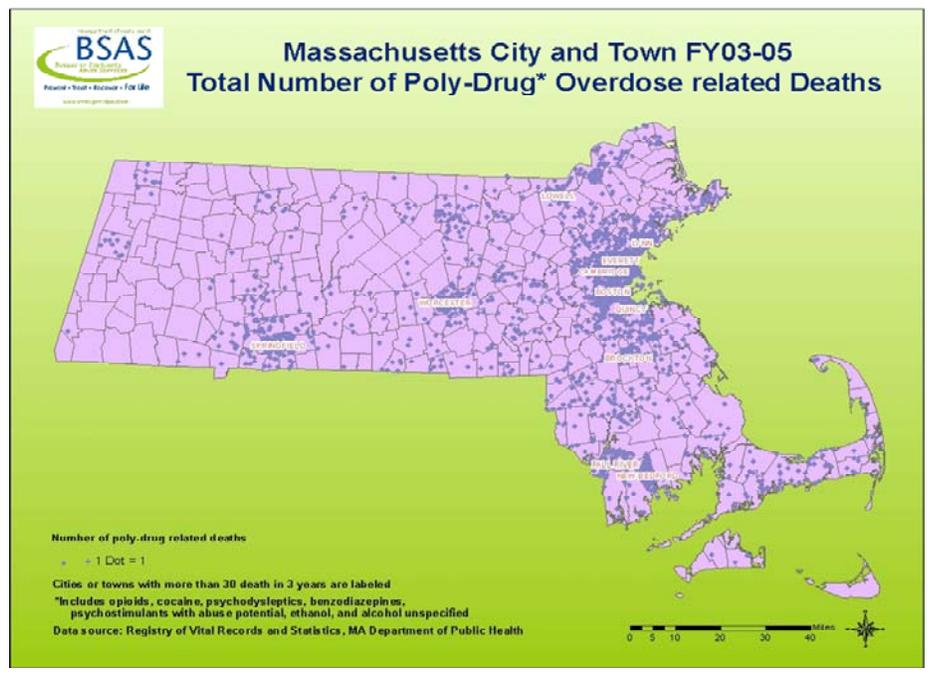


Statistically different from state ($p \leq .05$)— Red (*) Statistically worse than state- Green (**) statistically better than state
Age-adjusted to the 2000 US standard population.
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Massachusetts City and Town FY03-05 Total Number of Poly-Drug* Overdose related Deaths

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Summary Substance Abuse Indicators Percentages by EOHHS Region

Indicator	MA Total	Western	Central	Northeast	Metro West	South East	Boston
Past Month Alcohol 12-20 years	34.1	36.7	31.2	33.5	35.3	34.0	33.6
Past Month Binge Drinking- 12-20 years	24.1	27.2	24.6	22.6	24.7	24.1	21.0
Any Illicit Drug Use Past Month, Ages 12+	9.4	10.4	8.5	8.4	8.7	9.4	12.2
Any Illicit Drug Use Other than Marijuana Past Month, Ages 12+	3.7	3.8	3.4	3.3	3.6	3.6	4.5
Alcohol Dependence or Abuse past Year, Ages 12+	8.3	8.6	8.0	7.6	8.7	7.9	9.7
Dependence or Abuse of Alcohol or Any Illicit Drug, Ages 12+	10.3	10.6	10.0	9.7	10.2	9.7	12.1

■ Better Outcome (significantly different from state) ■ Worse Outcome (significantly different from state)

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, and 2004.

Summary Substance Abuse Indicators by EOHHS Region, Massachusetts: 2005

Indicator	MA Total	Western	Central	North east	Metro West	South East	Boston
% Adults Binge Drinking	15.7	16.4	15.8	16.0	14.5	15.3	18.1
% Adults Smoking	18.1	18.8	21.2	18.3	12.4	20.4	19.5
% Adults using illicit drugs	8.1	13.9	7.2	7.2	7.0	8.1	5.3
Substance Abuse Treatment Program Admissions Rate	1,601	2,044	1,441	1,379	871	1,724	2,978
Substance Abuse Treatment Program Admissions Rate-- Alcohol	661	921	571	498	404	821	1,010
Substance Abuse Treatment Program Admissions Rate— Cocaine	62	65	44	58	34	88	99
Substance Abuse Treatment Program Admissions Rate— Heroin	609	635	636	583	286	504	1,453

Statistically lower than state

Statistically higher than state

Summary Opioid Indicators by EOHHS Region Massachusetts: 2003-2005

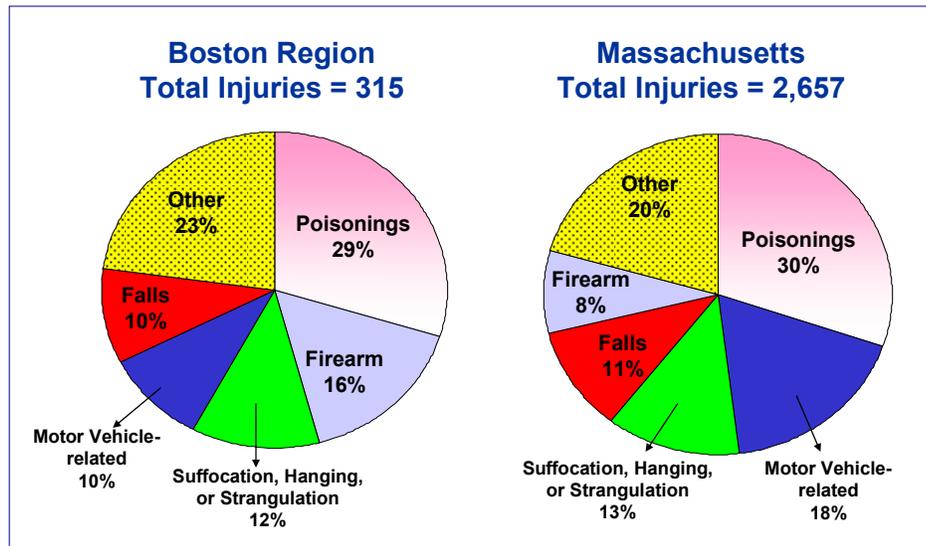
Indicator	MA Total	Western	Central	Northeast	Metro West	South East	Boston
Opioid-related Emergency Department Visit Rate	181	114	169	223	126	196	309
Opioid-related fatal overdose rate	8.1	6.7	6.5	9.5	6.0	10.1	10.8

Better Outcome (significantly different from state)

Worse Outcome (significantly different from state)

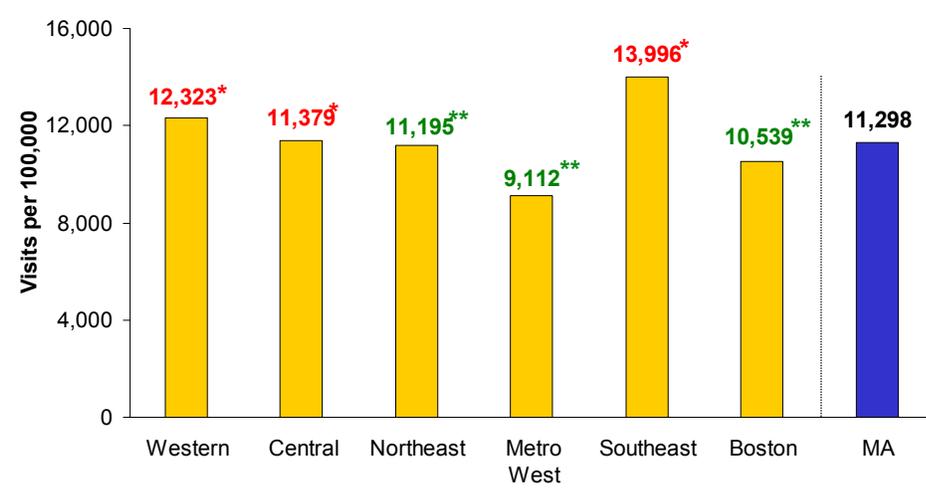
INJURY AND VIOLENCE

Causes of Injury Deaths Boston Region: 2005



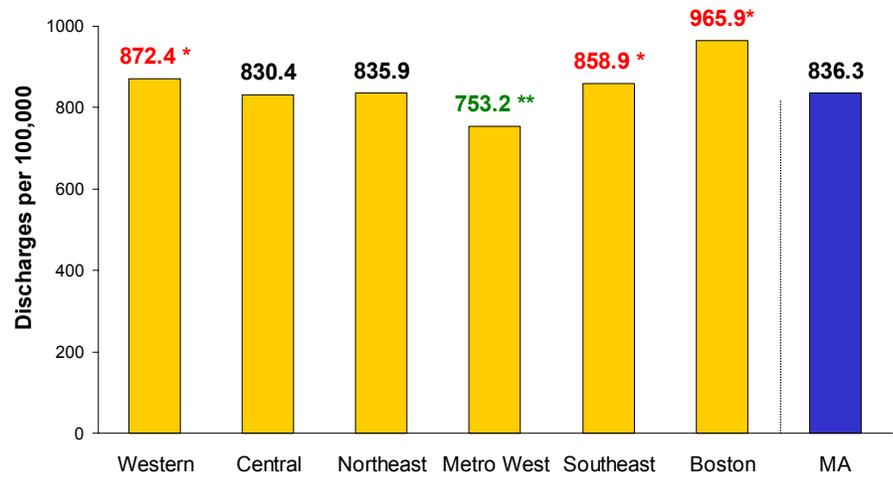
Source: Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation

Emergency Department Visit Rates for Injuries & Poisonings by EOHHS Region Massachusetts: 2003-2005



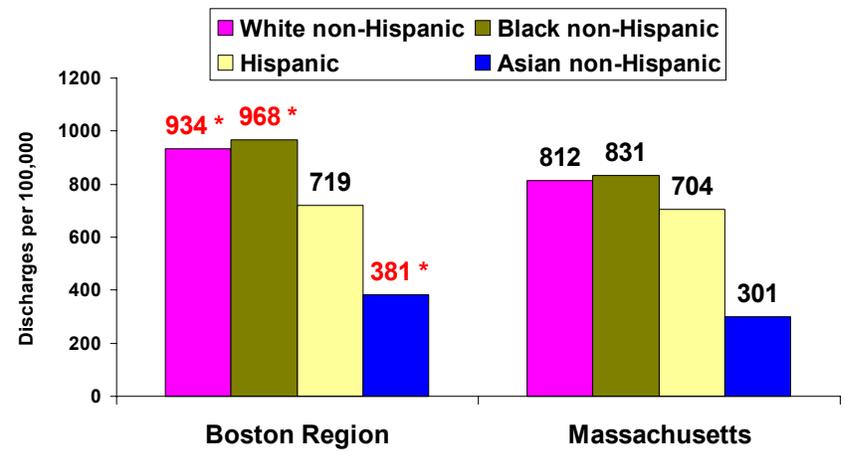
Statistically different from state ($p \leq .05$)— Red (*) Statistically worse than state- Green (**) statistically better than state
Age-adjusted to the 2000 US standard population.
Source: Division of Health Care Finance and Policy. Calendar Year 2003- 2005. Emergency Department Visits

Injury-Related Hospital Discharge Rates by EOHHS Region Massachusetts: 2003-2005



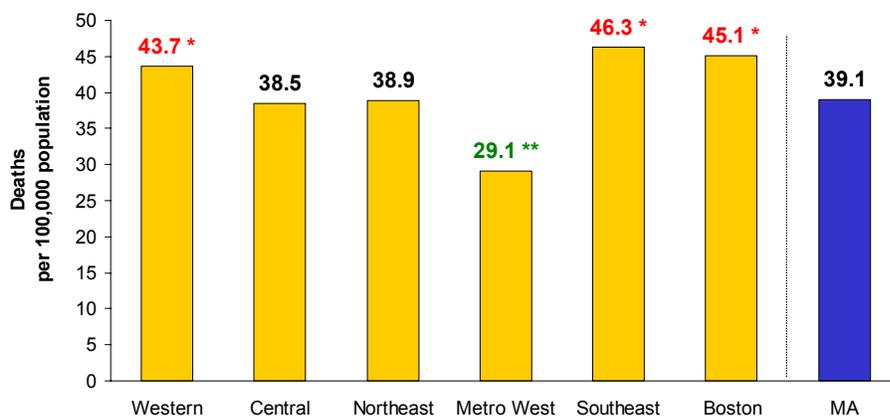
Statistically different from state (p ≤.05)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: Division of Health Care Finance and Policy. Calendar Year 2003- 2005. Hospital Discharges

Injury-related Hospital Discharge Rates by Race/Ethnicity, Boston Region and Massachusetts: 2003-2005



Statistically different from state (p ≤.05)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Inpatient Hospital Discharge Database

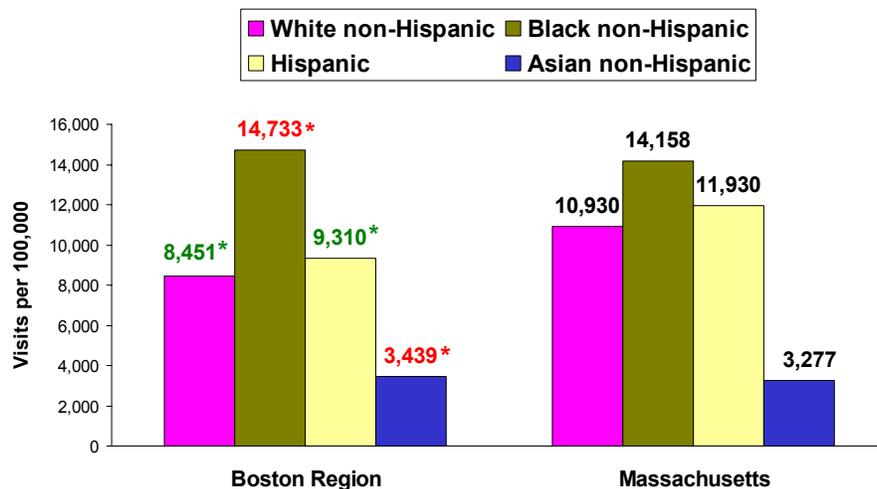
Injury Death Rates by EOHHS Region Massachusetts: 2003-2005



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
Age-adjusted to the 2000 US standard population.

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

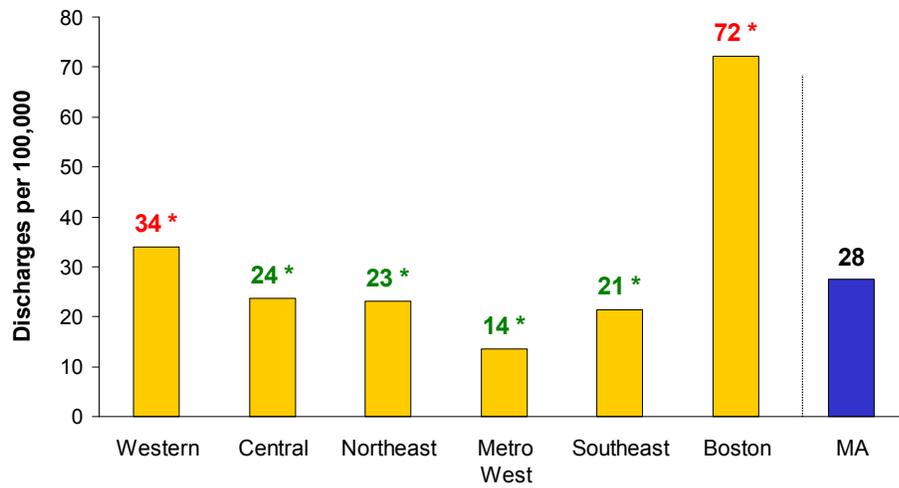
Emergency Department Visit Rates for Injuries & Poisonings by Race/Ethnicity Boston Region and Massachusetts: 2003-2005



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
Age-adjusted to the 2000 US standard population.

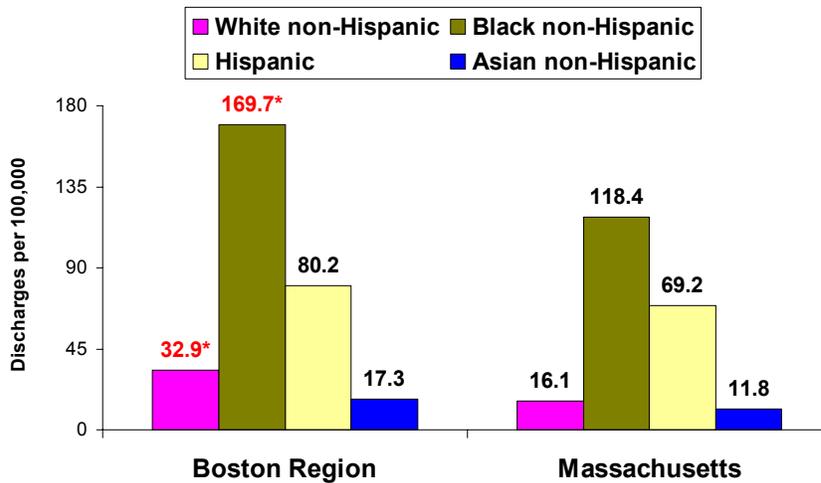
Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Emergency Department Visits

Hospital Discharge Rates for Assaults by EOHHS Region, Massachusetts: 2003-2005



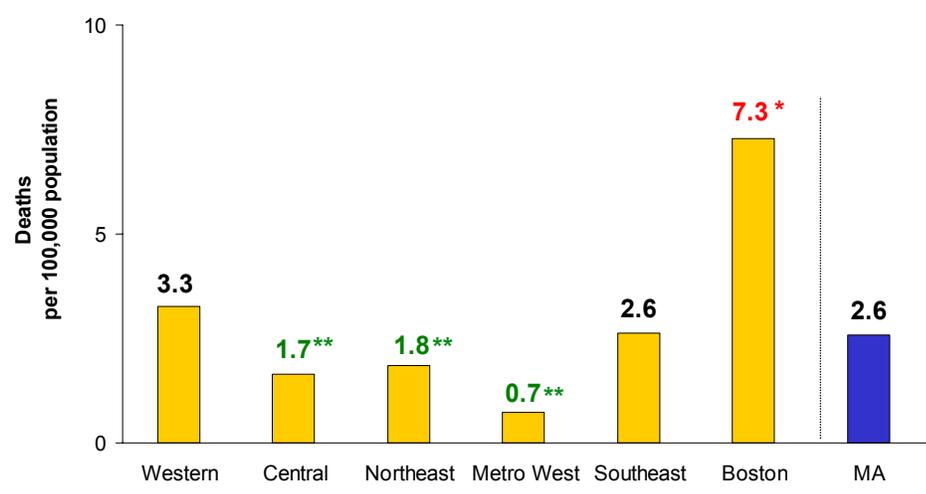
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Hospital Discharge Rates for Assaults by Race/Ethnicity, Boston Region and Massachusetts: 2003-2005



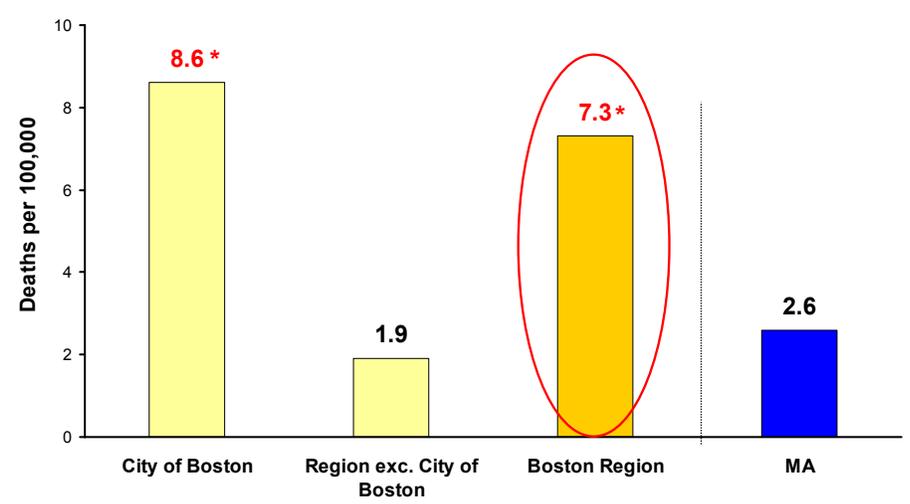
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Inpatient Hospital Discharge Database

Homicides by EOHHS Region Massachusetts: 2003-2005



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
Age-adjusted to the 2000 US standard population.
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

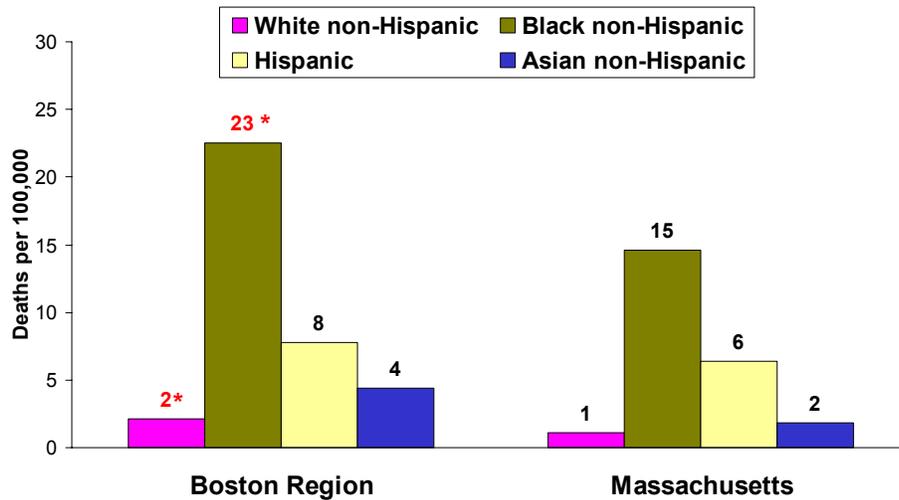
Homicides in Boston Region and Massachusetts: 2003-2005



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
Age-adjusted to the 2000 US standard population
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Homicide Rates by Race/Ethnicity Boston Region and Massachusetts: 2003-2005

142



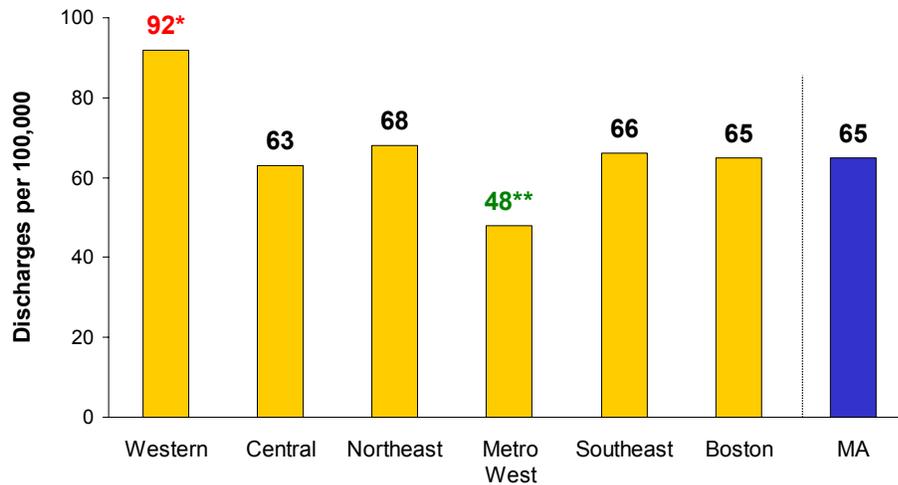
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state

Age-adjusted to the 2000 US standard population.

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Hospital Discharge Rates for Self-Inflicted Injury by EOHHS Region Massachusetts: 2003-2005

143



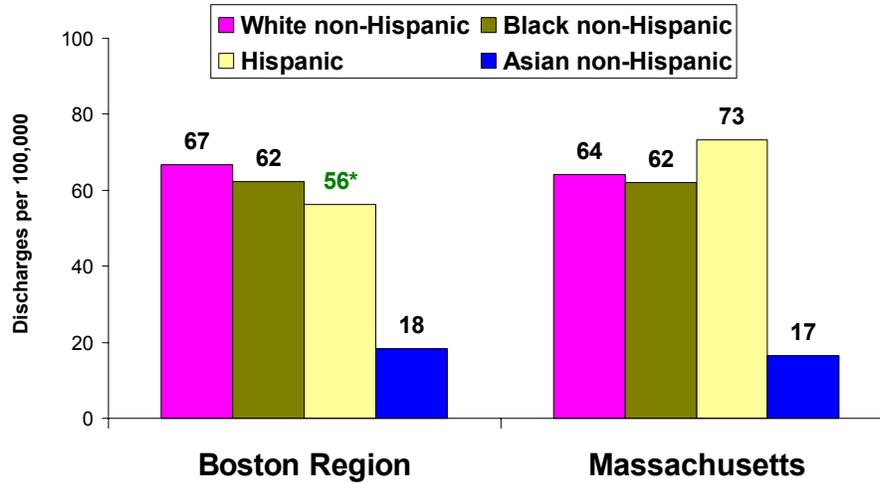
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state

Age-adjusted to the 2000 US standard population.

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Hospital Discharge Rates for Self-inflicted Injuries by Race/Ethnicity, Boston Region and Massachusetts: 2003-2005

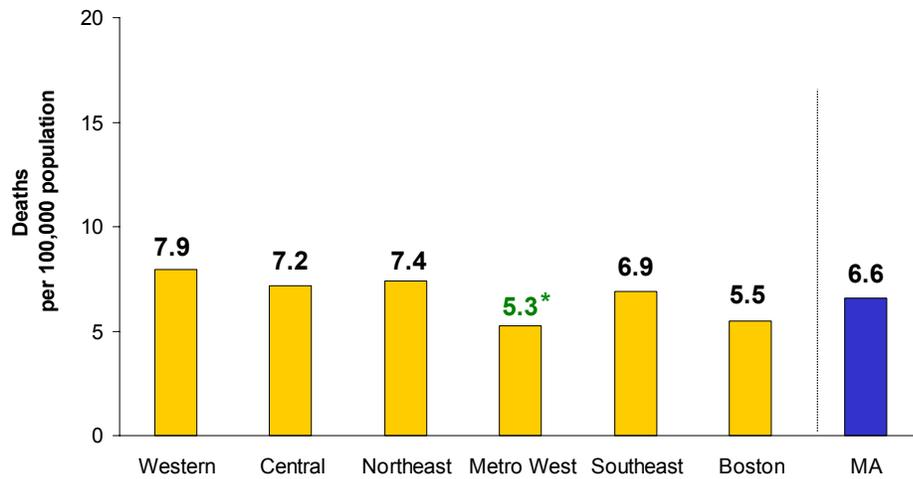
144



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Inpatient Hospital Discharge Database

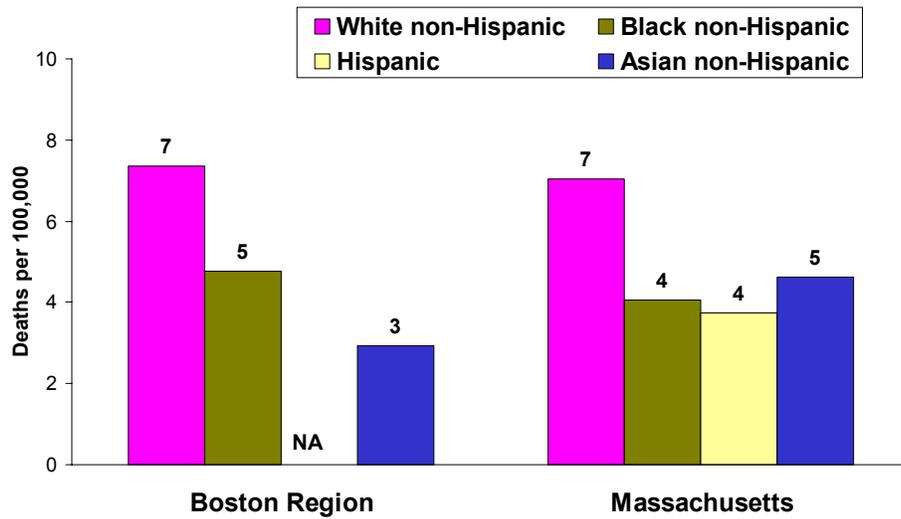
Suicides by EOHHS Region Massachusetts: 2003-2005

145



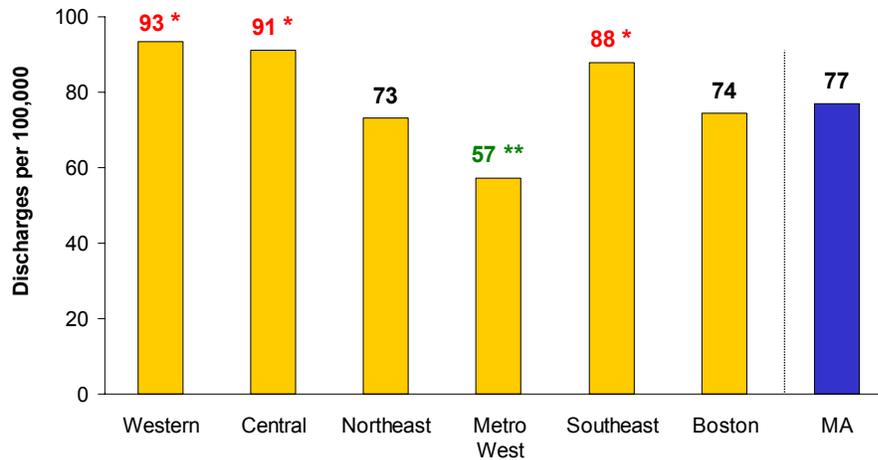
Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Suicide Rates by Race/Ethnicity Boston Region and Massachusetts: 2003-2005



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
Age-adjusted to the 2000 US standard population.
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

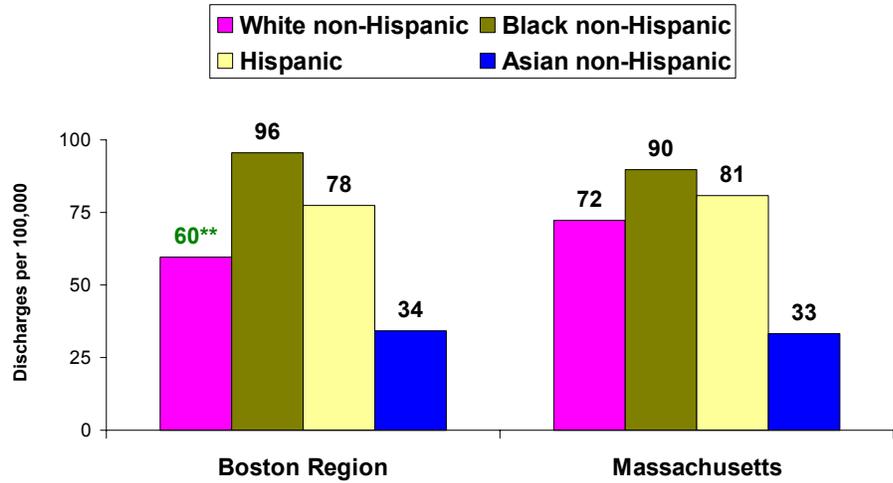
Hospital Discharge Rates for Motor Vehicle-related Injuries by EOHHS Region Massachusetts: 2003-2005



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
Age-adjusted to the 2000 US standard population.
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Hospital Discharge Rates for Motor Vehicle-related Injuries by Race/Ethnicity Boston Region and Massachusetts: 2003-2005

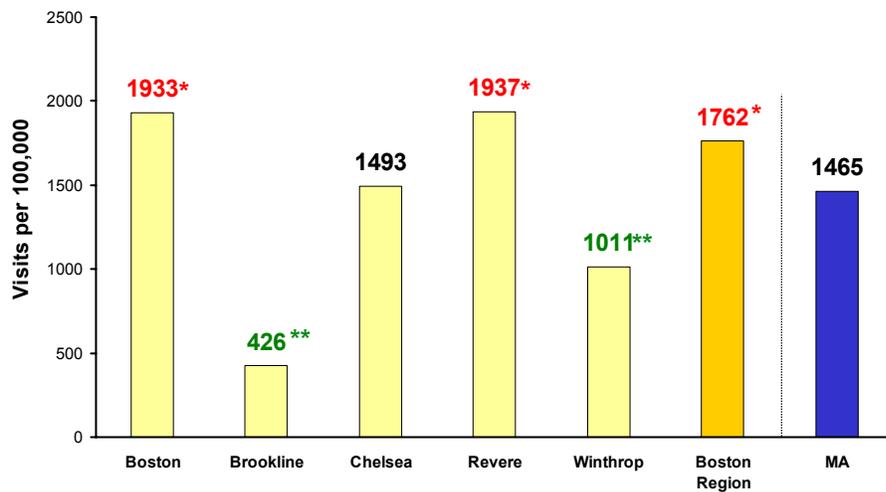
148



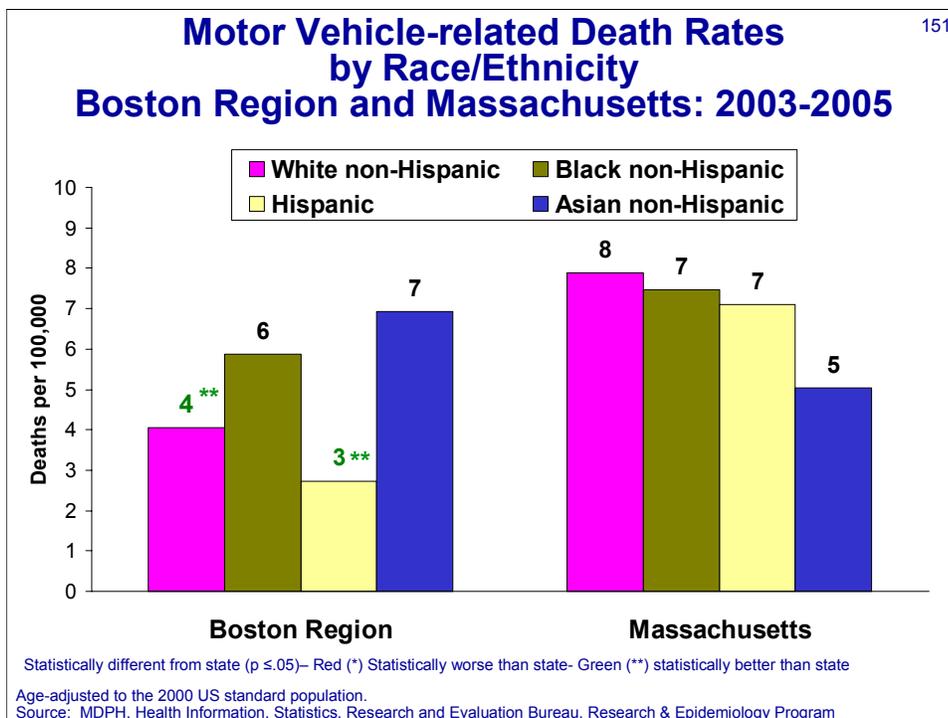
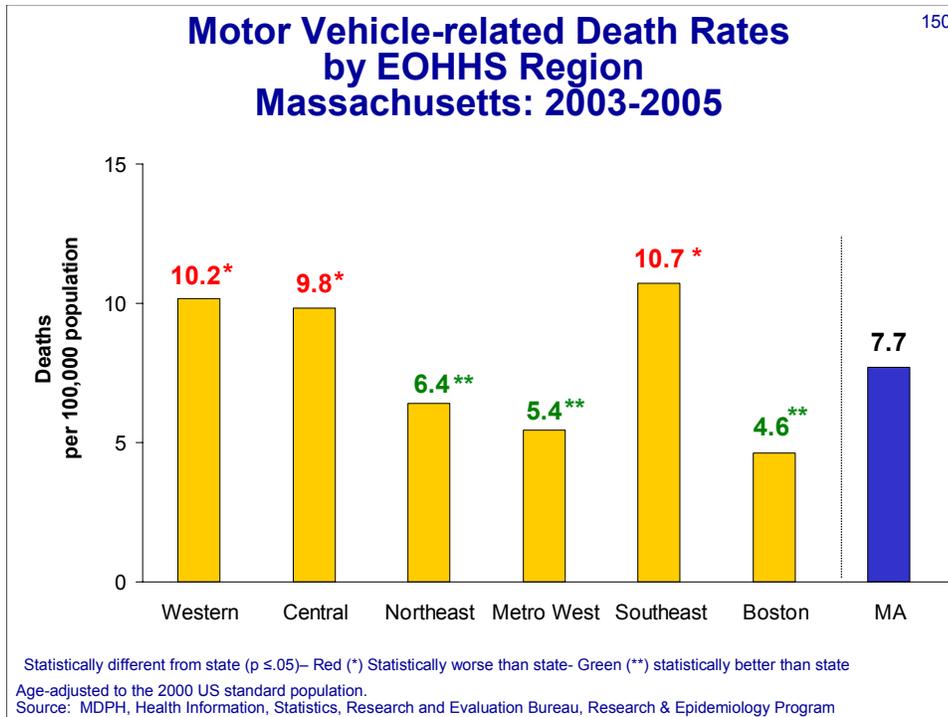
Statistically different from state ($p \leq .05$)— Red (*) Statistically worse than state- Green (**) statistically better than state
Age-adjusted to the 2000 US standard population.
Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Inpatient Hospital Discharge Database

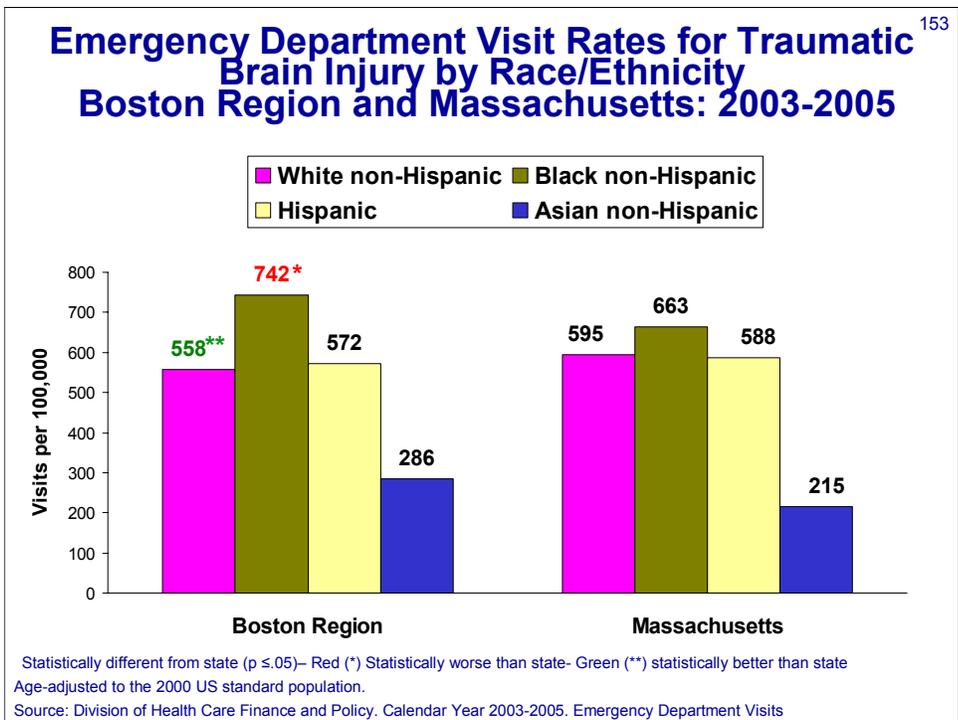
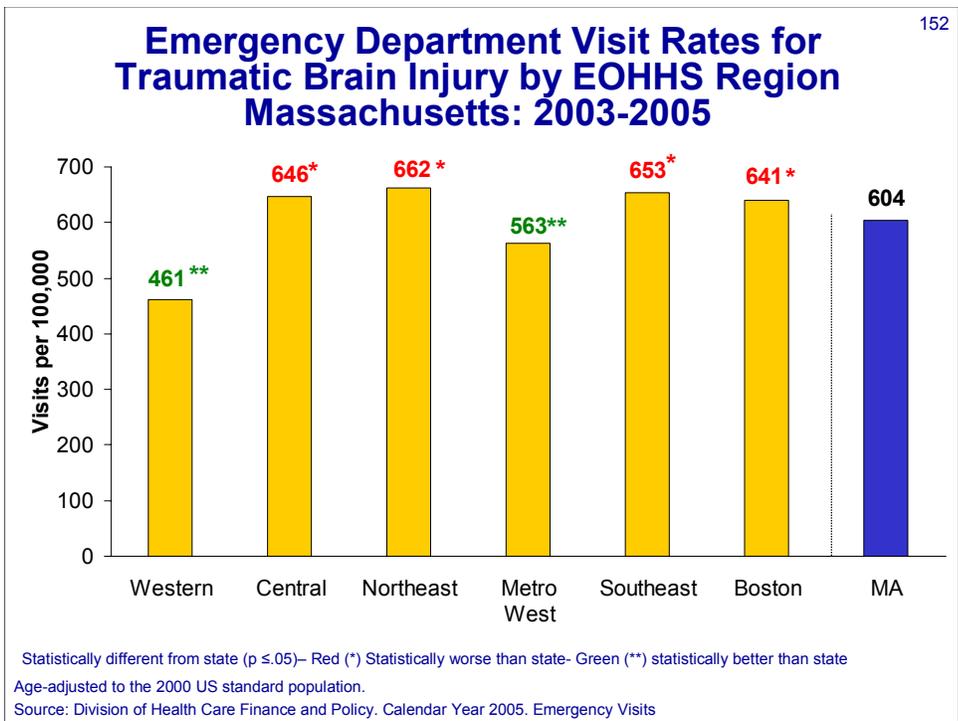
Emergency Department Visit Rates for Motor Vehicle-related Injuries by Cities in Boston Region & Massachusetts: 2003-2005

149

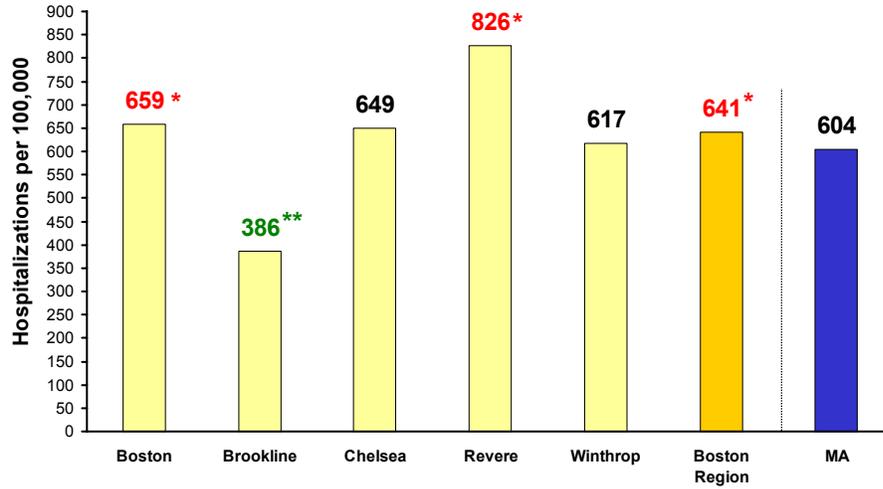


Statistically different from state ($p \leq .05$)— Red (*) Statistically worse than state- Green (**) statistically better than state
Age-adjusted to the 2000 US standard population.
Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Emergency Visits





Emergency Visit Rates for Traumatic Brain Injury by Cities in Boston Region & Massachusetts: 2003-2005

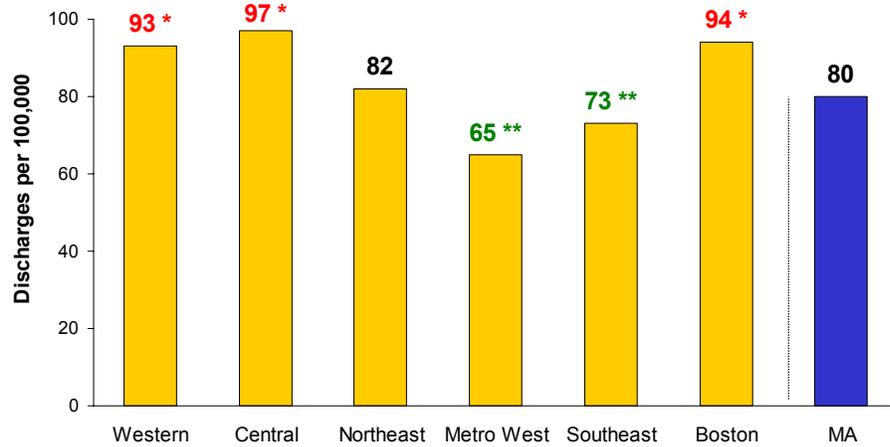


Statistically different from state (p ≤ .05)– Red (*) Statistically worse than state- Green (**) statistically better than state

Age-adjusted to the 2000 US standard population.

Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Inpatient Hospital Discharge Database

Hospital Discharge Rates for Traumatic Brain Injuries by EOHHS Region Massachusetts: 2003-2005

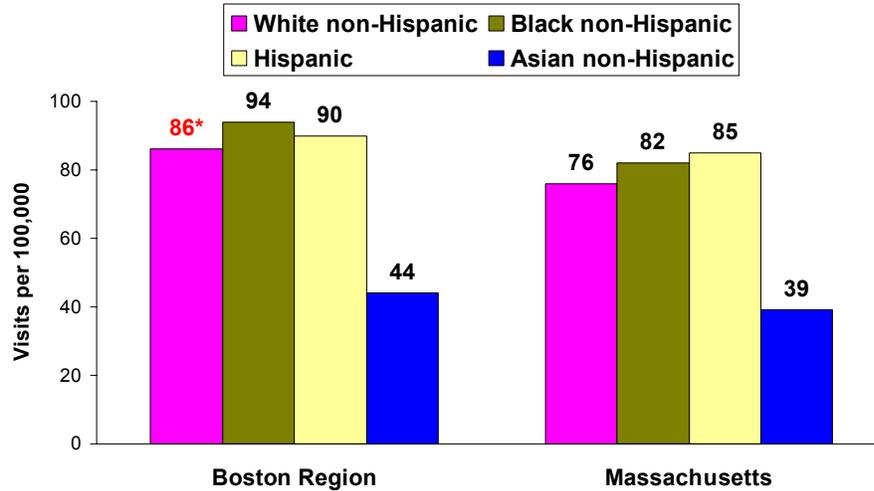


Statistically different from state (p ≤ .05)– Red (*) Statistically worse than state- Green (**) statistically better than state

Age-adjusted to the 2000 US standard population.

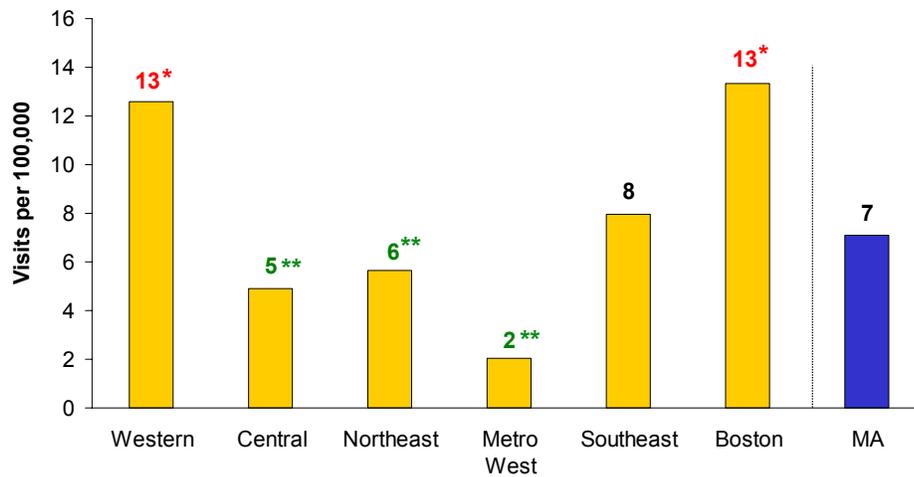
Source: Division of Health Care Finance and Policy. Calendar Year 2003- 2005. Hospital Discharges

Hospital Discharge Rates for Traumatic Brain Injury by Race/Ethnicity, Boston Region and Massachusetts: 2003-2005 156

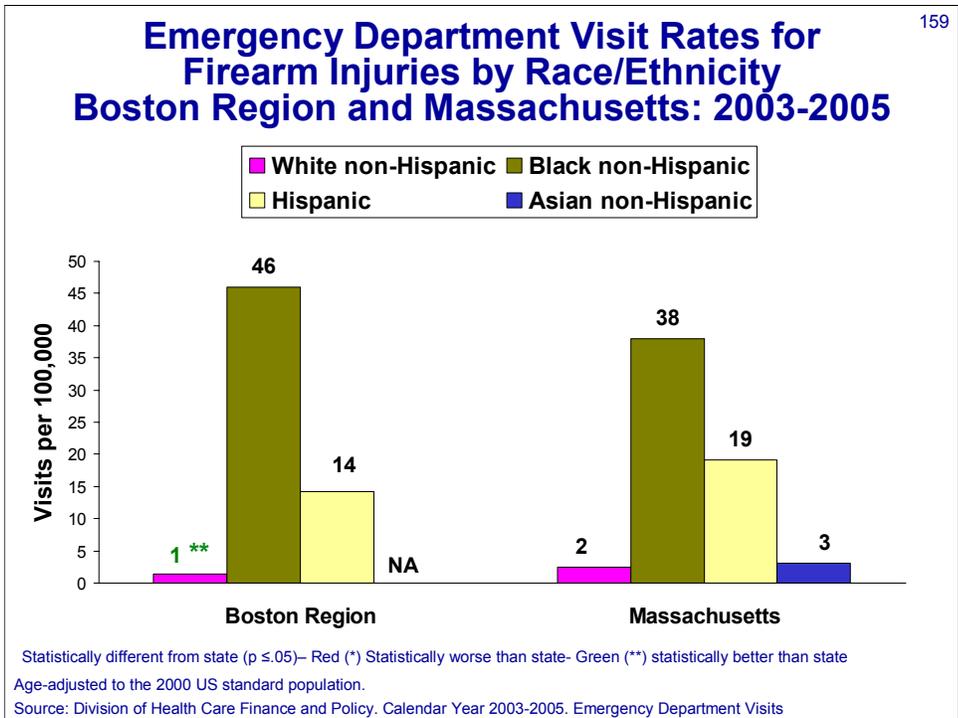
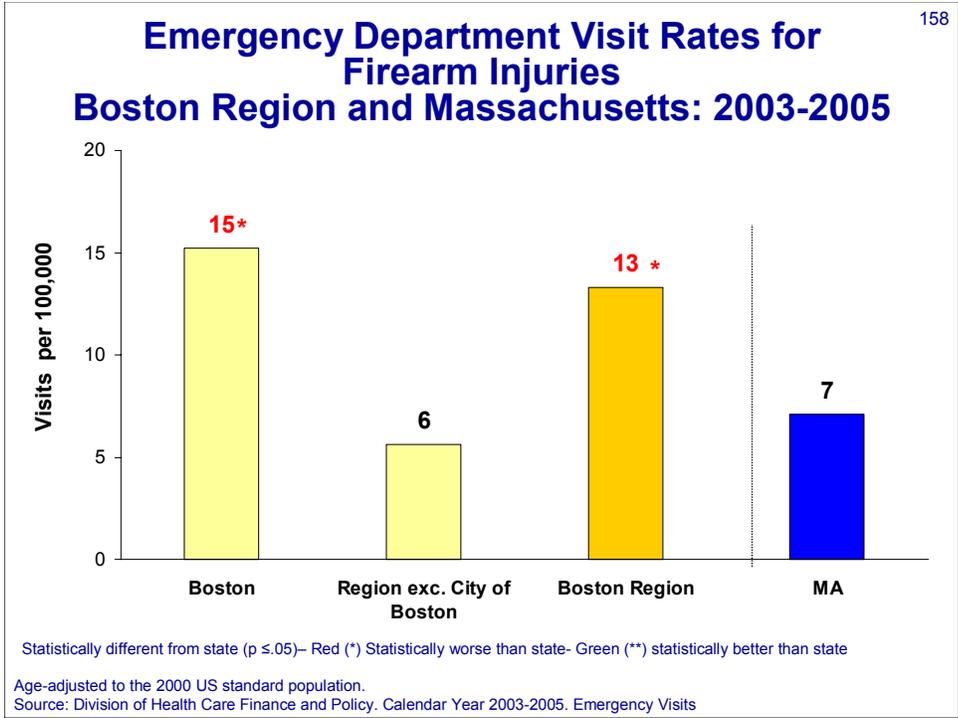


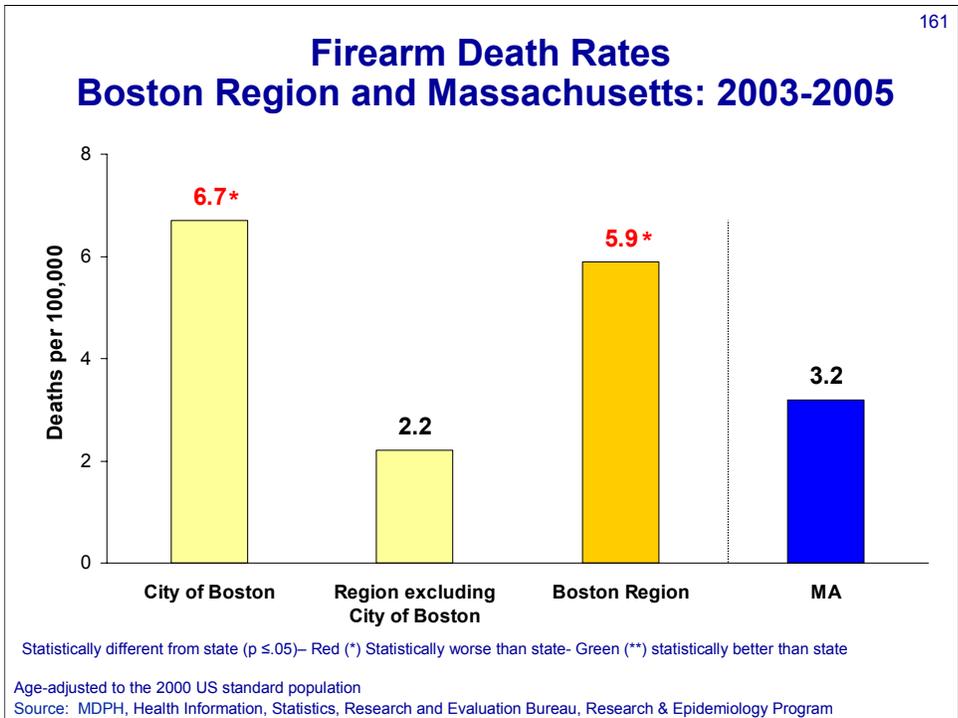
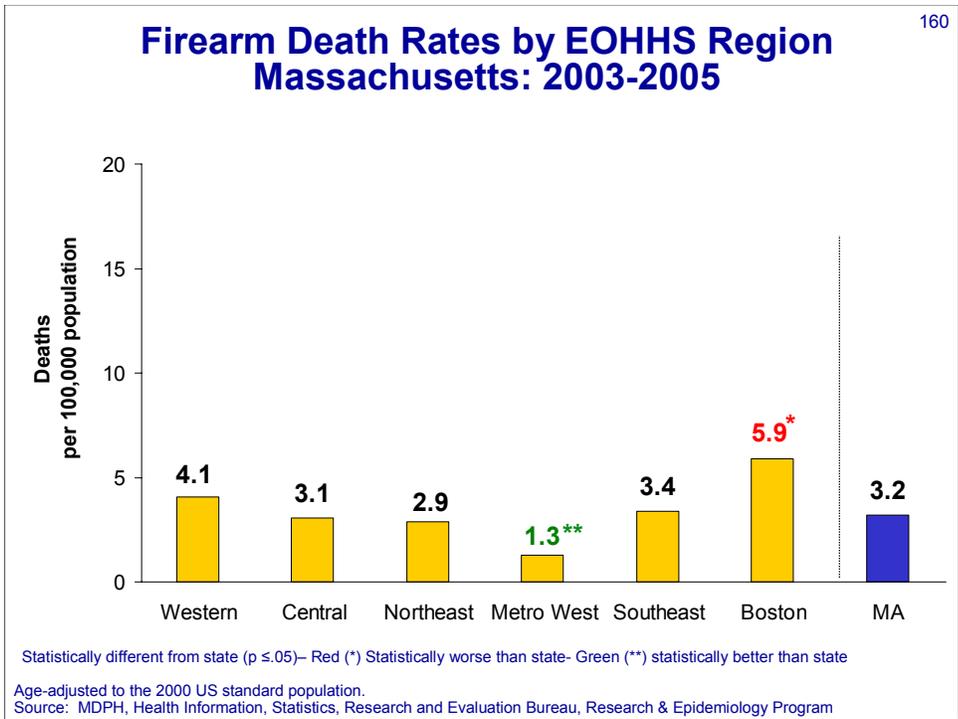
Statistically different from state ($p \leq .05$)— Red (*) Statistically worse than state- Green (**) statistically better than state
Age-adjusted to the 2000 US standard population.
Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Inpatient Hospital Discharge Database

Emergency Department Visit Rates for Firearm Injuries by EOHHS Region Massachusetts: 2003-2005 157

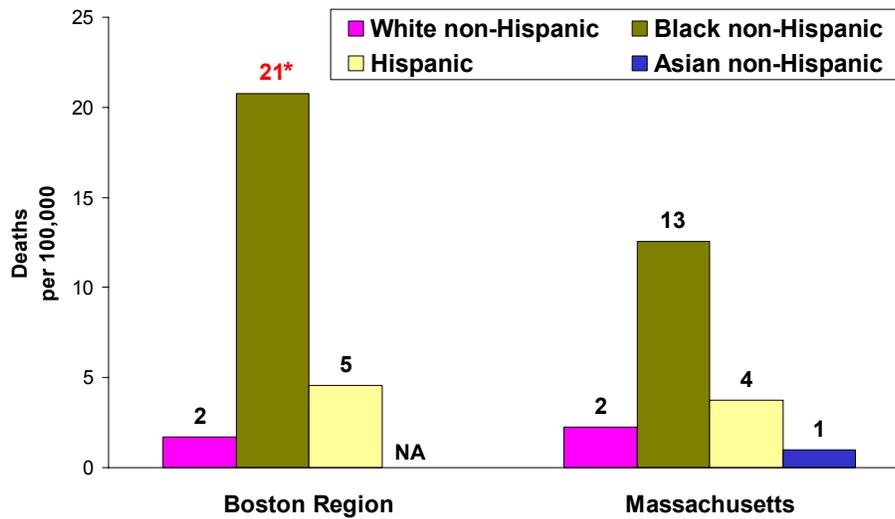


Statistically different from state ($p \leq .05$)— Red (*) Statistically worse than state- Green (**) statistically better than state
Age-adjusted to the 2000 US standard population.
Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Emergency Visits



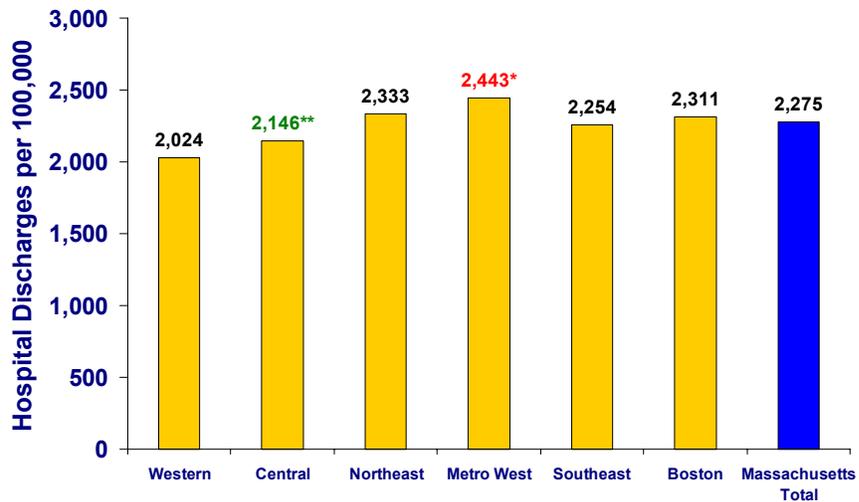


Firearm Death Rates by Race/Ethnicity Boston Region and Massachusetts: 2003-2005

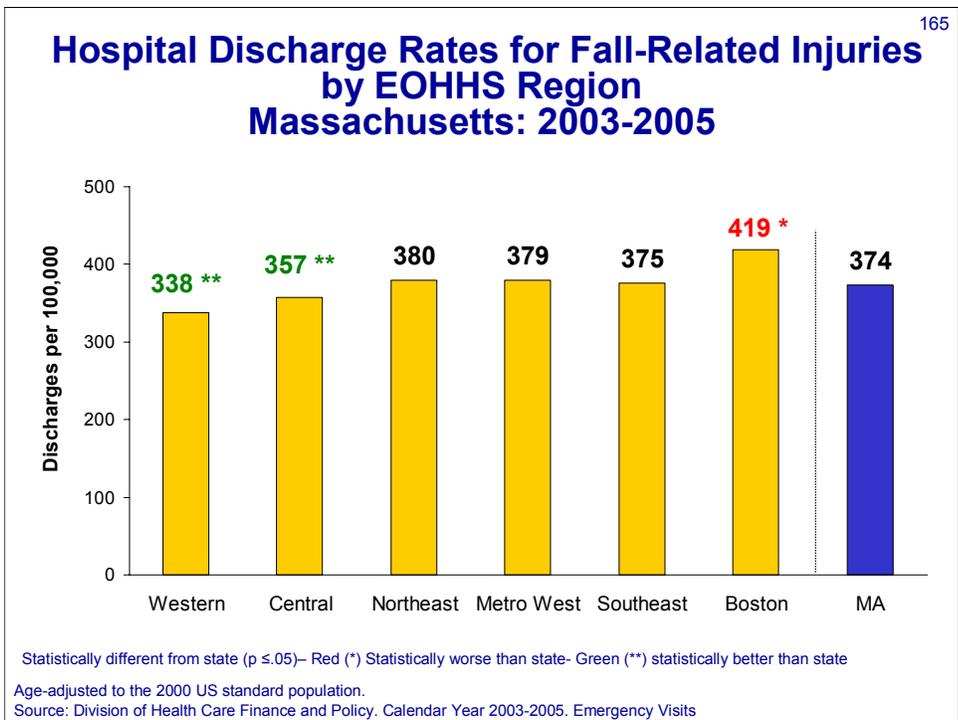
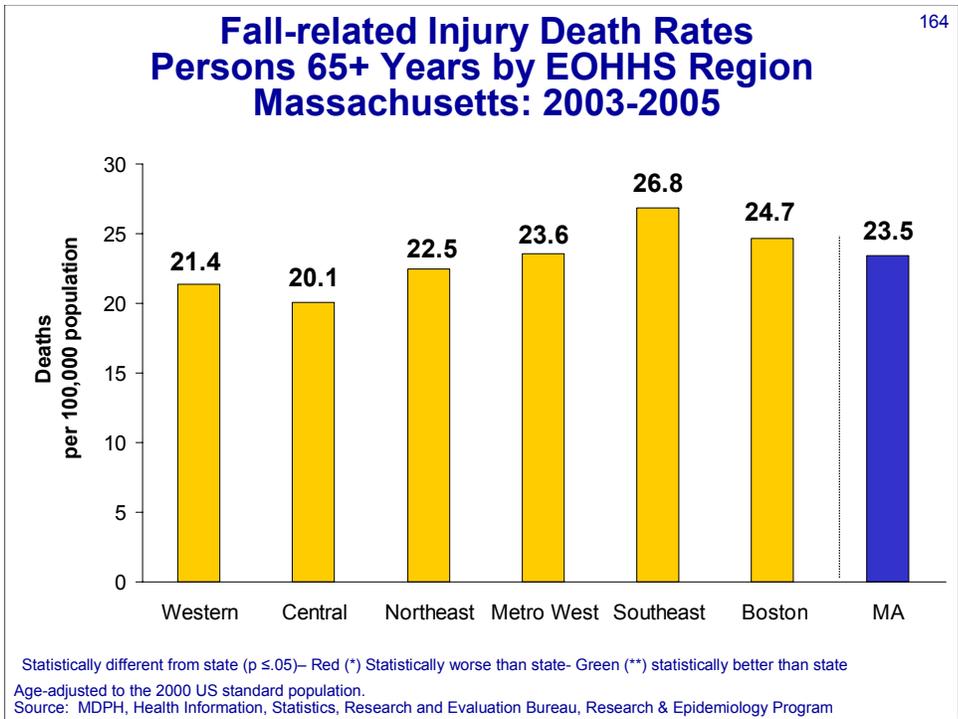


Statistically different from state ($p \leq .05$)— Red (*) Statistically worse than state- Green (**) statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

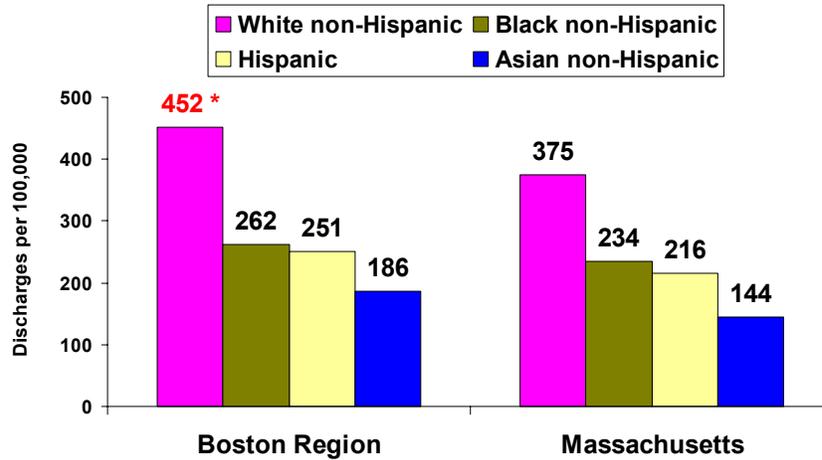
Hospitalization Rates for Fall-Related Injuries Ages 65+ by EOHHS Region Massachusetts: 2003-2005



Statistically different from state ($p \leq .05$)— Red (*) Statistically worse than state- Green (**) statistically better than state
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

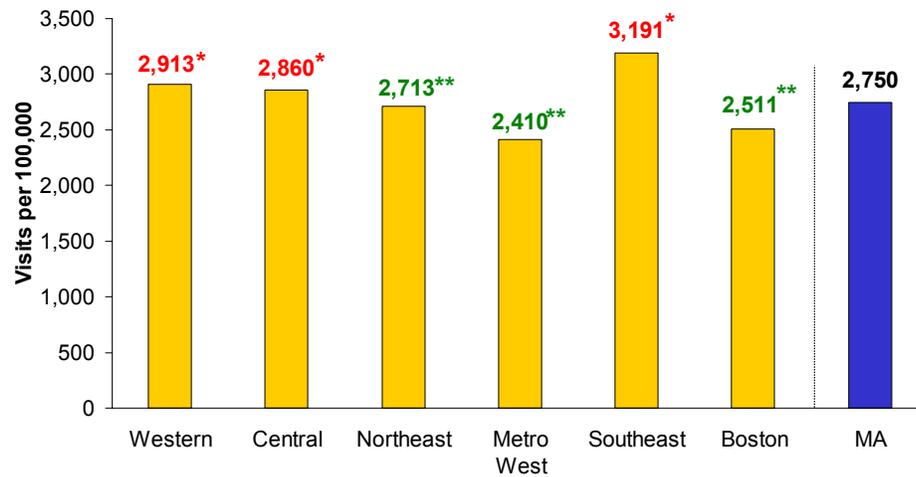


Hospital Discharge Rates for Fall-related Injuries by Race/Ethnicity, Boston Region and Massachusetts: 2003-2005



Statistically different from state (p ≤ .05)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Inpatient Hospital Discharge Database

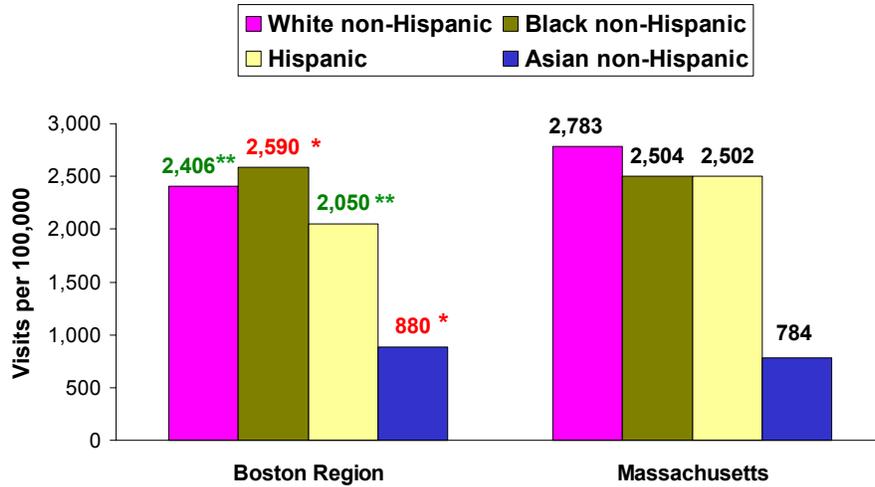
Emergency Department Visit Rates for Fall-Related Injuries by EOHHS Region Massachusetts: 2003-2005



Statistically different from state (p ≤ .05)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: Division of Health Care Finance and Policy. Calendar Year 2005. Emergency Visits

Emergency Department Visit Rates for Fall-related Injuries by Race/Ethnicity Boston Region and Massachusetts: 2003-2005

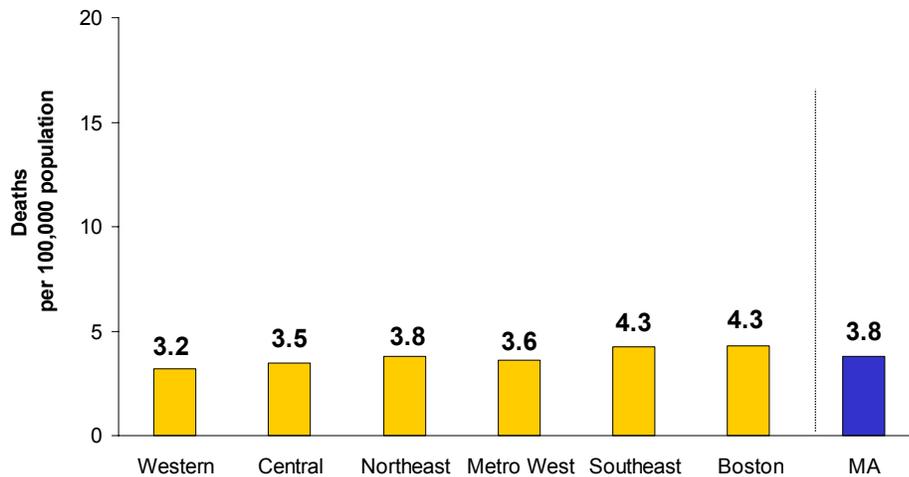
168



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
Age-adjusted to the 2000 US standard population.
Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Emergency Department Visits

Fall-Related Injury Mortality Rates by EOHHS Region Massachusetts: 2003-2005

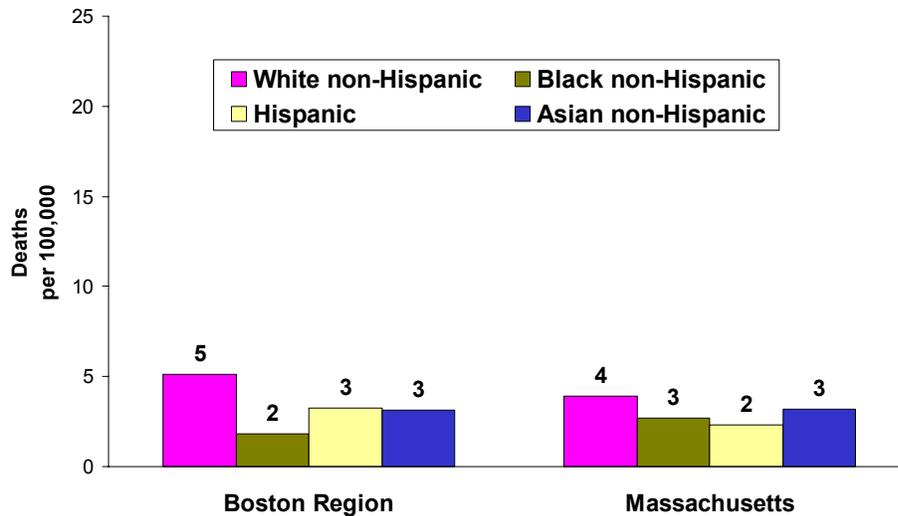
169



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
Age-adjusted to the 2000 US standard population.
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Fall-related Injury Death Rates by Race/Ethnicity Boston Region and Massachusetts: 2003-2005

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Statistically different from state ($p \leq .05$)— Red (*) Statistically worse than state- Green (**) statistically better than state

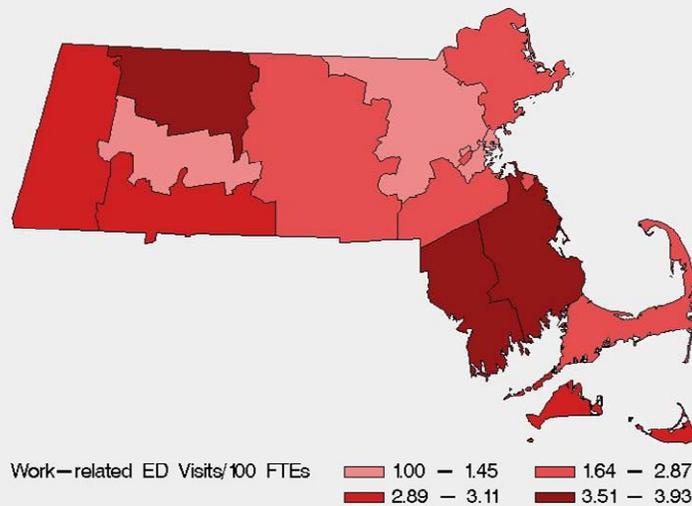
Age-adjusted to the 2000 US standard population.

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

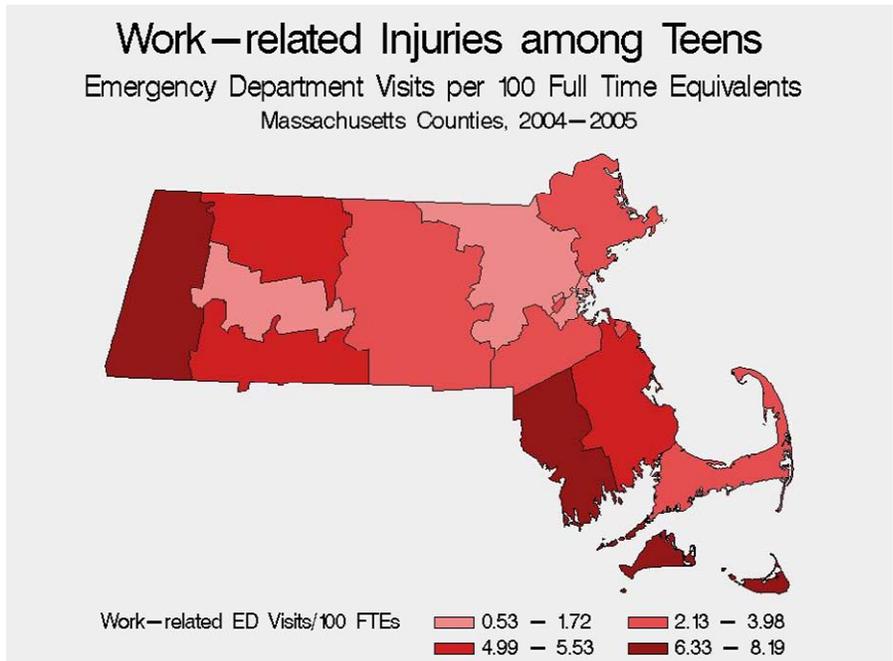
Work-related Injuries

171

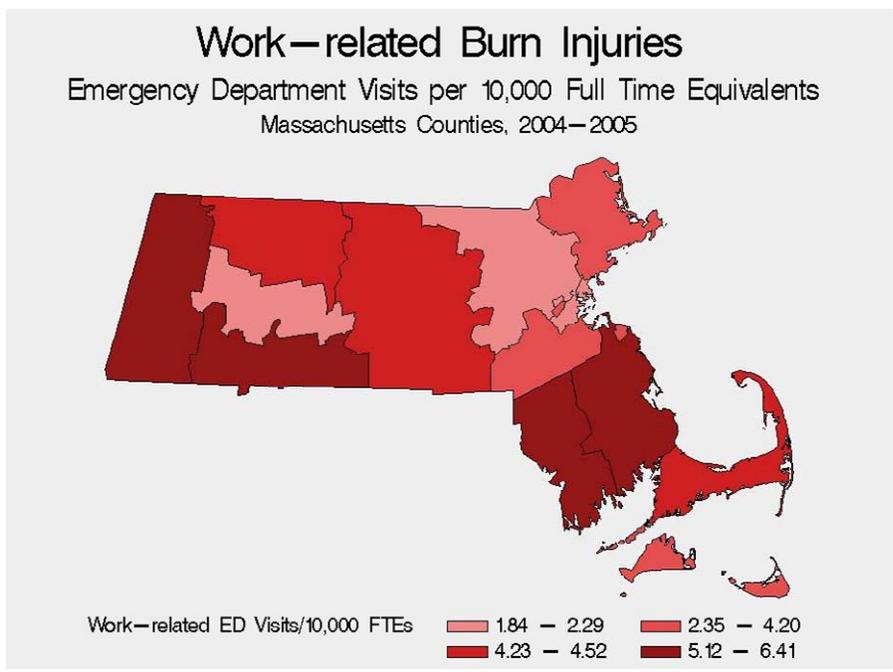
Emergency Department Visits per 100 Full Time Equivalents.
Massachusetts Counties, 2004-2005



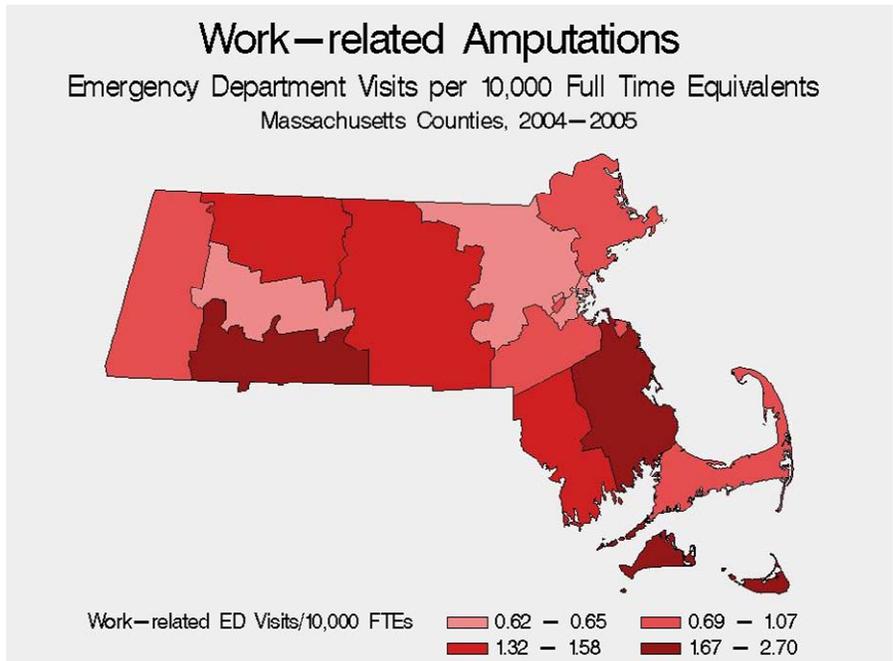
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Occupational Health Surveillance Program



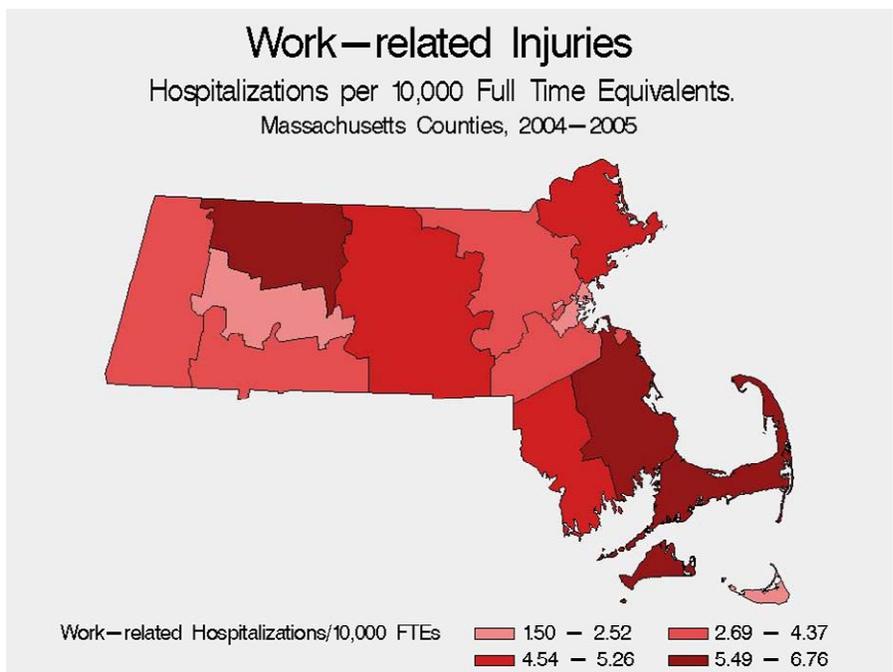
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Occupational Health Surveillance Program



Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Occupational Health Surveillance Program

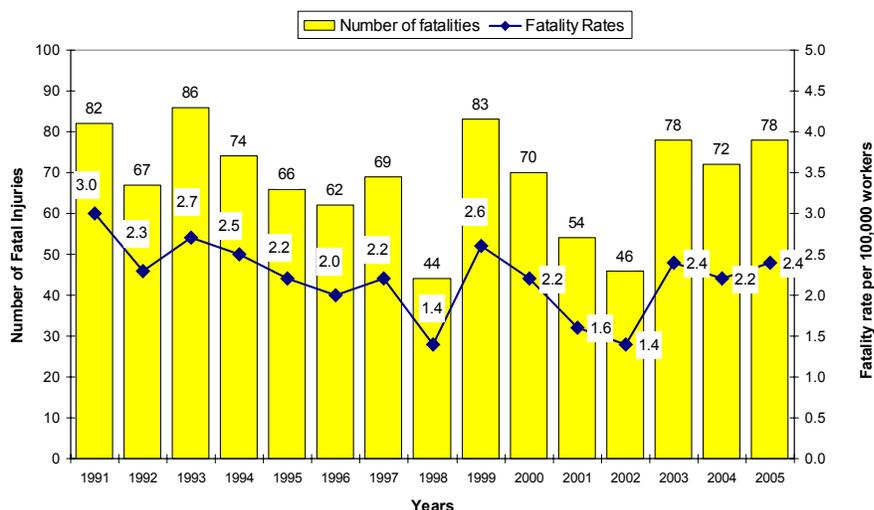


Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Occupational Health Surveillance Program



Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Occupational Health Surveillance Program

Number and Rate of Fatal Occupational Injuries by year, Massachusetts: 1991- 2005



Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Occupational Health Surveillance Program-Census of Fatal Occupational Injuries (CFOI) 1991-2005. MA employment data from BLS Current Population Survey (1991 - 2005) was used to calculate rates.

Summary Injury/Violence Hospitalization Indicators by EOHHS Region, Massachusetts: 2003-2005

Hospital Discharge Indicator Rates (age-adjusted)	MA Total	Western	Central	Northeast	Metro West	South East	Boston
All Injuries	836	872	830	836	753	859	966
Fall-related Injury, Ages 65pls	2,275	2,024	2,146	2,333	2,443	2,254	2,311
Traumatic Brain Injuries	80	93	97	82	65	73	94
Motor vehicle-related	77	93	91	73	57	88	74
Self-Inflicted	65	92	63	68	48	66	65
Assault	28	34	24	23	14	21	72

Better Outcome (significantly different from state) Worse Outcome (significantly different from state)

Age-adjusted to the 2000 US standard population.
Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Hospital Discharges

Summary Injury/Violence Emergency Department Indicators by EOHHS Region, Massachusetts: 2003-2005

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Indicator Age-adjusted Rate per 100,00	MA Total	Western	Central	Northeast	Metro West	South East	Boston
ER Visit Rate for all Injuries	11,298	12,323	11,379	11,195	9,112	13,996	10,539
ER Visit Rate for Traumatic Brain Injury	604	461	646	662	563	653	640
ER Visit Rate for Firearm	7	13	5	6	2	8	13
ER Visit Rate for Fall-related injuries	2,750	2,913	2,860	2,713	2,410	3,191	2,511

■ Better Outcome (significantly different from state)
 ■ Worse Outcome (significantly different from state)

Source: Division of Health Care Finance and Policy, Calendar Year 2003-2005, Emergency Department Visits

Summary Injury/Violence Mortality Indicators by EOHHS Region, Massachusetts: 2003-2005

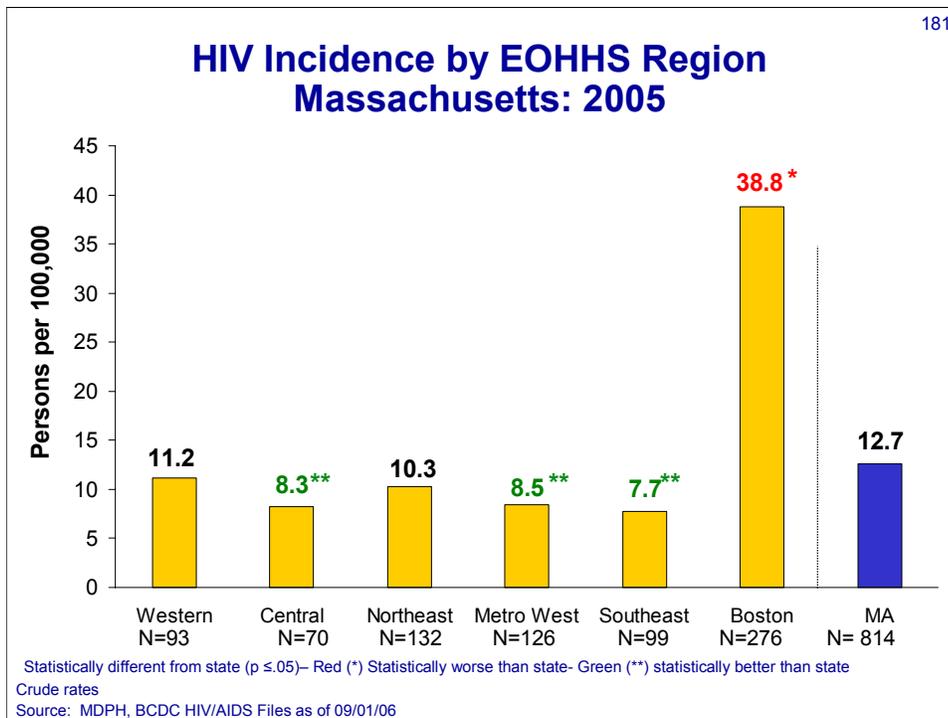
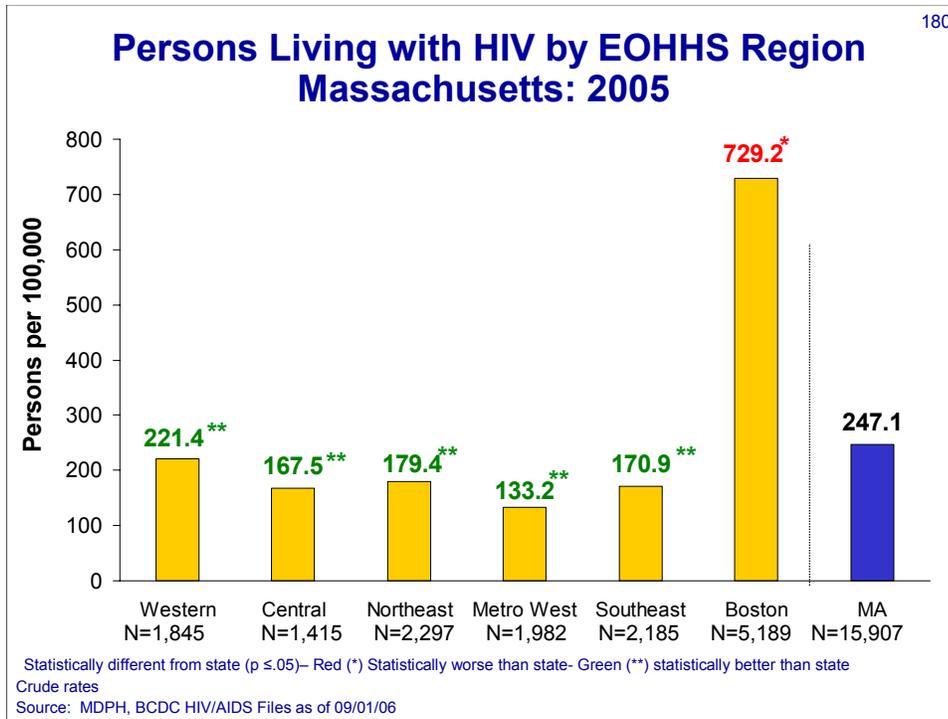
179

Mortality Indicator Age-adjusted Rate per 100,000	MA Total	Western	Central	Northeast	Metro West	South East	Boston
Homicide Death Rate	2.6	3.3	1.7	1.8	0.7	2.6	7.3
Suicide Death Rate	6.6	7.9	7.2	7.4	5.3	6.9	5.5
Motor Vehicle- related Death Rate	7.7	10.2	9.8	6.4	5.4	10.7	4.6
Firearm Death Rate	3.2	4.1	3.1	2.9	1.3	3.4	5.9
Fall-related Injury Death Rate	3.8	3.2	3.5	3.8	3.6	4.3	4.3

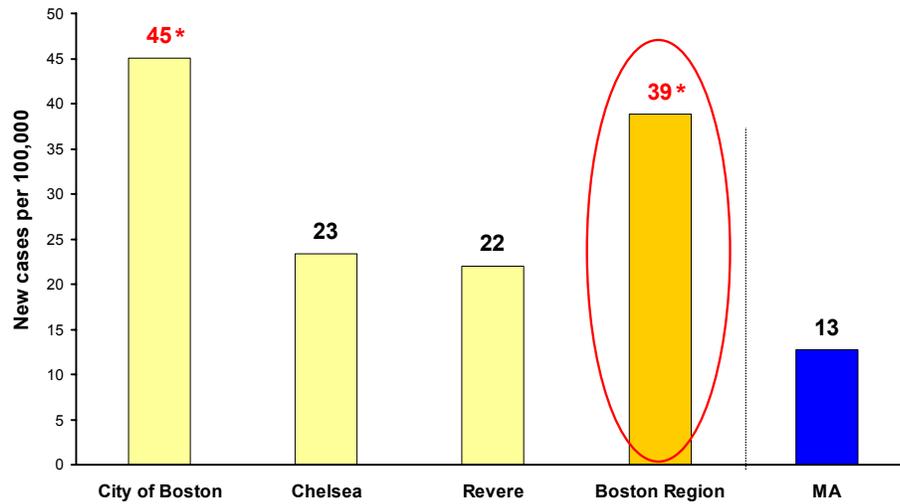
■ Better Outcome (significantly different from state)
 ■ Worse Outcome (significantly different from state)

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

HIV/AIDS

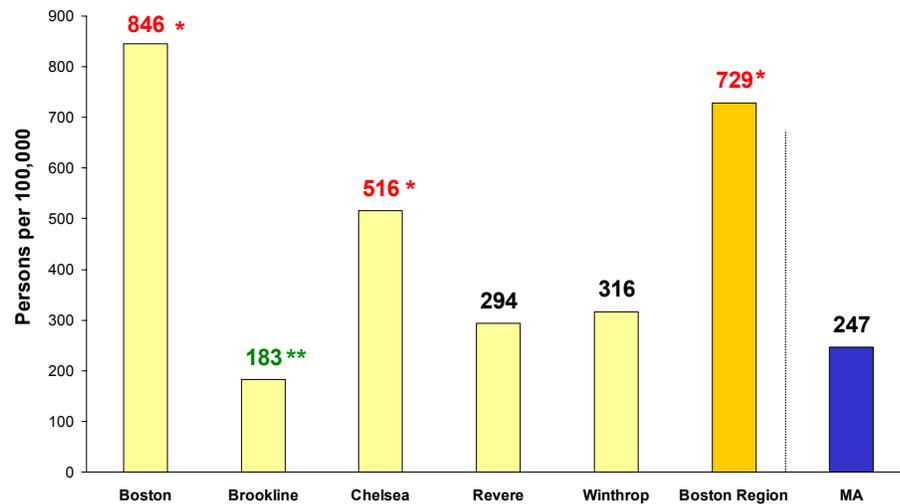


HIV Incidence by Cities in Boston Region & Massachusetts : 2005

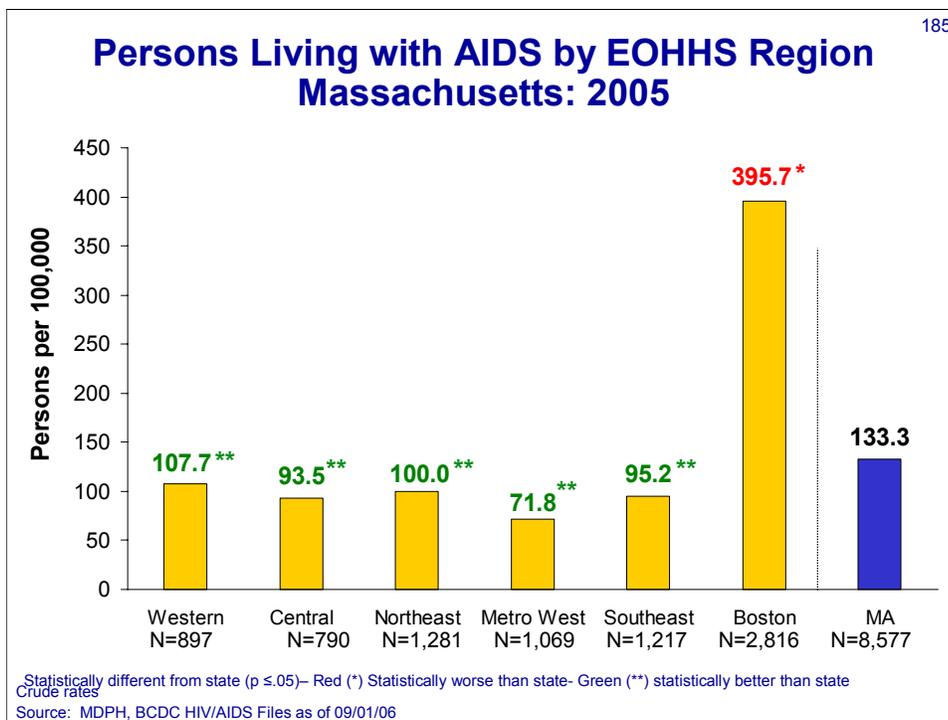
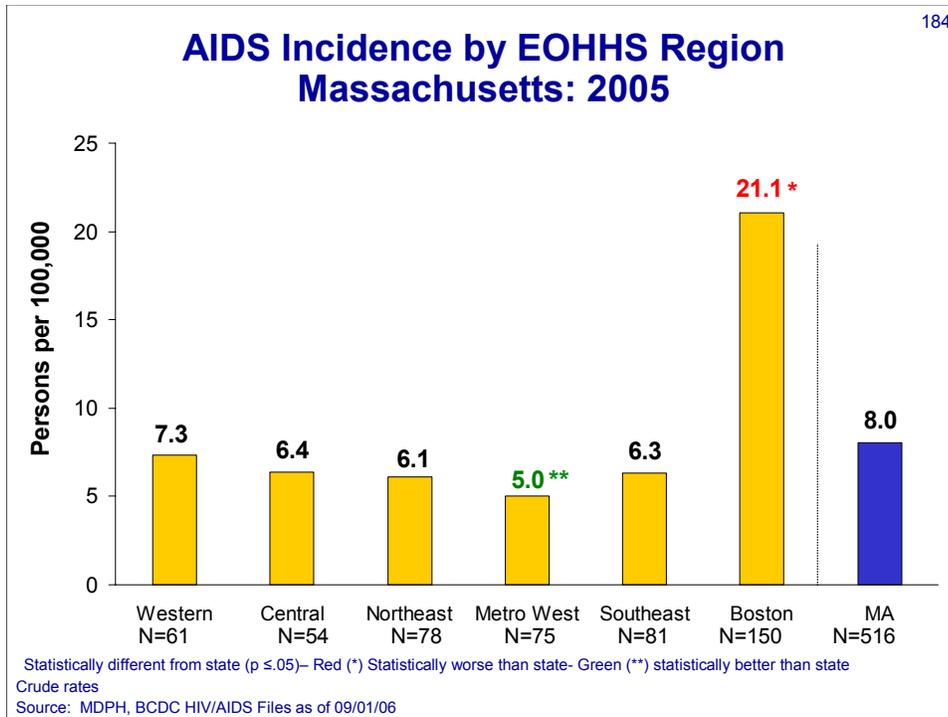


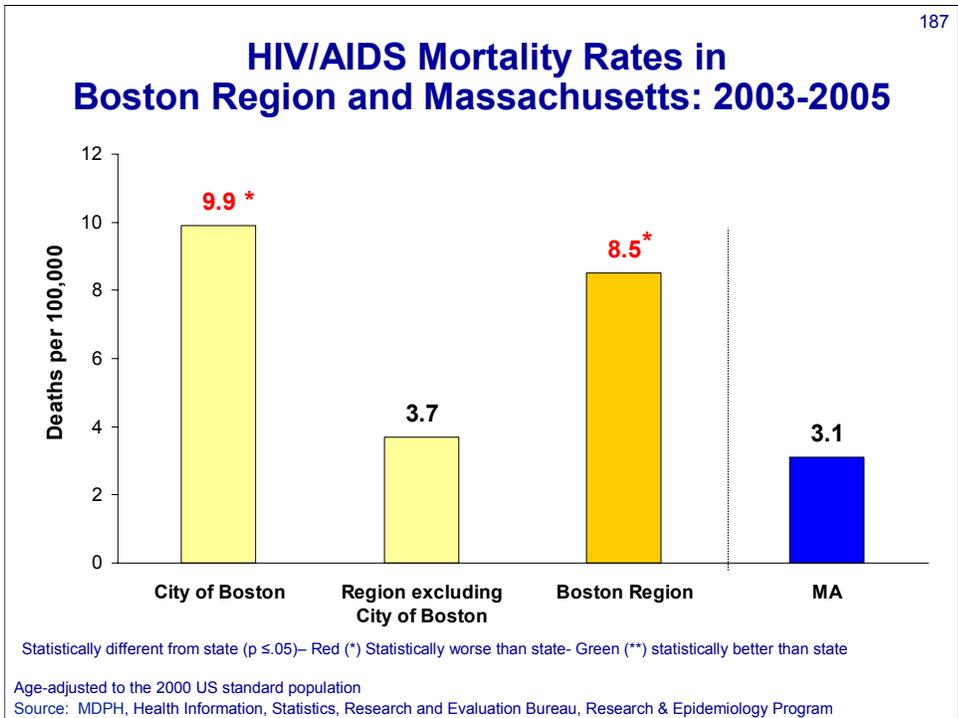
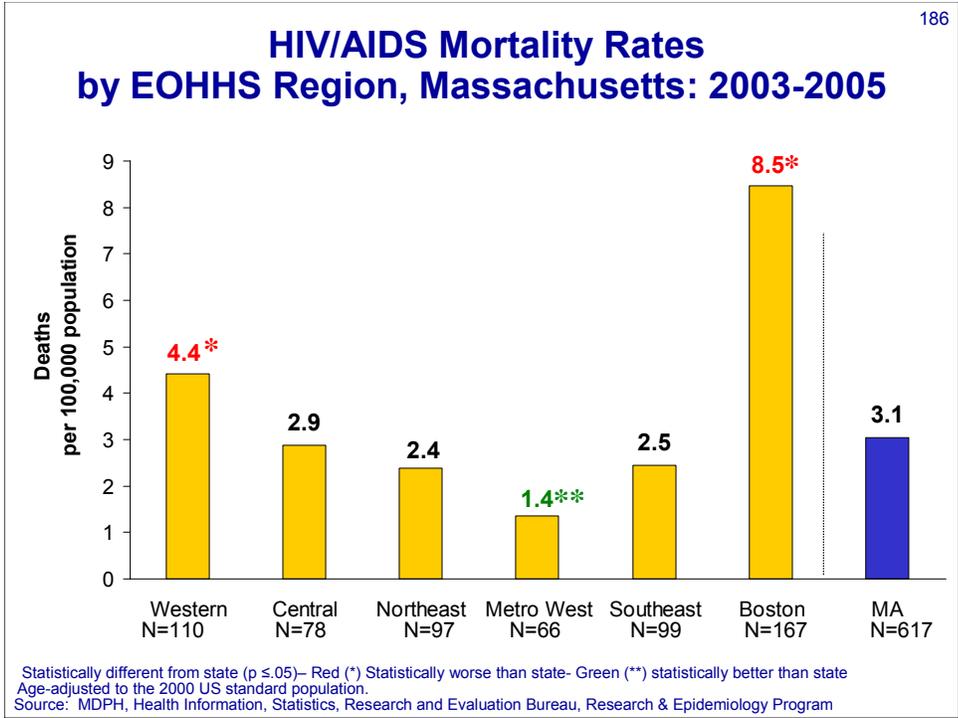
Statistically different from state (p ≤.05)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Crude rates
 Source: MDPH, BCDC HIV/AIDS Files as of 09/01/06

Persons Living with HIV Cities in Boston Region & Massachusetts : 2005

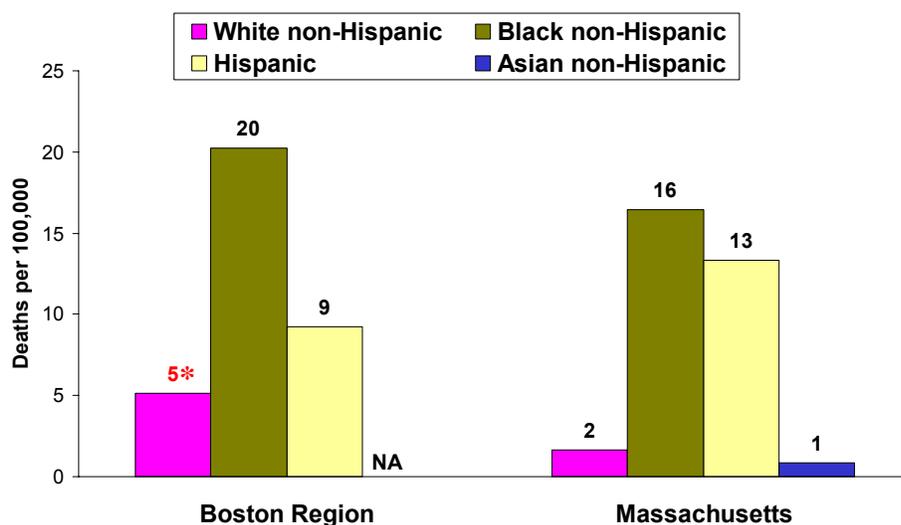


Statistically different from state (p ≤.05)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Crude rates
 Source: MDPH, BCDC HIV/AIDS Files as of 09/01/06





HIV/AIDS Death Rate by Race/Ethnicity Boston Region and Massachusetts: 2003-2005



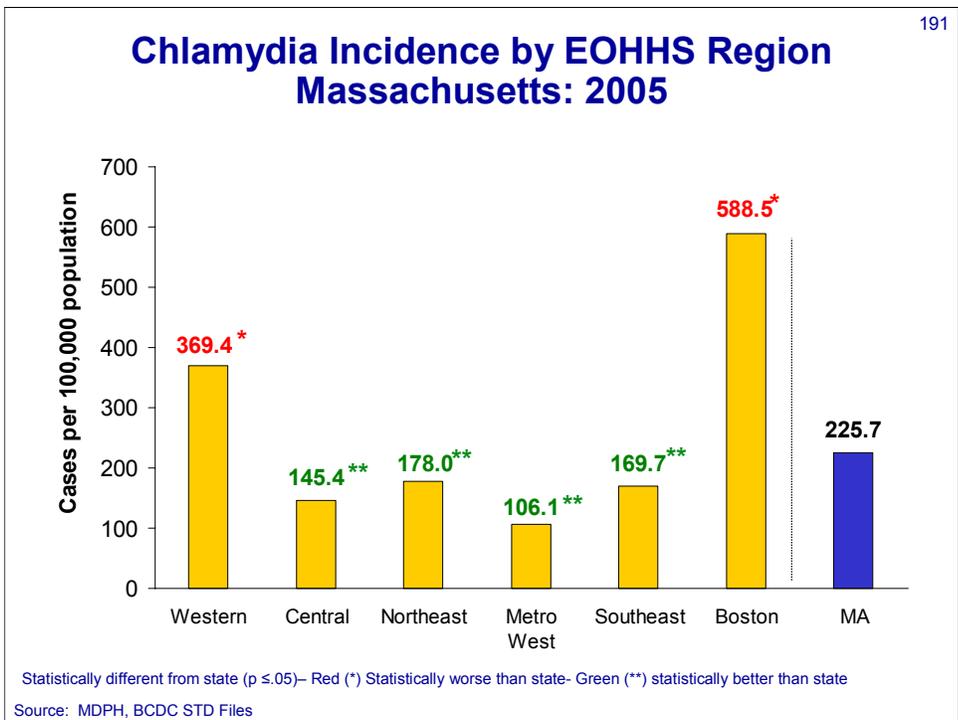
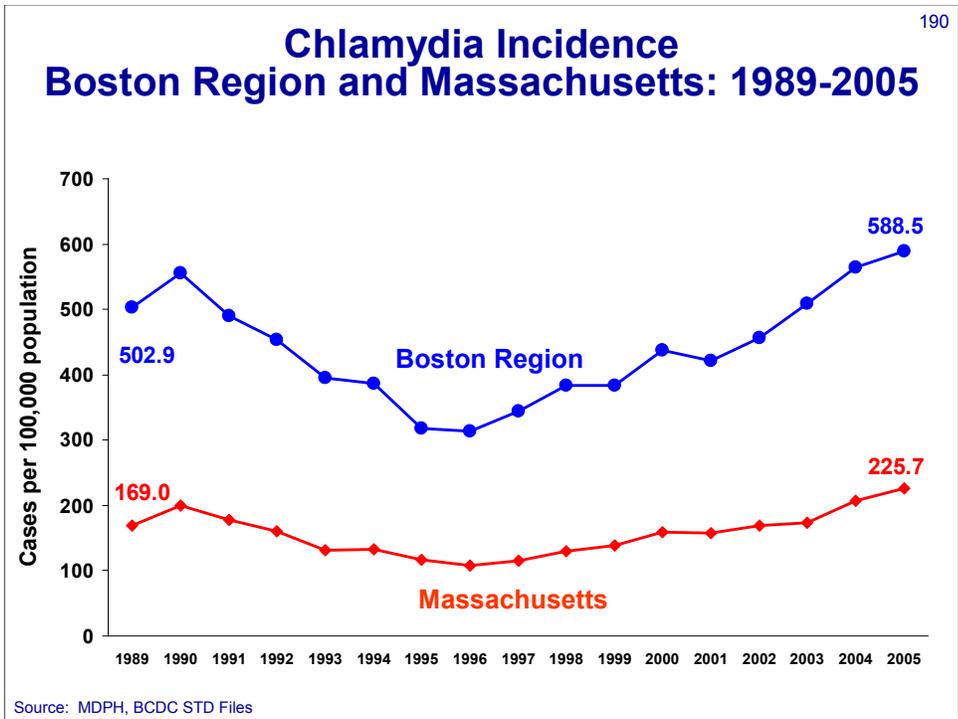
Statistically different from state (p ≤ .05)– Red (*) Statistically worse than state- Green (**) statistically better than state
Age-adjusted to the 2000 US standard population.
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

Summary HIV/AIDS Indicators by EOHHS Region

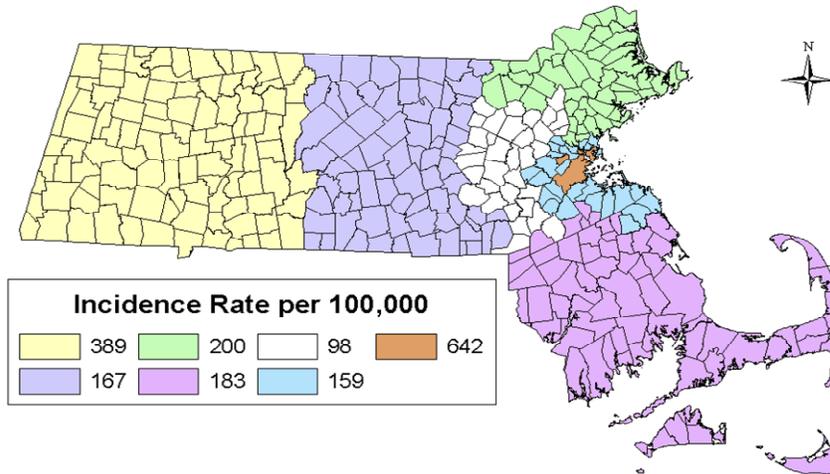
Indicator	MA Total	Western	Central	Northeast	Metro West	South East	Boston
Crude rate, per 100,000							
Persons living with HIV (2005)	247.1	221.4	167.5	179.4	133.1	170.9	729.2
HIV Incidence(2005)	12.6	11.2	8.3	10.3	8.5	7.7	38.8
Persons living with AIDS (2005)	133.2	107.7	93.5	100.0	71.8	95.2	395.7
AIDS Incidence (2005)	8.0	7.3	6.4	6.1	5.0	6.3	21.1
HIV/AIDS Mortality (2003-2005)	3.1	4.4	2.9	2.4	1.4	2.5	8.5

■ Better Outcome (significantly different from state)
 ■ Worse Outcome (significantly different from state)

INFECTIOUS DISEASES

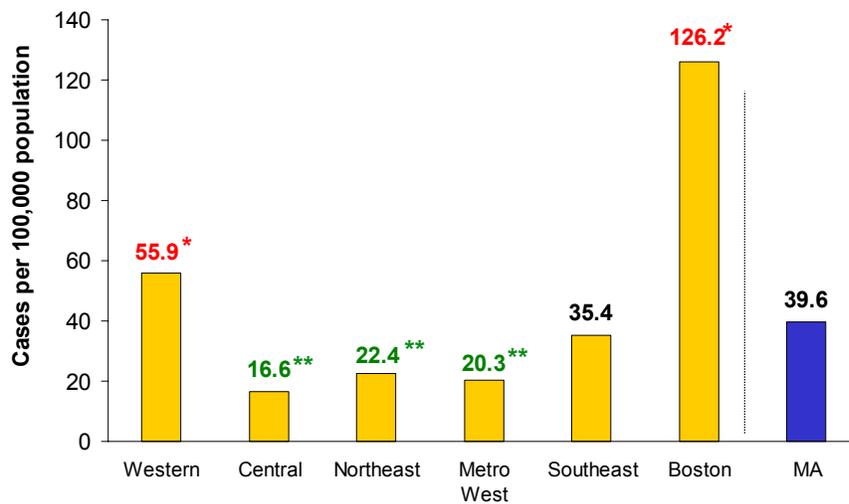


Chlamydia Incidence Rate by Emergency Preparation Region, 2006



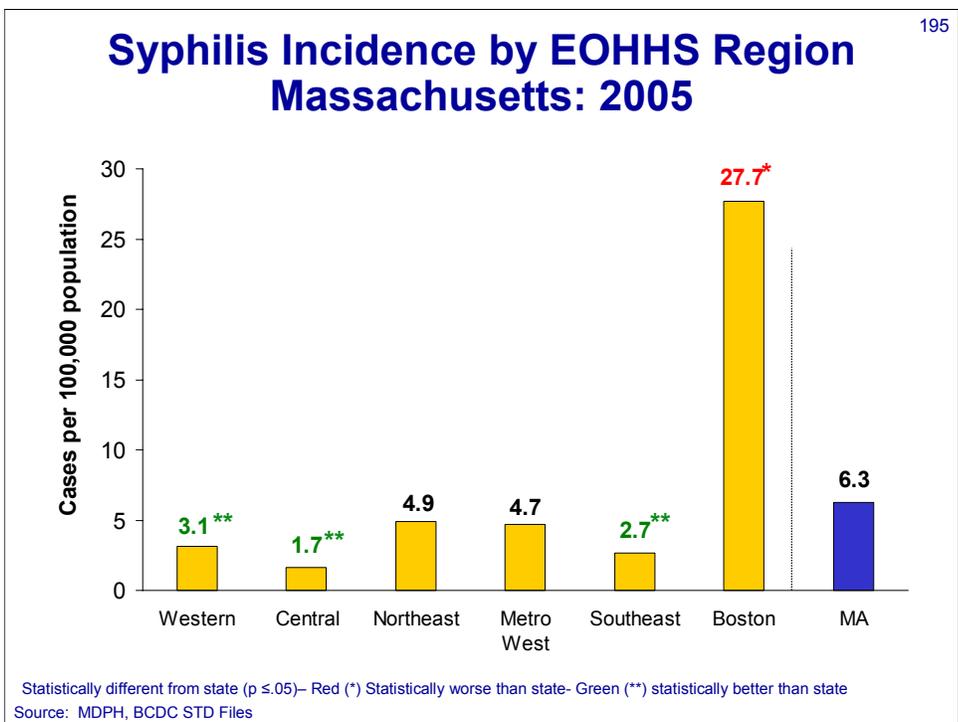
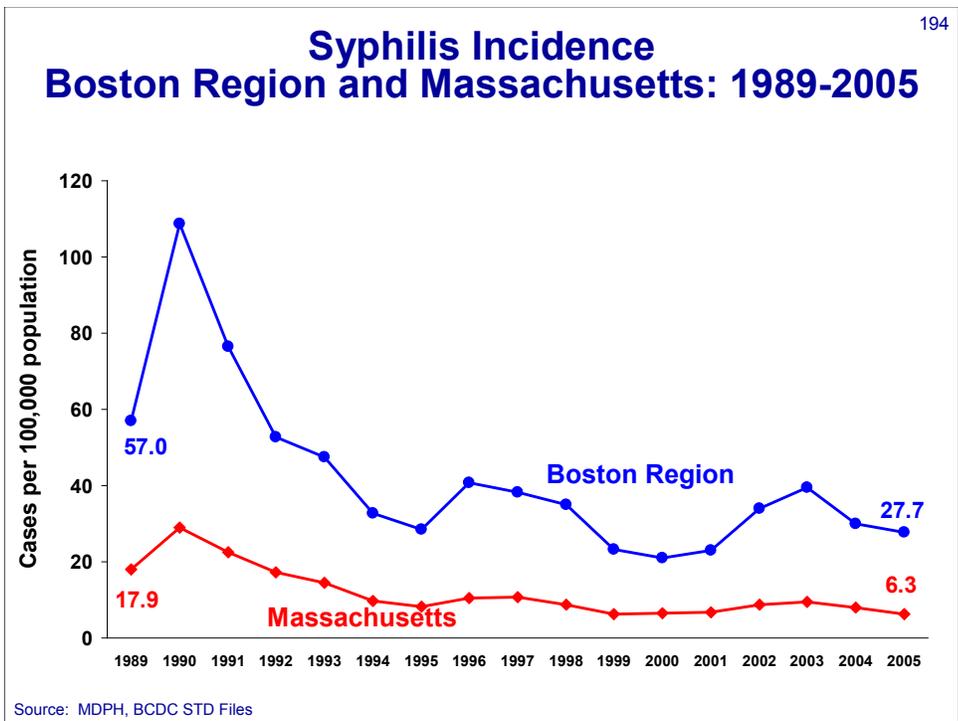
Source: MDPH, BCDC STD Files

Gonorrhea Incidence by EOHHs Region Massachusetts: 2005

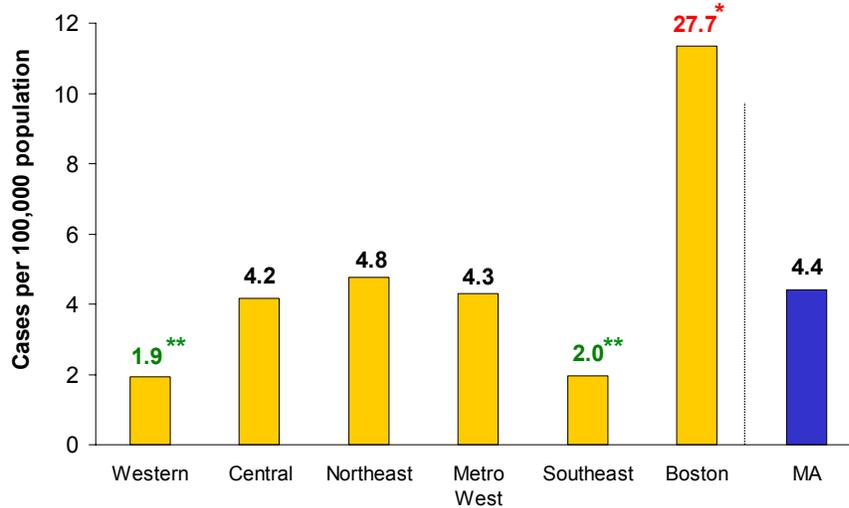


Statistically different from state (p ≤ .05)– Red (*) Statistically worse than state- Green (**) statistically better than state

Source: MDPH, BCDC STD Files

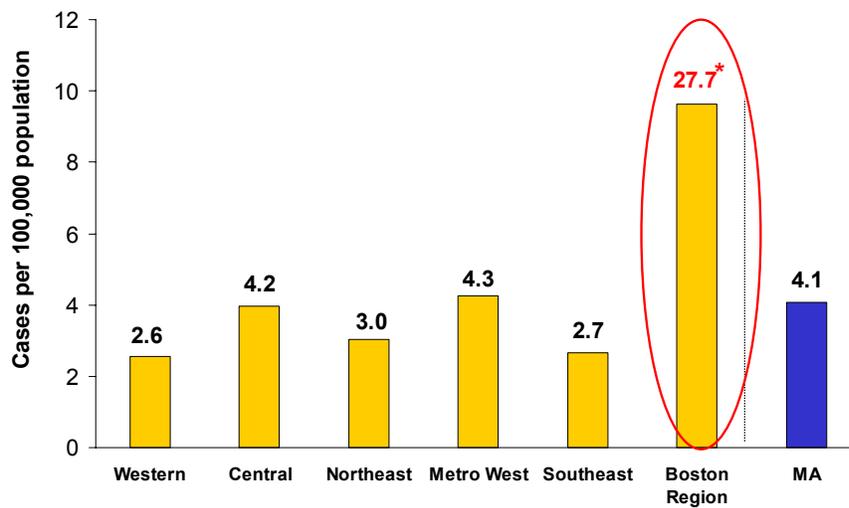


Tuberculosis Incidence by EOHHS Region Massachusetts: 2004



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
Source: MDPH Bureau of Communicable Disease Control, ISIS

Tuberculosis Incidence by EOHHS Region Massachusetts: 2006



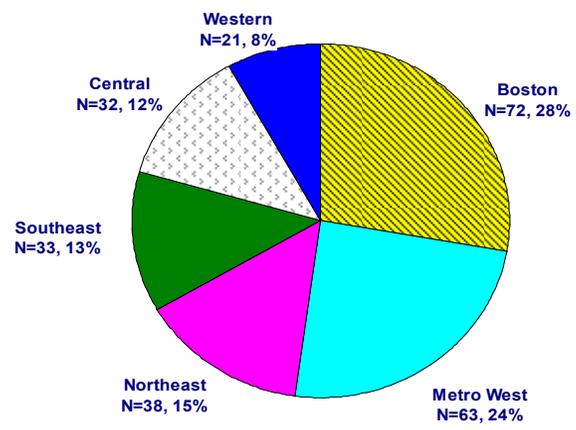
Statistically different from State ($p \leq .05$) Red (*) = Statistically worse; Green (**) = Statistically better
Source: MDPH Bureau of Communicable Disease Control, ISIS

Confirmed Tuberculosis Cases by Race/Ethnicity and EOHHS Region Massachusetts: 2006

EOHHS Region	White non-Hispanic	Black non-Hispanic	Asian/Pacific Islander	Hispanic
West	<5	<5	8	<5
Central	<5	6	14	10
Northeast	5	6	19	6
Metro Boston	21	20	21	13
Boston	8	26	19	8
Southeast	14	9	<5	8

Source: MDPH Bureau of Communicable Disease Control, ISIS

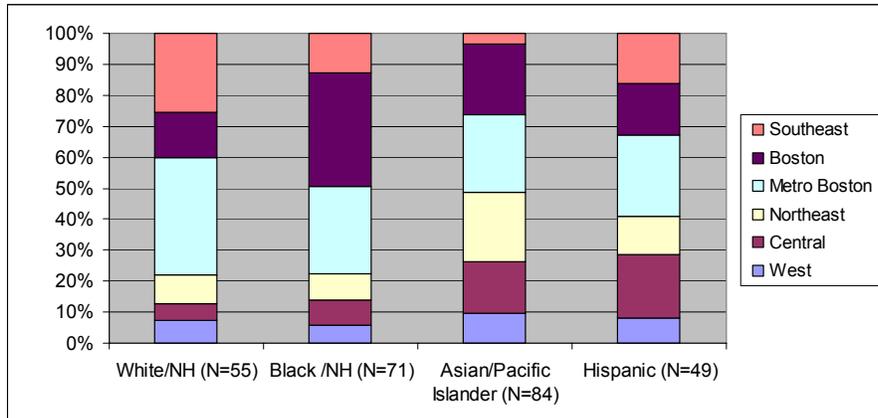
Percent of Confirmed Tuberculosis Cases by EOHHS Region Massachusetts: 2006 (N = 259)



Source: MDPH Bureau of Communicable Disease Control, ISIS

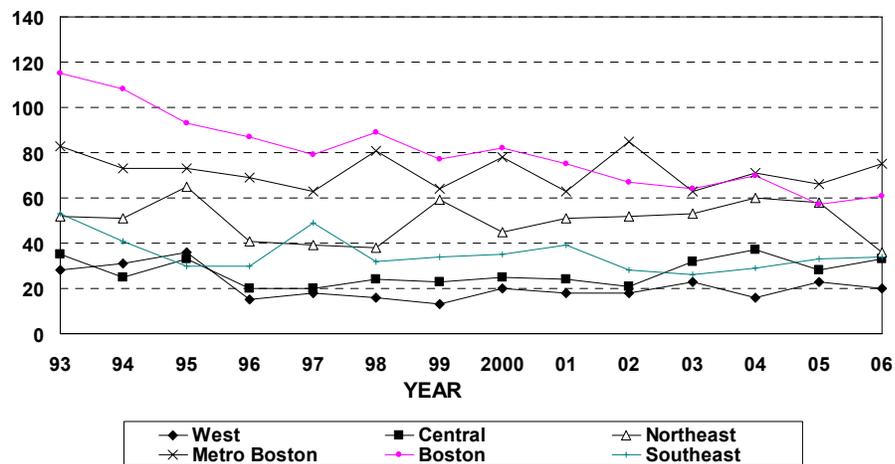
Percent of Confirmed Tuberculosis Cases by Race/Ethnicity and EOHHS Region Massachusetts: 2006

200



Source: MDPH Bureau of Communicable Disease Control, ISIS

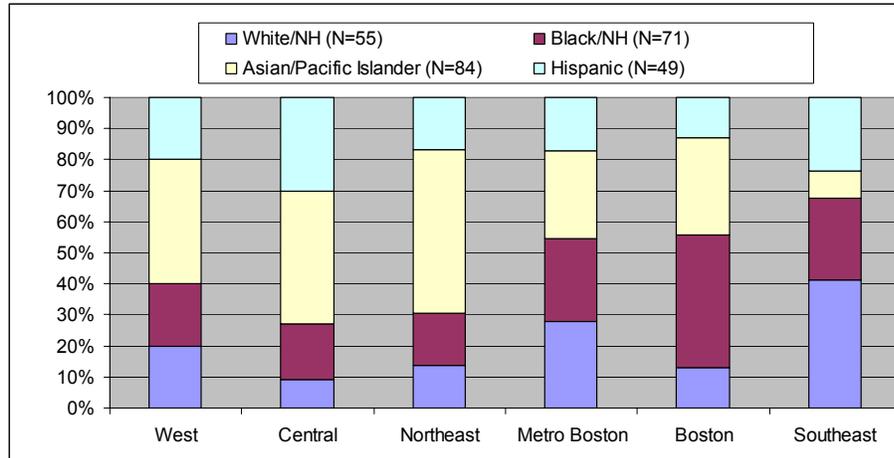
Tuberculosis Cases by EOHHS Region Massachusetts: 1993-2006



Source: MDPH Bureau of Communicable Disease Control, ISIS

Percent of Confirmed Tuberculosis Cases by Race/Ethnicity and EOHHS Region Massachusetts: 2006

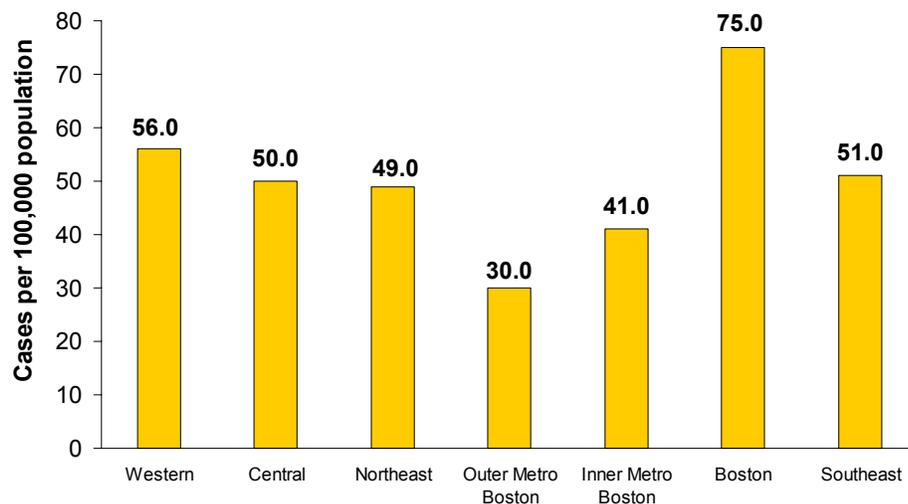
202



Source: MDPH Bureau of Communicable Disease Control, ISIS

Hepatitis C Average Incidence Rates by EOHHS Region, Massachusetts: 1992-2006¹

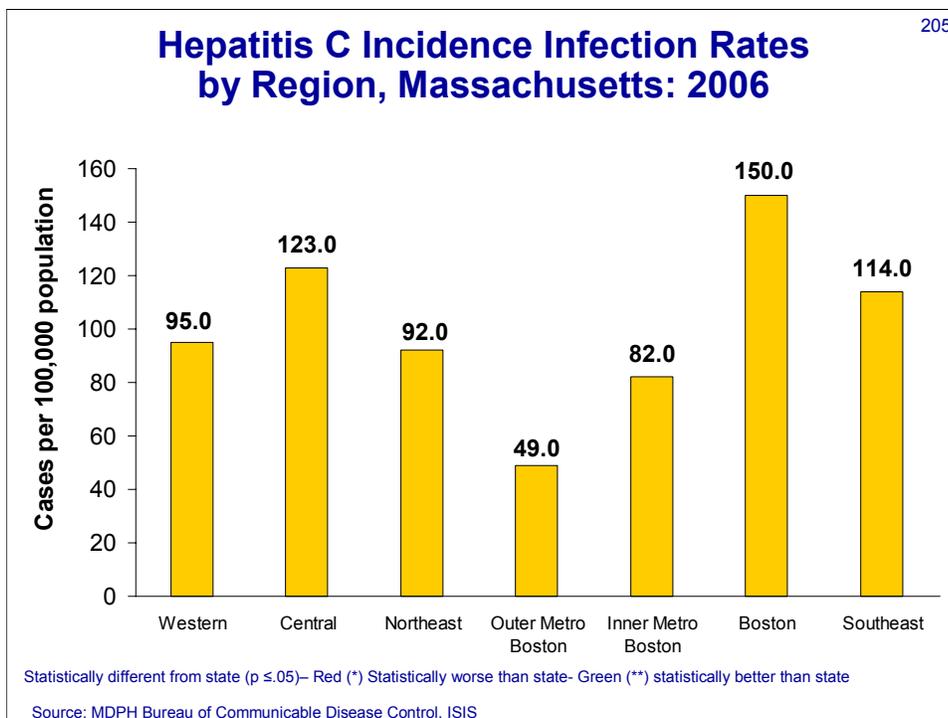
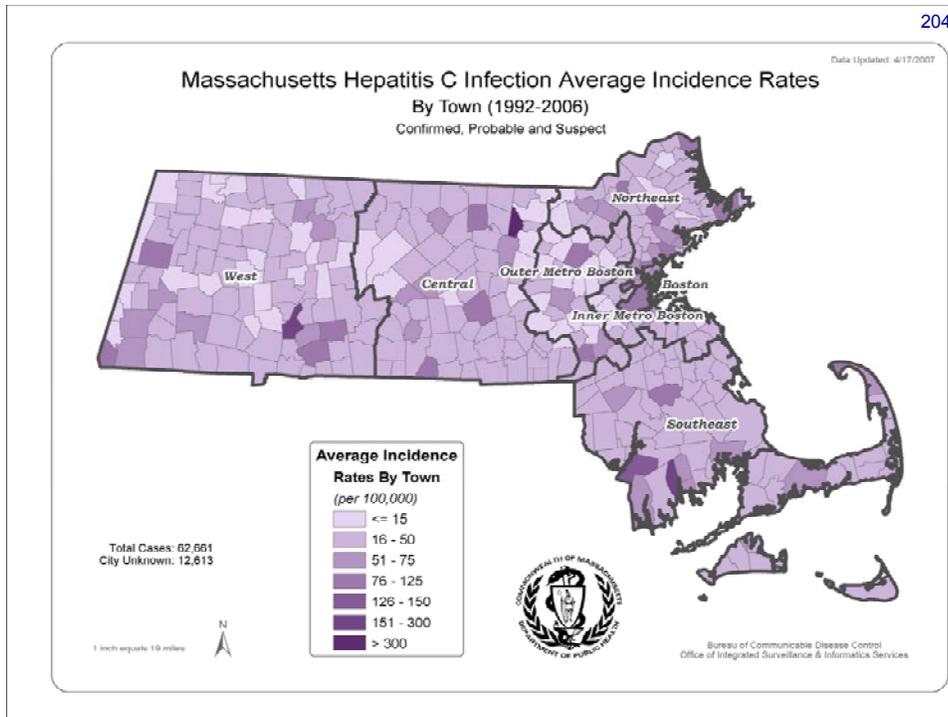
203

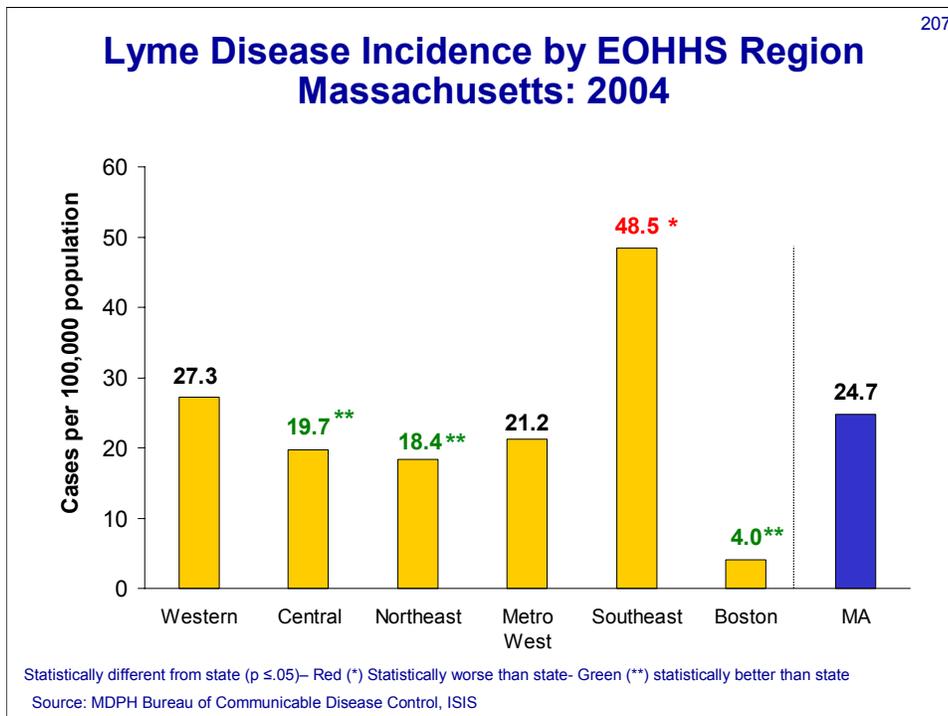
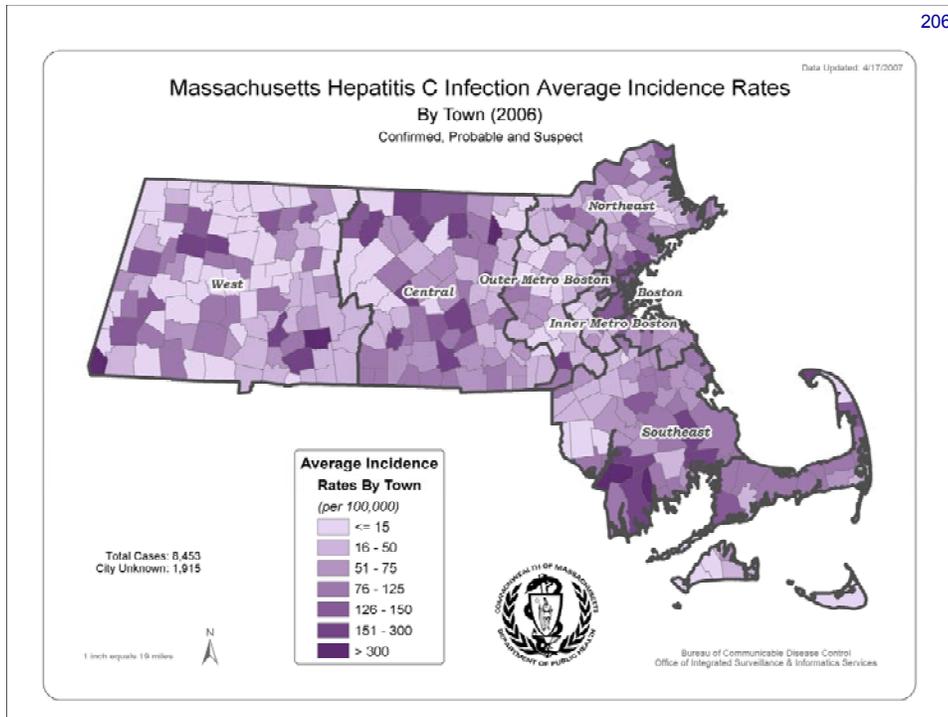


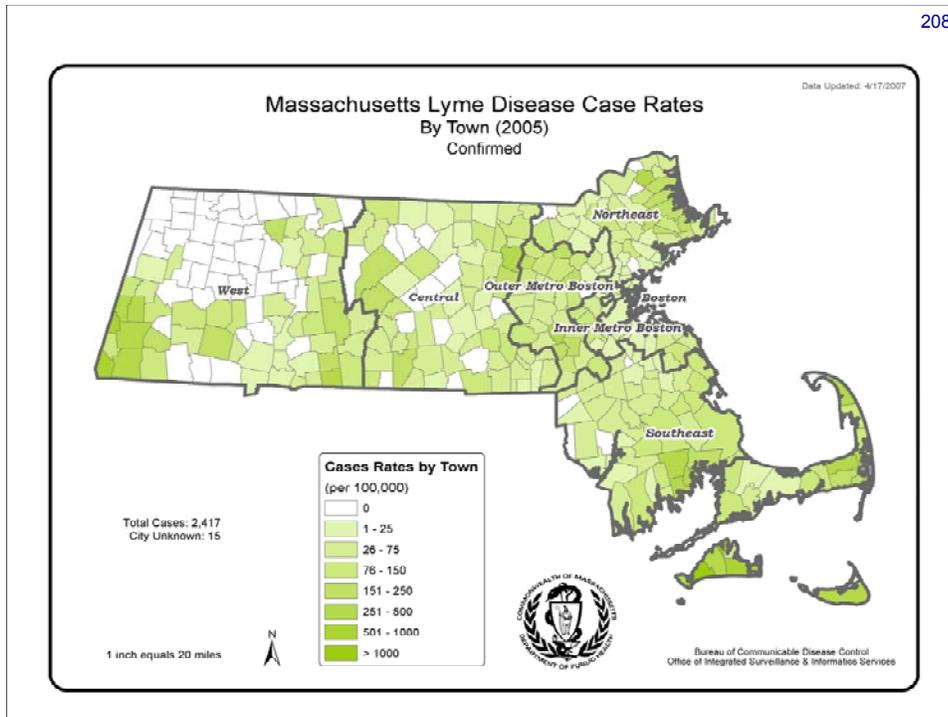
¹ Data as of March 17, 2007

Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state

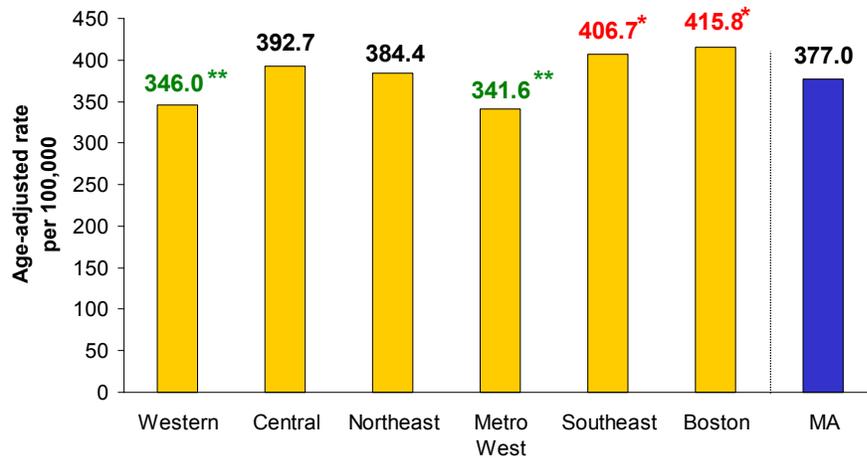
Source: MDPH Bureau of Communicable Disease Control, ISIS







Pneumonia/Influenza Hospital Discharges by EOHHS Region Massachusetts: 2005



Statistically different from state ($p \leq .05$) – Red (*) Statistically worse than state- Green (**) statistically better than state

Source: Division of Health Care Finance and Policy. Calendar Year 2005. Inpatient Hospital Discharge Database

Hospital Discharge Rates for Pneumonia/Influenza Cities in Boston Region & Massachusetts: 2003-2005



Statistically different from state (p ≤ .05)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Age-adjusted to the 2000 US standard population.
 Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Inpatient Hospital Discharge Database

Summary Infectious Disease Indicators by EOHHS Region

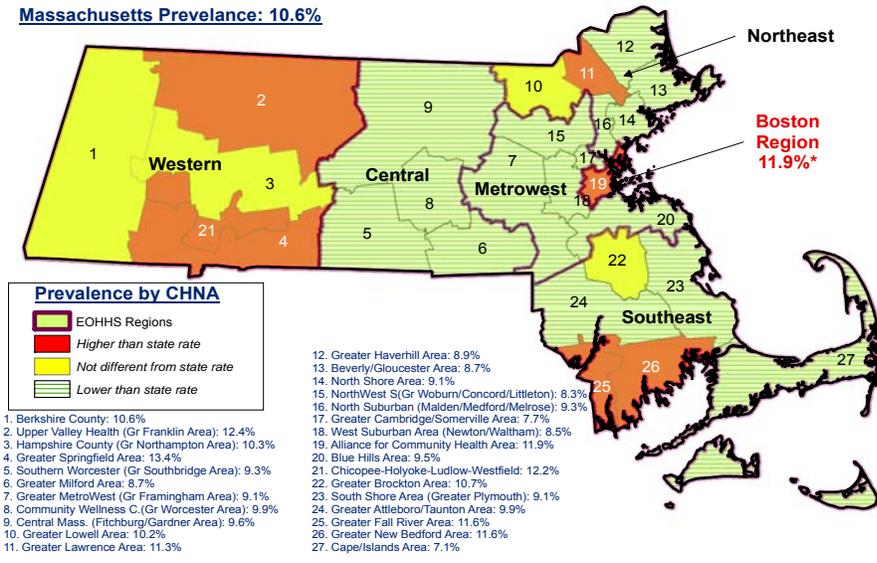
Indicator	MA Total	Western	Central	North East	Metro West	Southeast	Boston
Chlamydia Incidence (crude rates, 2005)	225.7	369.4	145.4	178.0	106.1	169.7	588.5
Gonorrhea Incidence (crude rates, 2005)	39.6	55.9	16.6	22.4	20.3	35.4	126.2
Syphilis Incidence (crude rates, 2005)	6.3	3.1	1.7	4.9	4.7	2.7	22.7
Tuberculosis Incidence (crude rates, 2006)	4.1	2.5	4.0	3.0	4.3	2.7	9.6
Lyme Disease Incidence (crude rates, 2004)	24.7	27.3	19.7	18.4	21.2	48.4	4.0
Average Hep C Incidence Infection (crude rates, 2006)	114.0	95.0	123.0	92.0	49.0	82.0	150.0
Pneumonia/ Influenza Hospital Discharges (age-adjusted, 2005)	377.0	346.0	392.7	384.4	341.5	406.7	415.8

Better Outcome (significantly different from state)
 Worse Outcome (significantly different from state)

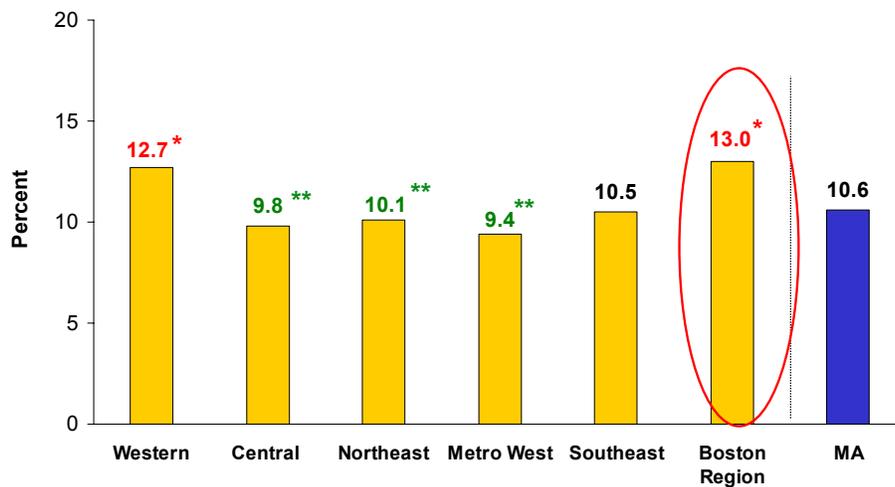
ASTHMA

Asthma Prevalence for School Children, Grades K-8 by Community Health Network Areas (CHNA) within EOHHS Regions Massachusetts Academic Year 2004-05

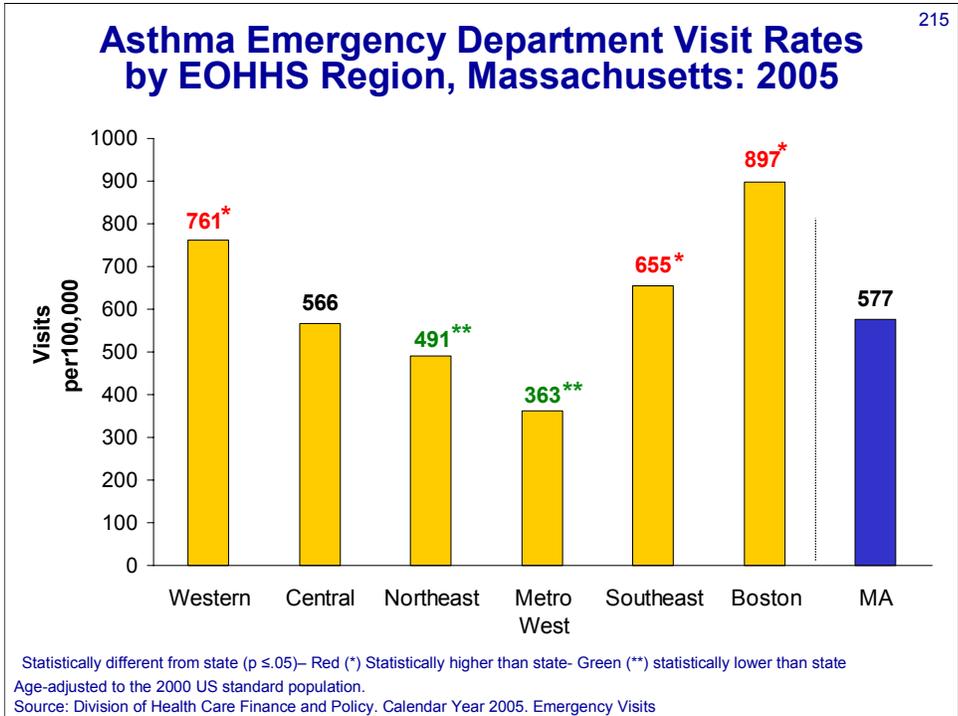
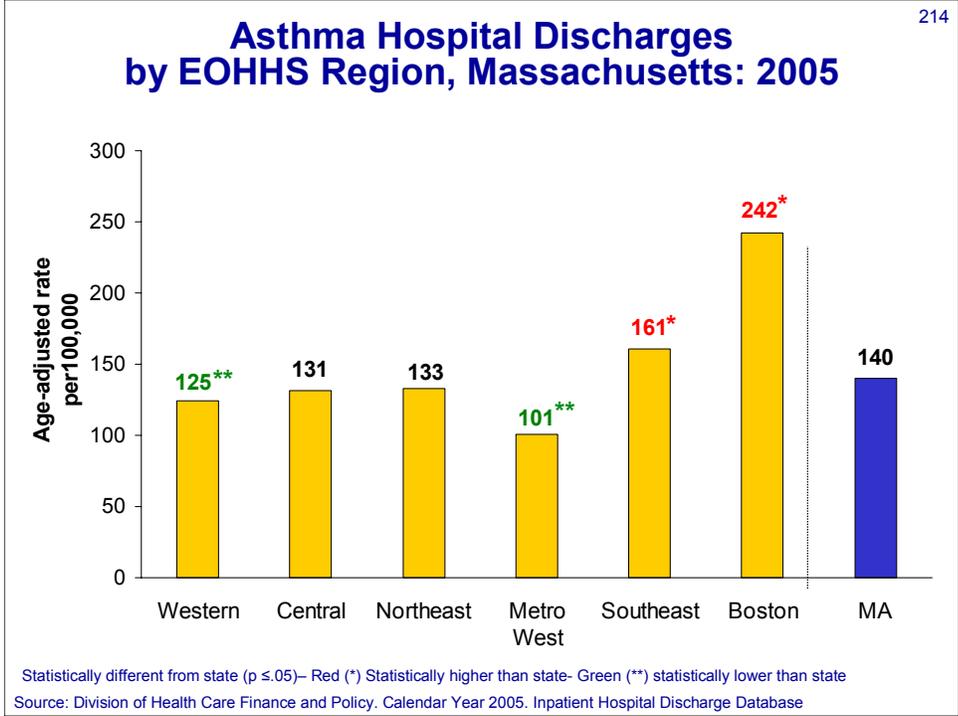
Massachusetts Prevalence: 10.6%



Pediatric Asthma Prevalence Among School Children, Grades K-8 by EOHHS Region Massachusetts: 2005-2006

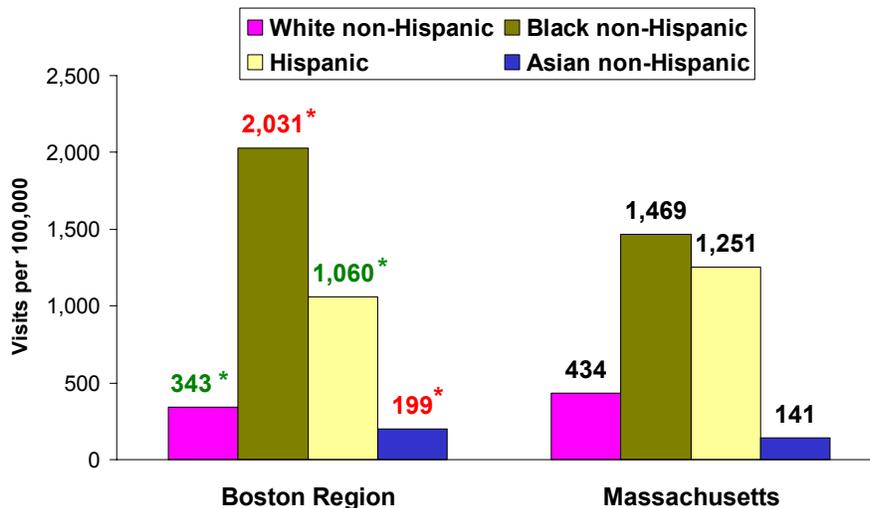


Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Source: MDPH, Center for Environmental Health, Pediatric Asthma Surveillance (2005-2006)



Emergency Department Visit Rates for Asthma by Race/Ethnicity Boston Region and Massachusetts: 2005

216

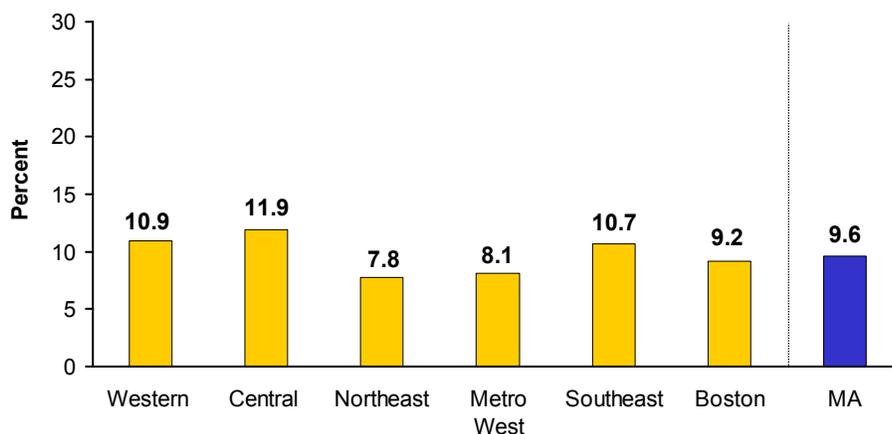


Statistically different from state ($p \leq .05$)— Red (*) Statistically higher than state- Green (**) statistically lower than state
Age-adjusted to the 2000 US standard population.

Source: Division of Health Care Finance and Policy. Calendar Year 2005. Emergency Department Visits

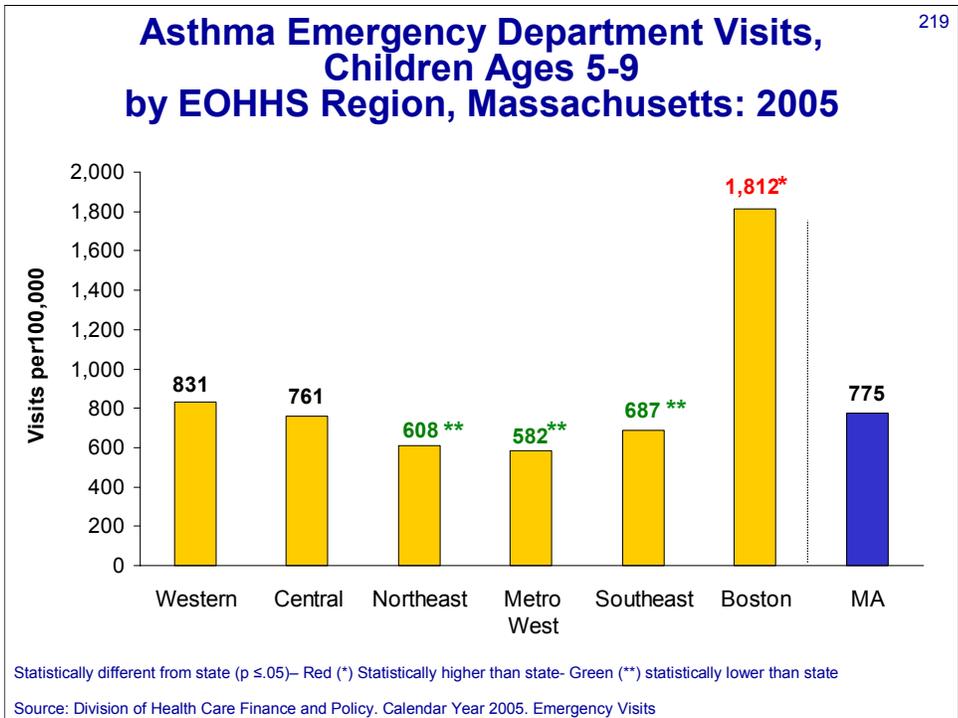
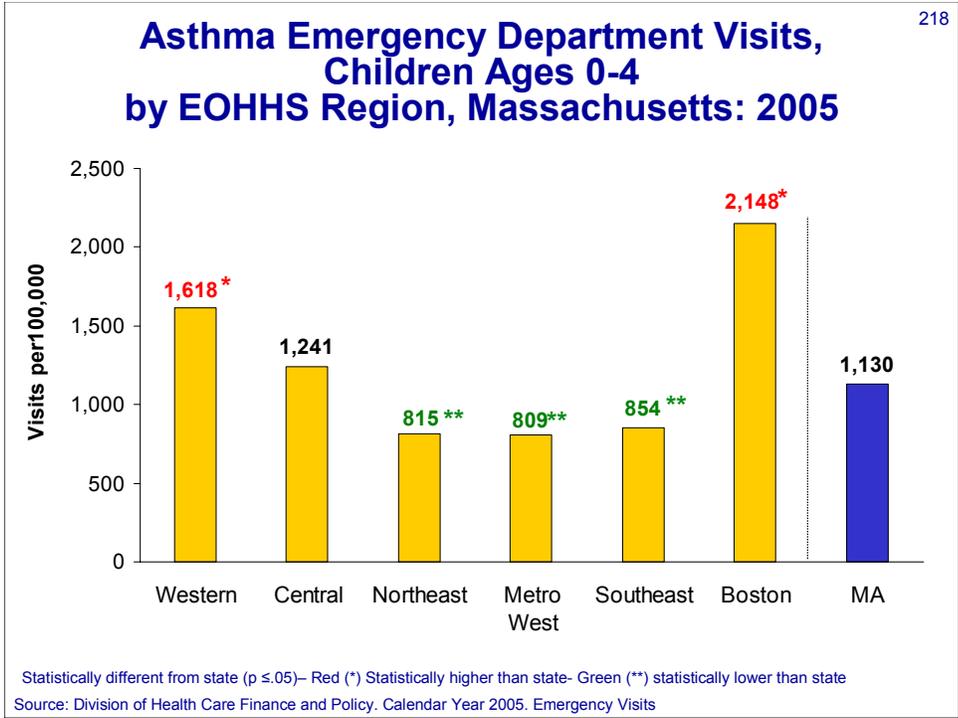
Adults who Currently have Asthma by EOHHS Region, Massachusetts: 2005

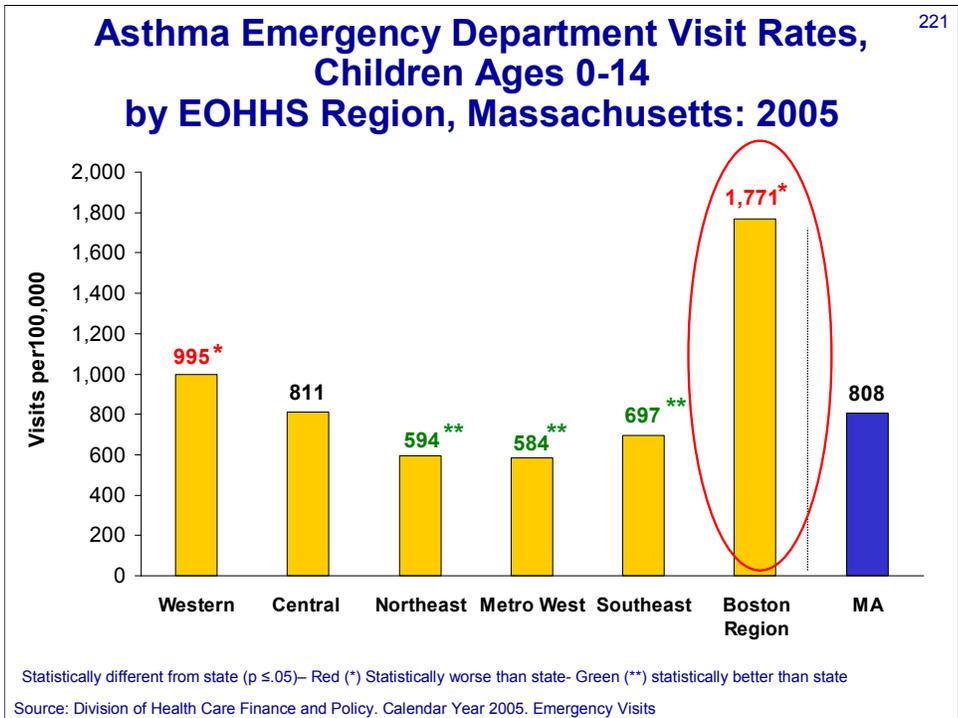
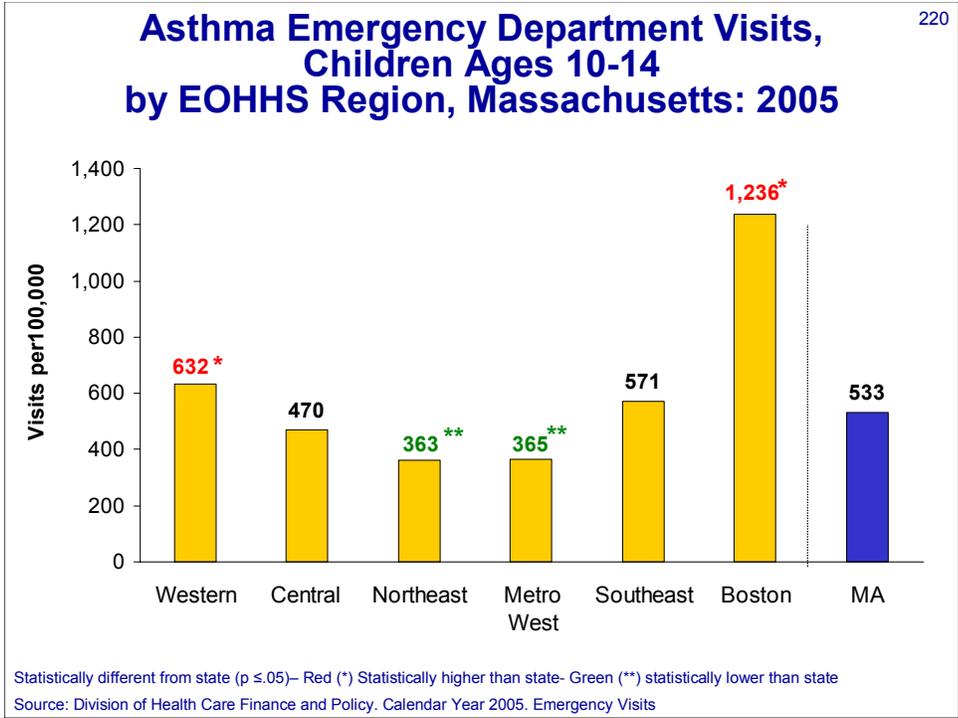
217



Statistically different from state ($p \leq .05$)— Red (*) Statistically higher than state- Green (**) statistically lower than state

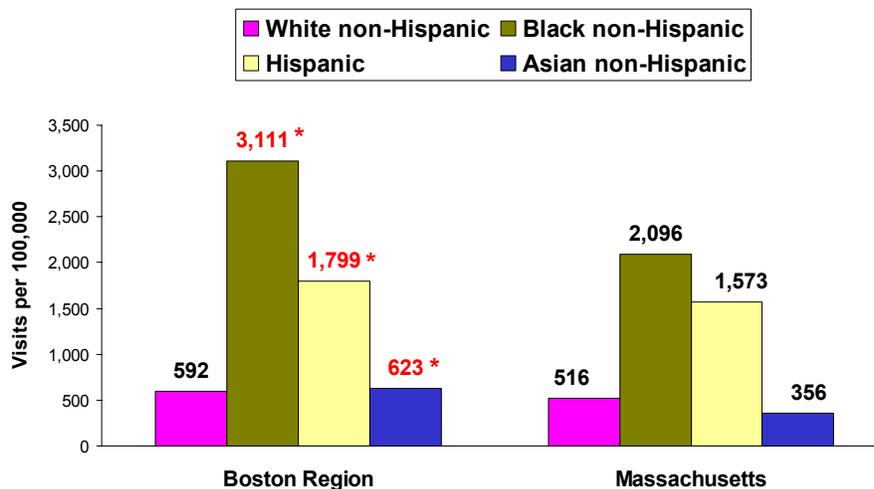
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program





Asthma Emergency Department Visit Rates, Children Ages 0-14 Boston Region and Massachusetts: 2005

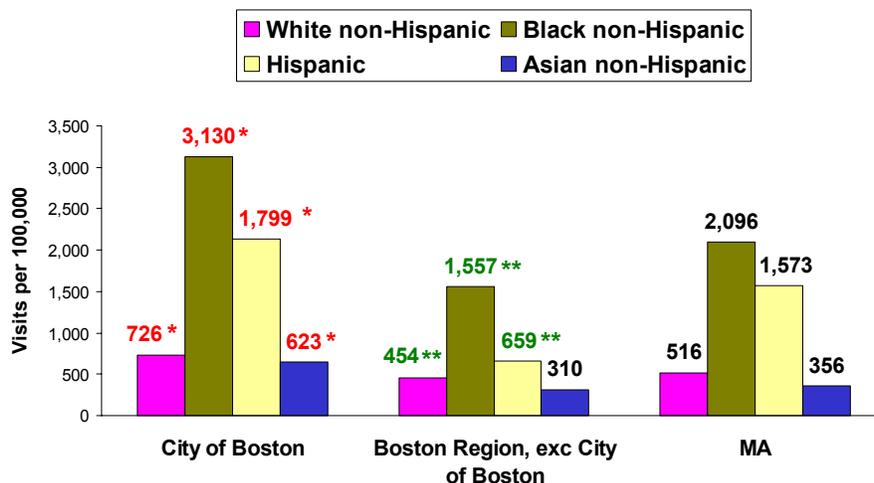
222



Statistically different from state ($p \leq .05$)– Red (*) Statistically higher than state- Green (**) statistically lower than state
Source: Division of Health Care Finance and Policy. Calendar Year 2005. Emergency Department Visits

Asthma Emergency Visit Rates by Race/Ethnicity Children Ages 0-14 Boston Region and Massachusetts: 2003-2005

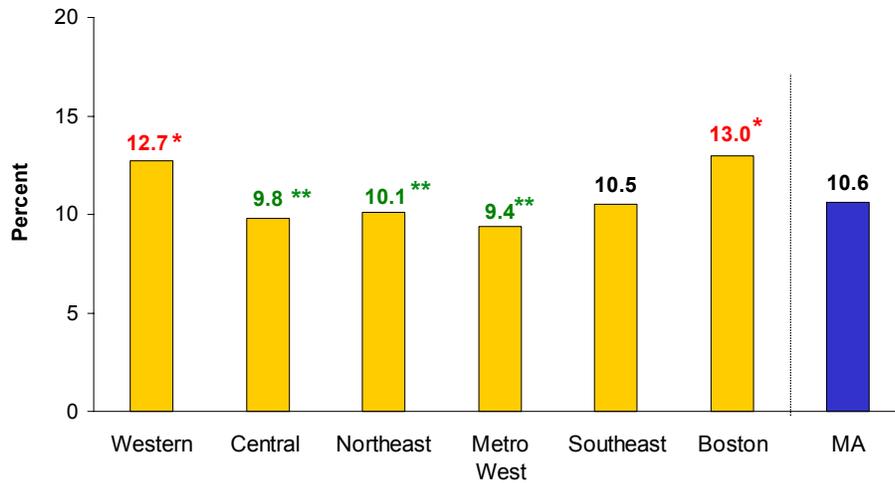
223



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
Source: Division of Health Care Finance and Policy. Calendar Year 2005. Emergency Department Visits

Pediatric Asthma Prevalence Among School Children, Grades K-8 by EOHS Region Massachusetts: 2005-2006

224



Statistically different from state ($p \leq .05$)— Red (*) Statistically higher than state- Green (**) statistically lower than state
 Source: MDPH, Center for Environmental Health, Pediatric Asthma Surveillance (2005-2006)

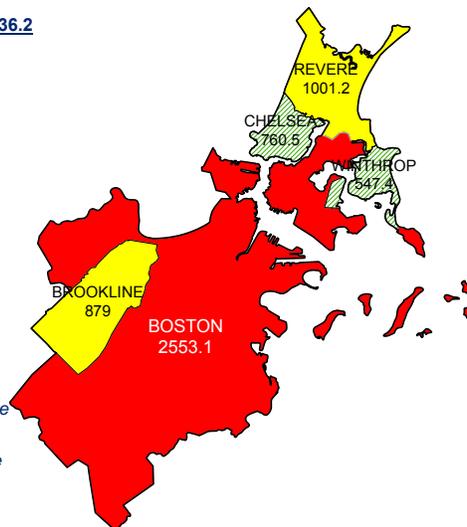
Pediatric Asthma Emergency Visit Rates by Towns Among Children Ages <5 Boston Region - Massachusetts 2004-2005

225

Massachusetts State Total Rate: 1,136.2

2004-05 Children Ages<5 ED Visit Rates per 100,000

- Significantly higher than state rate
- Not different from state rate
- Significantly lower than state rate



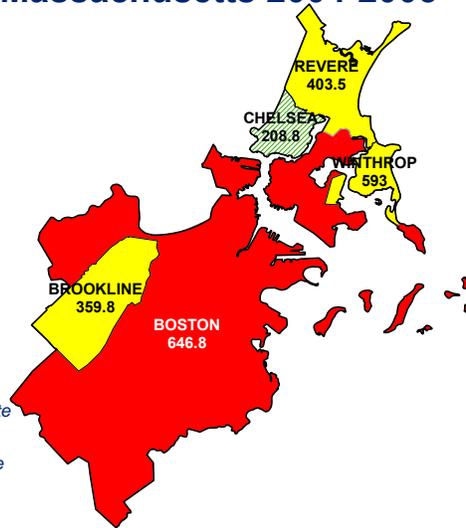
Source: Division of Health Care Finance and Policy. Calendar Year 2005. Emergency Visits

Pediatric Asthma Hospitalization Rates by Towns Among Children Ages <5 Boston Region - Massachusetts 2004-2005

Massachusetts State Total: 337.5

Hospitalization Rates by Towns
per 100,000

- Significantly higher than state rate
- Not different from state rate
- Significantly lower than state rate



Source: Division of Health Care Finance and Policy. Calendar Year 2005. Hospital Discharges

Summary Asthma Indicators by EOHHS Region, Massachusetts: 2005

Indicator	MA Total	Western	Central	Northeast	Metro West	South East	Boston
Asthma Hospital Discharges (age-adjusted per100,000)	140.1	125.0	131.5	132.7	100.9	160.9	241.9
Asthma ER Visits (age-adjusted per100,000)	576.9	760.9	565.9	491.4	363.0	654.5	897.1
% Adults who currently have asthma (2005)	9.6	10.9	11.9	7.8	8.1	10.7	9.2
Asthma ER Visits Ages 0-14 (age-adjusted per100,000)	808	995	811	594	584	697	1,771

- Statistically lower than state
- Statistically higher than state

Summary Asthma Indicators by EOHHS Region, Massachusetts: 2005

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Indicator	MA Total	Western	Central	Northeast	Metro West	South East	Boston
Asthma ER Visits Ages 0-4 (age adjusted per100,000)	1,130	1,618	1,241	815	809	854	2,148
Asthma ER Visits Ages 5-9 (age adjusted per100,000)	775	831	761	608	582	687	1,812
Asthma ER Visits Ages 10-14 (age adjusted per100,000)	533	632	470	363	365	571	1,236
Pediatric Asthma Prevalence (2005-2006)	10.6	12.7	9.8	10.1	9.4	10.5	13.0

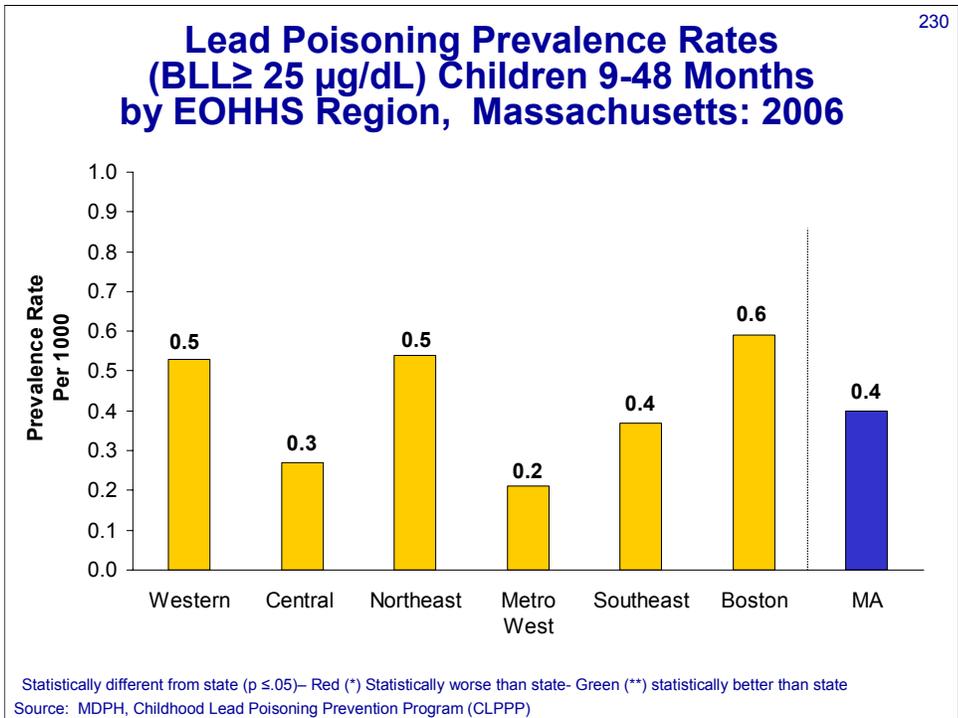
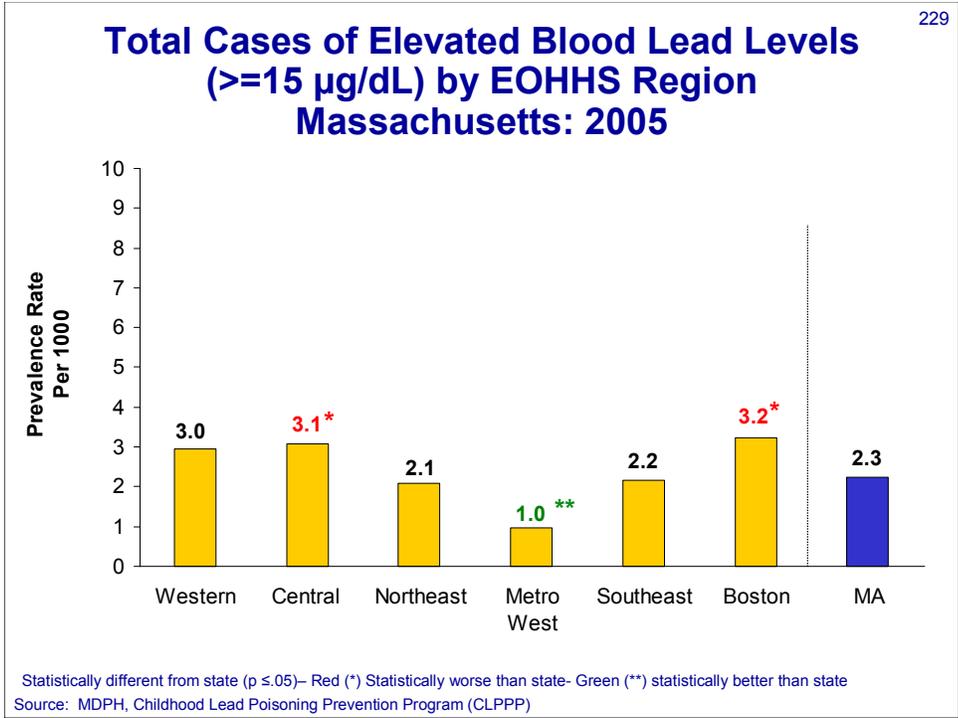


Statistically lower than state

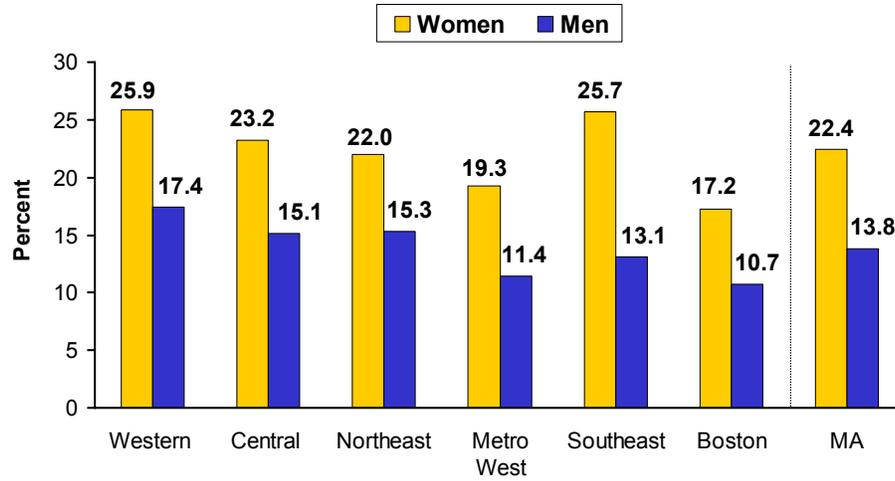


Statistically higher than state

OTHER HEALTH INDICATORS

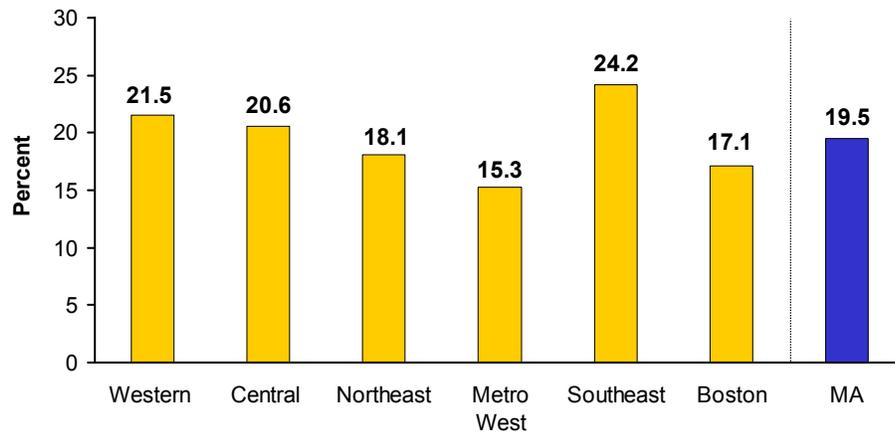


Adults who Report Experiencing Intimate Partner Violence by EOHHS Region and Gender Massachusetts: 2005 ²³¹



Statistically different from state ($p \leq .05$) – Red (*) Statistically worse than state- Green (**) statistically better than state
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

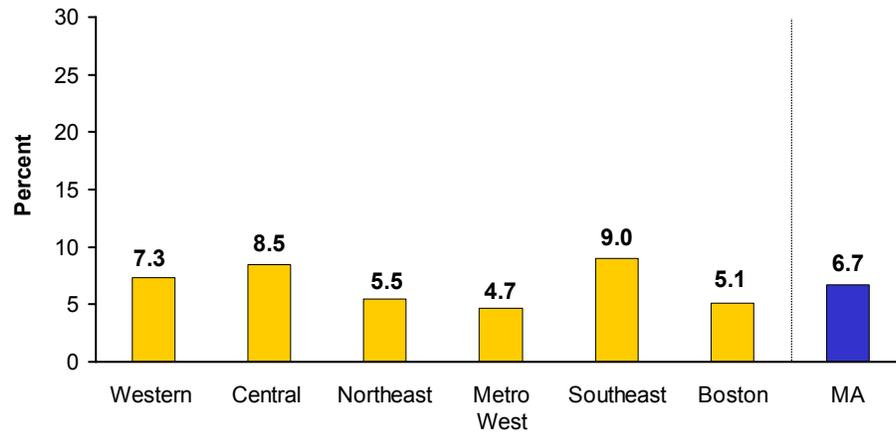
Adults who Report Having a Disability by EOHHS Region, Massachusetts: 2005 ²³²



Statistically different from state ($p \leq .05$) – Red (*) Statistically worse than state- Green (**) statistically better than state
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

Adults who Report Having a Disability and needing help with activities EOHHS Region, Massachusetts: 2005

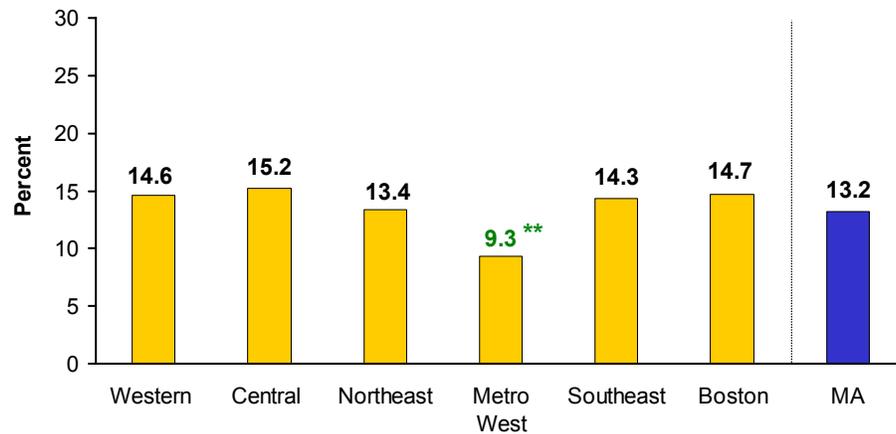
233



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

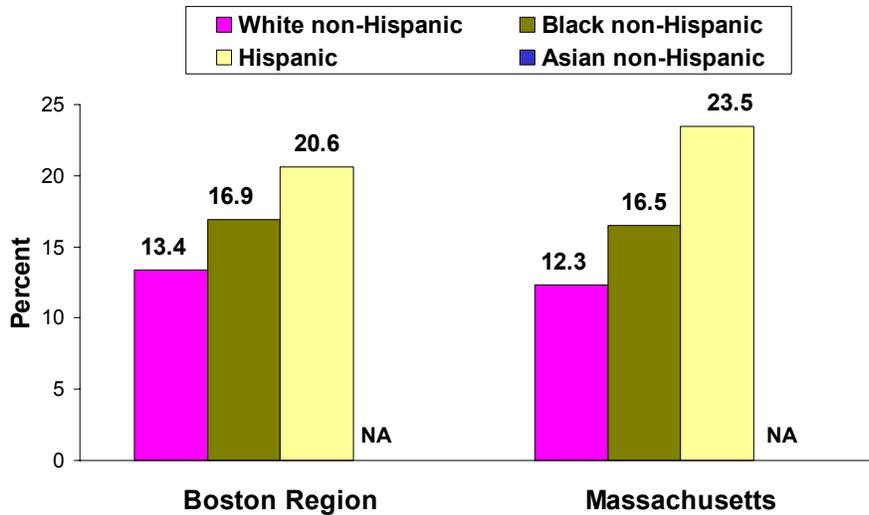
Adults with Fair or Poor Health by EOHHS Region, Massachusetts: 2005

234



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

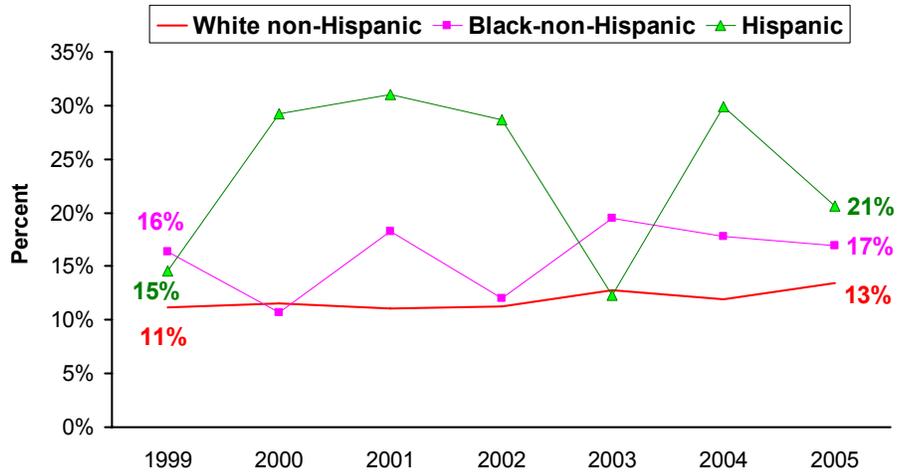
Adults who Currently Report Fair or Poor Health by Race and Ethnicity Boston Region and Massachusetts: 2005 ²³⁵



Statistically different from state ($p \leq .05$)— Red (*) Statistically worse than state- Green (**) statistically better than state

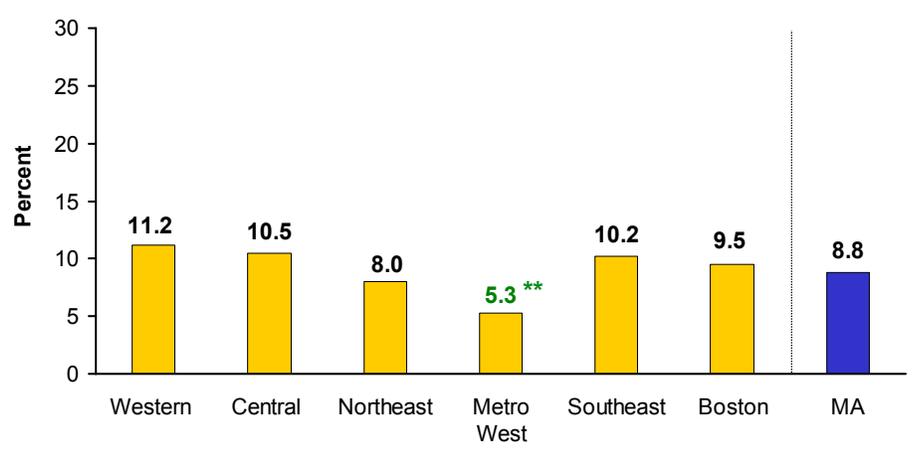
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

Adults who Currently Report Fair or Poor Health by Race and Ethnicity Boston Region: 1999-2005 ²³⁶



Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

Adults with Poor Mental Health for 15 or more days in Past Month by EOHHs Region Massachusetts: 2005



Statistically different from state (p ≤ .05)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

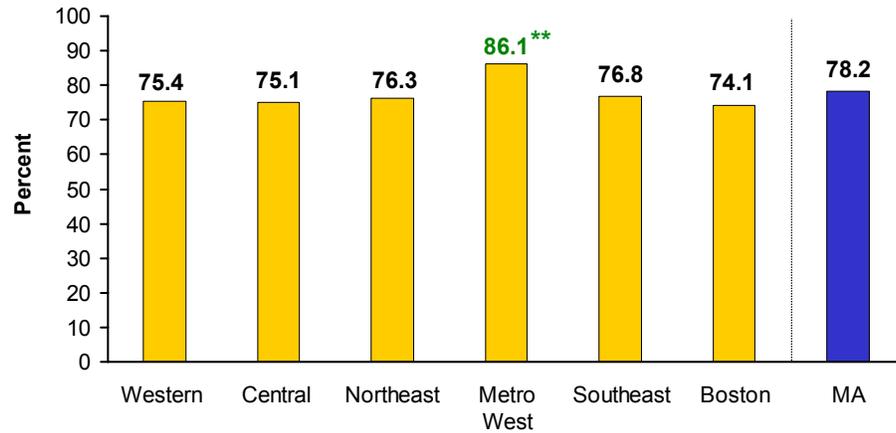
Summary Other Health Indicators by EOHHs Region

Indicator	MA Total	Western	Central	North East	Metro West	South East	Boston
% Fair or Poor Health (2005)	13.2	14.6	15.2	13.4	9.3	14.3	14.7
Cases of Elevated Blood Lead levels (Percent of All Children Screened Per 1000, 2005)	2.3	2.9	3.1	2.1	1.0	2.2	3.2
% Visited Dentist Past Year (2004)	78.2	75.4	75.1	76.3	86.1	76.8	74.1
% 6+ Teeth Missing (2004)	15.1	18.8	15.4	16.5	10.5	17.4	13.7
% Poor Mental Health for 15 or more days in Past Month (2005)	8.8	11.2	10.5	8.0	5.3	10.2	9.5

Green Better Outcome (significantly different from state) Red Worse Outcome (significantly different from state)

Adults who Visit a Dentist in Past Year by EOHHS Region, Massachusetts: 2004

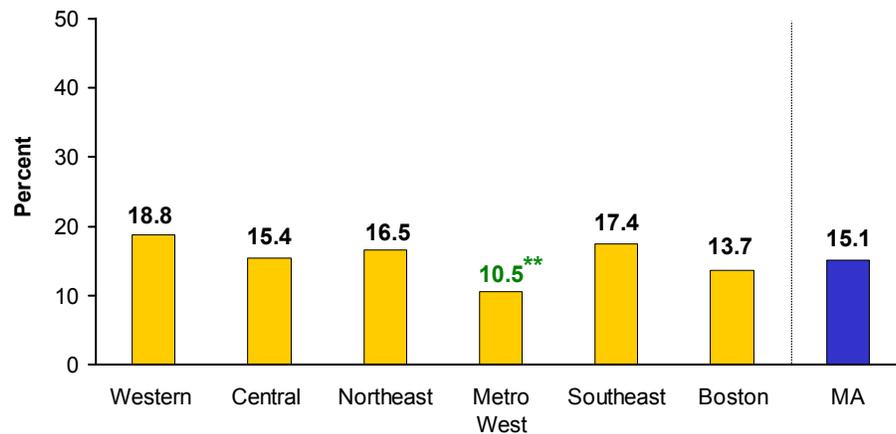
239



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

Adults who have lost 6 or more teeth to decay or disease by EOHHS Region, Massachusetts: 2004

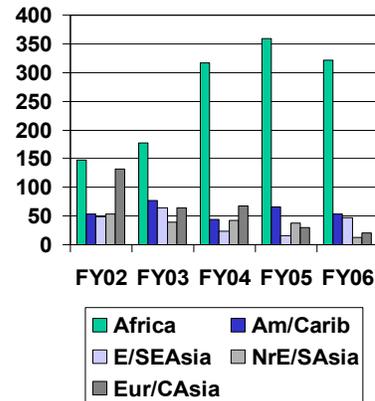
240



Statistically different from state ($p \leq .05$)– Red (*) Statistically worse than state- Green (**) statistically better than state
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Health Survey Program

Refugee Arrivals: Boston Region FY02-FY06

- 2,317 refugees resettled over 5 years
- Great diversity in population
- 40% age ≤ 19 at arrival
- Cities/Towns with largest numbers of arrivals: Boston, Chelsea, Cambridge, Revere



Refugee Health Assessment Findings Boston Region: FY02-FY06

- High rates of latent TB infection (LTBI)
 - 2,093 refugees tested: 48% positive
 - Intensive follow-up in partnership with TB clinics, local health and DPH to assure testing, evaluation and treatment
 - Rapid assessment identifies active disease early to prevent spread
- Risk of lead poisoning among refugee children
 - 60 refugee children identified with elevated blood lead levels at arrival (20% of children <7 years old)
 - Poor nutritional status puts children at risk of increased absorption of lead post-resettlement
- Need for bilingual, bicultural services to promote access to care

Summary Refugees by EOHHS Regions Massachusetts: 2002-2006

Indicator	Western	Central	North East	Metro West and Boston Regions
Refugee Arrivals	2,204	858	1,312	2,843
Largest Group	European and Central Asian	African	African and South East Asian	African
% refugees 19 years or less	44%	51%	45%	39%
Largest Cities	Greenfield, Springfield, West Springfield, Westfield	Worcester	Lowell, Lynn, Malden	Boston, Cambridge, Chelsea, Everett, Quincy, Revere, Somerville, Waltham
%TB Positive	41%	33%	44%	47%

Source: MDPH, Refugee and Immigrant Health Program and the Bureau of Communicable Disease Control office of Integrated Surveillance and Informatics

Premature Mortality Rate (PMR)¹

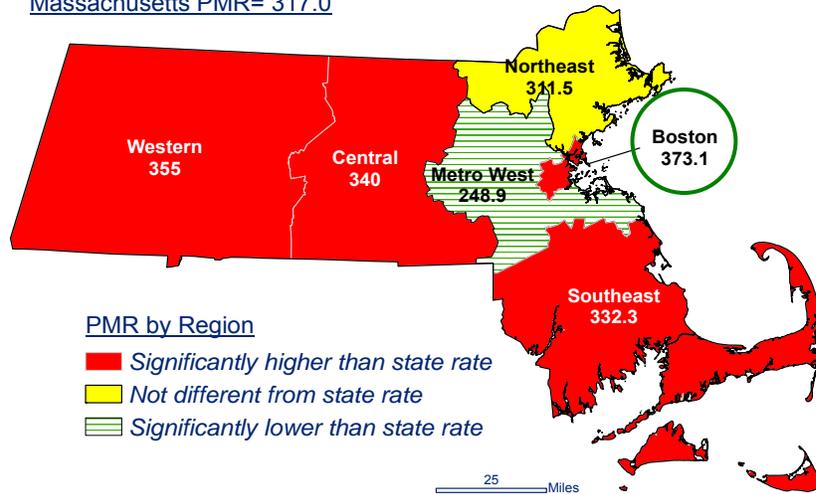
- **Definition**
 - deaths before age 75
- **Rationale**
 - two-thirds of deaths to persons ages 75+
 - vast majority of deaths to persons age 75+ are due to chronic conditions associated with aging
 - Focus on deaths to persons less than 75 years may be more preventable
- **Summary health statistic**
 - excellent measure to reflect the health status of a population
 - used as a health status indicator that can be used to focus prevention initiatives and target programs

¹ Rates are per 100,000 population. Age-adjusted to the 2000 US standard population under 75 years of age.

Source: Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation

Premature Mortality Rates (PMR) by Region Massachusetts: 2005

Massachusetts PMR= 317.0



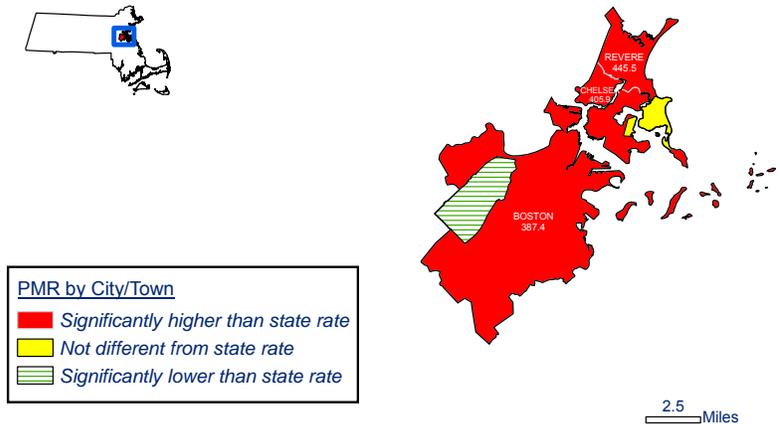
Rates are per 100,000 persons under 75 years of age, age-adjusted to the 2000 US standard population under 75 years of age.

Source: Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation

PMR- Boston Region by City/Town Massachusetts: 2005

Massachusetts PMR= 317.0

Boston Region PMR= 373.1

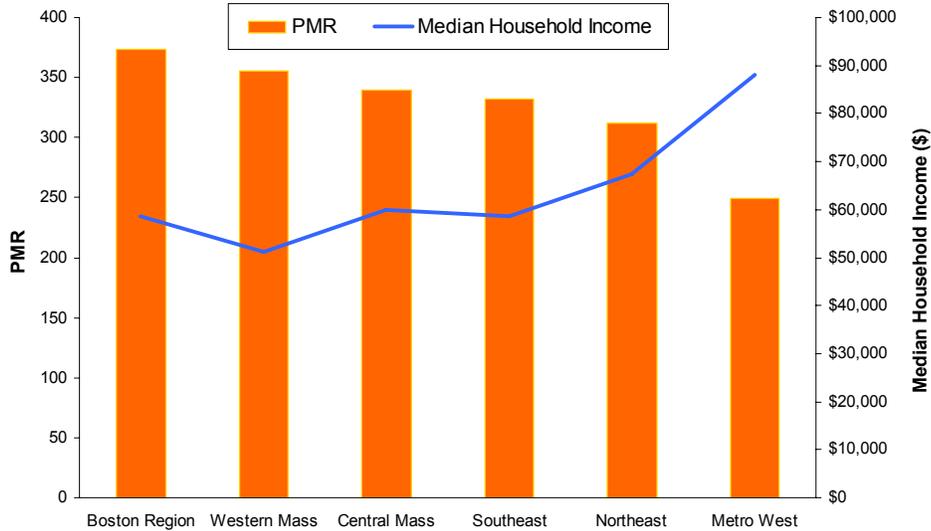


Rates are per 100,000 persons under 75 years of age, age-adjusted to the 2000 US standard population under 75 years of age.

Source: Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation

Median Household Income and PMR by EOHHS Regions, Massachusetts: 2005

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Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program
 State Median Household Income: \$66,365

Premature Mortality Rate (PMR) by EOHHS Region: 2005

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	PMR
Massachusetts	317.0
Western Region	355.0
Central Region	340.0
Northeast Region	311.5
Metrowest Region	248.9
Southeast Region	332.3
Boston Region	373.1

■ Better Outcome (significantly different from state)
 ■ Worse Outcome (significantly different from state)

Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

SUMMARY

Summary

Residents of large cities are disproportionately affected by, including the following:

Boston: Teen pregnancies, diagnosis of prostate cancer & HIV, hospitalizations for hypertension & diabetes, admissions for substance abuse treatment, emergency visits of children with asthma, deaths to diabetes, opioid-related fatal overdoses, firearm injuries, and homicides

Chelsea: Teen pregnancies, hospitalizations for hypertension and diabetes, deaths to diabetes and to opioid-related fatal overdoses

Revere: Teen pregnancies, hospitalizations for diabetes, admissions for substance abuse treatment, deaths to lung cancer and to opioid-related fatal overdoses

Winthrop: Deaths to lung cancer, admissions for heroin abuse treatment

Health Disparities

The following groups of the Boston region, when compared with those at the state level, have higher rates of:

Blacks: hospitalizations for hypertension & diabetes, homicides, deaths to firearm injuries and HIV

Whites: hospitalizations for hypertension & diabetes, homicides

Refugees: high TB rates; increased lead poisoning among children

APPENDIX

REGIONS AND TOWNS

REGION	TOWN	COUNTY	CHNA
BOSTON	BOSTON	SUFFOLK	Alliance for Community Health
	BROOKLINE	NORFOLK	Alliance for Community Health
	CHELSEA	SUFFOLK	Alliance for Community Health
	REVERE	SUFFOLK	Alliance for Community Health
	WINTHROP	SUFFOLK	Alliance for Community Health
CENTRAL	ASHBURNHAM	WORCESTER	Fitchburg/Gardner CHN
	ASHBY	MIDDLESEX	Fitchburg/Gardner CHN
	AUBURN	WORCESTER	Community Wellness Coalition
	AYER	MIDDLESEX	Fitchburg/Gardner CHN
	BARRE	WORCESTER	Fitchburg/Gardner CHN
	BELLINGHAM	NORFOLK	Community Partners for Health
	BERLIN	WORCESTER	Fitchburg/Gardner CHN
	BLACKSTONE	WORCESTER	Community Partners for Health
	BOLTON	WORCESTER	Fitchburg/Gardner CHN
	BOYLSTON	WORCESTER	Community Wellness Coalition
	BRIMFIELD	HAMPDEN	CHN of Southern Worcester County
	BROOKFIELD	WORCESTER	CHN of Southern Worcester County
	CHARLTON	WORCESTER	CHN of Southern Worcester County
	CLINTON	WORCESTER	Fitchburg/Gardner CHN
	DOUGLAS	WORCESTER	Community Partners for Health
	DUDLEY	WORCESTER	CHN of Southern Worcester County
	EAST BROOKFIELD	WORCESTER	CHN of Southern Worcester County
	FITCHBURG	WORCESTER	Fitchburg/Gardner CHN
	FRANKLIN	NORFOLK	Community Partners for Health
	GARDNER	WORCESTER	Fitchburg/Gardner CHN
	GRAFTON	WORCESTER	Community Wellness Coalition
	GROTON	MIDDLESEX	Fitchburg/Gardner CHN
	HARDWICK	WORCESTER	Fitchburg/Gardner CHN
	HARVARD	WORCESTER	Fitchburg/Gardner CHN
	HOLDEN	WORCESTER	Community Wellness Coalition
	HOLLAND	HAMPDEN	CHN of Southern Worcester County
	HOPEDALE	WORCESTER	Community Partners for Health
	HUBBARDSTON	WORCESTER	Fitchburg/Gardner CHN
	LANCASTER	WORCESTER	Fitchburg/Gardner CHN
	LEICESTER	WORCESTER	Community Wellness Coalition
	LEOMINSTER	WORCESTER	Fitchburg/Gardner CHN
	LUNENBURG	WORCESTER	Fitchburg/Gardner CHN
	MEDWAY	NORFOLK	Community Partners for Health
	MENDON	WORCESTER	Community Partners for Health
	MILFORD	WORCESTER	Community Partners for Health
	MILLBURY	WORCESTER	Community Wellness Coalition
MILLVILLE	WORCESTER	Community Partners for Health	
NEW BRAINTREE	WORCESTER	Fitchburg/Gardner CHN	
NORTH BROOKFIELD	WORCESTER	CHN of Southern Worcester County	
NORTHBRIDGE	WORCESTER	Community Partners for Health	
OAKHAM	WORCESTER	Fitchburg/Gardner CHN	
OXFORD	WORCESTER	CHN of Southern Worcester County	

	PAXTON PEPPERELL PRINCETON RUTLAND SHIRLEY SHREWSBURY SOUTHBRIDGE SPENCER STERLING STURBRIDGE SUTTON TEMPLETON TOWNSEND UPTON UXBRIDGE WALES WARREN WEBSTER WEST BOYLSTON WEST BROOKFIELD WESTMINSTER WINCHENDON WORCESTER	WORCESTER MIDDLESEX WORCESTER WORCESTER MIDDLESEX WORCESTER WORCESTER WORCESTER WORCESTER WORCESTER WORCESTER MIDDLESEX WORCESTER WORCESTER HAMPDEN WORCESTER WORCESTER WORCESTER WORCESTER WORCESTER WORCESTER WORCESTER	Community Wellness Coalition Fitchburg/Gardner CHN Fitchburg/Gardner CHN Fitchburg/Gardner CHN Fitchburg/Gardner CHN Community Wellness Coalition CHN of Southern Worcester County CHN of Southern Worcester County Fitchburg/Gardner CHN CHN of Southern Worcester County Community Partners for Health Fitchburg/Gardner CHN Fitchburg/Gardner CHN Community Partners for Health Community Partners for Health CHN of Southern Worcester County CHN of Southern Worcester County CHN of Southern Worcester County Community Wellness Coalition CHN of Southern Worcester County Fitchburg/Gardner CHN Fitchburg/Gardner CHN Community Wellness Coalition
METRO WEST	ACTON ARLINGTON ASHLAND BEDFORD BELMONT BOXBOROUGH BRAINTREE BURLINGTON CAMBRIDGE CANTON CARLISLE COHASSET CONCORD DEDHAM DOVER FOXBOROUGH FRAMINGHAM HINGHAM HOLLISTON HOPKINTON HUDSON HULL LEXINGTON LINCOLN LITTLETON MARLBOROUGH MAYNARD	MIDDLESEX MIDDLESEX MIDDLESEX MIDDLESEX MIDDLESEX MIDDLESEX NORFOLK MIDDLESEX MIDDLESEX NORFOLK MIDDLESEX NORFOLK NORFOLK NORFOLK MIDDLESEX NORFOLK MIDDLESEX NORFOLK NORFOLK NORFOLK MIDDLESEX PLYMOUTH MIDDLESEX MIDDLESEX MIDDLESEX PLYMOUTH MIDDLESEX MIDDLESEX MIDDLESEX MIDDLESEX MIDDLESEX	Greater Woburn/Concord/Littleton CHN Greater Cambridge/Somerville CHN CHN of Greater Metro West Greater Woburn/Concord/Littleton CHN Greater Cambridge/Somerville CHN Greater Woburn/Concord/Littleton CHN Blue Hills Community Health Alliance Greater Woburn/Concord/Littleton CHN Greater Cambridge/Somerville CHN Blue Hills Community Health Alliance Greater Woburn/Concord/Littleton CHN Blue Hills Community Health Alliance Greater Woburn/Concord/Littleton CHN West Suburban Health Network West Suburban Health Network CHN of Greater Metro West CHN of Greater Metro West Blue Hills Community Health Alliance CHN of Greater Metro West CHN of Greater Metro West CHN of Greater Metro West Blue Hills Community Health Alliance Greater Woburn/Concord/Littleton CHN Greater Woburn/Concord/Littleton CHN Greater Woburn/Concord/Littleton CHN CHN of Greater Metro West CHN of Greater Metro West

	MEDFIELD MILLIS MILTON NATICK NEEDHAM NEWTON NORFOLK NORTHBOROUGH NORWELL NORWOOD PLAINVILLE QUINCY RANDOLPH SCITUATE SHARON SHERBORN SOMERVILLE SOUTHBOROUGH STOW SUDBURY WALPOLE WALTHAM WATERTOWN WAYLAND WELLESLEY WESTBOROUGH WESTON WESTWOOD WEYMOUTH WILMINGTON WINCHESTER WOBURN WRENTHAM	NORFOLK NORFOLK NORFOLK MIDDLESEX NORFOLK MIDDLESEX NORFOLK NORFOLK WORCESTER PLYMOUTH NORFOLK NORFOLK NORFOLK PLYMOUTH NORFOLK NORFOLK MIDDLESEX MIDDLESEX WORCESTER MIDDLESEX MIDDLESEX NORFOLK MIDDLESEX MIDDLESEX NORFOLK WORCESTER MIDDLESEX NORFOLK NORFOLK MIDDLESEX MIDDLESEX MIDDLESEX NORFOLK WORCESTER MIDDLESEX NORFOLK NORFOLK MIDDLESEX MIDDLESEX MIDDLESEX NORFOLK	CHN of Greater Metro West CHN of Greater Metro West Blue Hills Community Health Alliance CHN of Greater Metro West West Suburban Health Network West Suburban Health Network CHN of Greater Metro West CHN of Greater Metro West Blue Hills Community Health Alliance Blue Hills Community Health Alliance CHN of Greater Metro West Blue Hills Community Health Alliance Blue Hills Community Health Alliance Blue Hills Community Health Alliance Blue Hills Community Health Alliance CHN of Greater Metro West Greater Cambridge/Somerville CHN CHN of Greater Metro West CHN of Greater Metro West CHN of Greater Metro West CHN of Greater Metro West West Suburban Health Network Greater Cambridge/Somerville CHN CHN of Greater Metro West West Suburban Health Network CHN of Greater Metro West West Suburban Health Network Blue Hills Community Health Alliance Greater Woburn/Concord/Littleton CHN Greater Woburn/Concord/Littleton CHN Greater Woburn/Concord/Littleton CHN CHN of Greater Metro West
NORTHEAST	AMESBURY ANDOVER BEVERLY BILLERICA BOXFORD CHELMSFORD DANVERS DRACUT DUNSTABLE ESSEX EVERETT GEORGETOWN GLOUCESTER GROVELAND HAMILTON HAVERHILL IPSWICH	ESSEX ESSEX ESSEX MIDDLESEX ESSEX MIDDLESEX ESSEX MIDDLESEX MIDDLESEX ESSEX MIDDLESEX ESSEX ESSEX ESSEX ESSEX ESSEX ESSEX ESSEX ESSEX ESSEX	Greater Haverhill CHN Greater Lawrence CHN Community Health Network North Greater Lowell CHN Greater Haverhill CHN Greater Lowell CHN North Shore CHN Greater Lowell CHN Greater Lowell CHN Community Health Network North North Suburban Health Alliance Greater Haverhill CHN Community Health Network North Greater Haverhill CHN Community Health Network North Greater Haverhill CHN Community Health Network North

	LAWRENCE LOWELL LYNN LYNNFIELD MALDEN MANCHESTER MARBLEHEAD MEDFORD MELROSE MERRIMAC METHUEN MIDDLETON NAHANT NEWBURY NEWBURYPORT NORTH ANDOVER NORTH READING PEABODY READING ROCKPORT ROWLEY SALEM SALISBURY SAUGUS STONEHAM SWAMPSCOTT TEWKSBURY TOPSFIELD TYNGSBOROUGH WAKEFIELD WENHAM WEST NEWBURY WESTFORD	ESSEX MIDDLESEX ESSEX ESSEX MIDDLESEX ESSEX ESSEX MIDDLESEX MIDDLESEX ESSEX ESSEX ESSEX ESSEX ESSEX ESSEX ESSEX MIDDLESEX ESSEX MIDDLESEX ESSEX ESSEX ESSEX MIDDLESEX ESSEX MIDDLESEX MIDDLESEX MIDDLESEX ESSEX MIDDLESEX MIDDLESEX MIDDLESEX ESSEX ESSEX MIDDLESEX	Greater Lawrence CHN Greater Lowell CHN North Shore CHN North Shore CHN North Suburban Health Alliance Community Health Network North North Shore CHN North Suburban Health Alliance North Suburban Health Alliance Greater Haverhill CHN Greater Lawrence CHN Greater Lawrence CHN North Shore CHN Greater Haverhill CHN Greater Haverhill CHN Greater Lawrence CHN North Suburban Health Alliance North Shore CHN North Suburban Health Alliance Community Health Network North Greater Haverhill CHN North Shore CHN Greater Haverhill CHN North Shore CHN North Suburban Health Alliance North Shore CHN Greater Lowell CHN Community Health Network North Greater Lowell CHN North Suburban Health Alliance Community Health Network North Greater Haverhill CHN Greater Lowell CHN
SOUTHEAST	ABINGTON ACUSHNET ATTLEBORO AVON BARNSTABLE BERKLEY BOURNE BREWSTER BRIDGEWATER BROCKTON CARVER CHATHAM CHILMARK DARTMOUTH DENNIS DIGHTON DUXBURY	PLYMOUTH BRISTOL BRISTOL NORFOLK BARNSTABLE BRISTOL BARNSTABLE BARNSTABLE PLYMOUTH PLYMOUTH PLYMOUTH BARNSTABLE DUKES BRISTOL BARNSTABLE BRISTOL PLYMOUTH	Greater Brockton CHN Greater New Bedford CHN Health & Education Response Greater Brockton CHN Cape and Islands CHN Health & Education Response Cape and Islands CHN Cape and Islands CHN Greater Brockton CHN Greater Brockton CHN South Shore Community Partners in Prevention Cape and Islands CHN Cape and Islands CHN Greater New Bedford CHN Cape and Islands CHN Health & Education Response South Shore Community Partners in Prevention

EAST BRIDGEWATER	PLYMOUTH	Greater Brockton CHN
EASTHAM	BARNSTABLE	Cape and Islands CHN
EASTON	BRISTOL	Greater Brockton CHN
EDGARTOWN	DUKES	Cape and Islands CHN
FAIRHAVEN	BRISTOL	Greater New Bedford CHN
FALL RIVER	BRISTOL	Partners for a Healthier Community
FALMOUTH	BARNSTABLE	Cape and Islands CHN
FREETOWN	BRISTOL	Greater New Bedford CHN
GAY HEAD	DUKES	Cape and Islands CHN
GOSNOLD	DUKES	Cape and Islands CHN
HALIFAX	PLYMOUTH	South Shore Community Partners in Prevention
HANOVER	PLYMOUTH	South Shore Community Partners in Prevention
HANSON	PLYMOUTH	South Shore Community Partners in Prevention
HARWICH	BARNSTABLE	Cape and Islands CHN
HOLBROOK	NORFOLK	Greater Brockton CHN
KINGSTON	PLYMOUTH	South Shore Community Partners in Prevention
LAKEVILLE	PLYMOUTH	Health & Education Response
MANSFIELD	BRISTOL	Health & Education Response
MARION	PLYMOUTH	Greater New Bedford CHN
MARSHFIELD	PLYMOUTH	South Shore Community Partners in Prevention
MASHPEE	BARNSTABLE	Cape and Islands CHN
MATTAPOISETT	PLYMOUTH	Greater New Bedford CHN
MIDDLEBOROUGH	PLYMOUTH	Health & Education Response
NANTUCKET	NANTUCKET	Cape and Islands CHN
NEW BEDFORD	BRISTOL	Greater New Bedford CHN
NORTH ATTLEBORO	BRISTOL	Health & Education Response
NORTON	BRISTOL	Health & Education Response
OAK BLUFFS	DUKES	Cape and Islands CHN
ORLEANS	BARNSTABLE	Cape and Islands CHN
PEMBROKE	PLYMOUTH	South Shore Community Partners in Prevention
PLYMOUTH	PLYMOUTH	South Shore Community Partners in Prevention
PLYMPTON	PLYMOUTH	South Shore Community Partners in Prevention
PROVINCETOWN	BARNSTABLE	Cape and Islands CHN
RAYNHAM	BRISTOL	Health & Education Response
REHOBOTH	BRISTOL	Health & Education Response
ROCHESTER	PLYMOUTH	Greater New Bedford CHN
ROCKLAND	PLYMOUTH	South Shore Community Partners in Prevention
SANDWICH	BARNSTABLE	Cape and Islands CHN
SEEKONK	BRISTOL	Health & Education Response
SOMERSET	BRISTOL	Partners for a Healthier Community
STOUGHTON	NORFOLK	Greater Brockton CHN
SWANSEA	BRISTOL	Partners for a Healthier Community
TAUNTON	BRISTOL	Health & Education Response
TISBURY	DUKES	Cape and Islands CHN
TRURO	BARNSTABLE	Cape and Islands CHN
WAREHAM	PLYMOUTH	Greater New Bedford CHN
WELLFLEET	BARNSTABLE	Cape and Islands CHN
WEST BRIDGEWATER	PLYMOUTH	Greater Brockton CHN
WEST TISBURY	DUKES	Cape and Islands CHN
WESTPORT	BRISTOL	Partners for a Healthier Community

	WHITMAN YARMOUTH	PLYMOUTH BARNSTABLE	Greater Brockton CHN Cape and Islands CHN
WESTERN	ADAMS	BERKSHIRE	CHN of Berkshire
	AGAWAM	HAMPDEN	The Community Health Connection
	ALFORD	BERKSHIRE	CHN of Berkshire
	AMHERST	HAMPSHIRE	Partnership for Health in Hampshire County
	ASHFIELD	FRANKLIN	Upper Valley Health Web
	ATHOL	WORCESTER	Upper Valley Health Web
	BECKET	BERKSHIRE	CHN of Berkshire
	BELCHERTOWN	HAMPSHIRE	Partnership for Health in Hampshire County
	BERNARDSTON	FRANKLIN	Upper Valley Health Web
	BLANDFORD	HAMPDEN	The Community Health Connection
	BUCKLAND	FRANKLIN	Upper Valley Health Web
	CHARLEMONT	FRANKLIN	Upper Valley Health Web
	CHESHIRE	BERKSHIRE	CHN of Berkshire
	CHESTER	HAMPDEN	Four (For) Communities
	CHESTERFIELD	HAMPSHIRE	Partnership for Health in Hampshire County
	CHICOPEE	HAMPDEN	Four (For) Communities
	CLARKSBURG	BERKSHIRE	CHN of Berkshire
	COLRAIN	FRANKLIN	Upper Valley Health Web
	CONWAY	FRANKLIN	Upper Valley Health Web
	CUMMINGTON	HAMPSHIRE	Partnership for Health in Hampshire County
	DALTON	BERKSHIRE	CHN of Berkshire
	DEERFIELD	FRANKLIN	Upper Valley Health Web
	EAST LONGMEADOW	HAMPDEN	The Community Health Connection
	EASTHAMPTON	HAMPSHIRE	Partnership for Health in Hampshire County
	EGREMONT	BERKSHIRE	CHN of Berkshire
	ERVING	FRANKLIN	Upper Valley Health Web
	FLORIDA	BERKSHIRE	CHN of Berkshire
	GILL	FRANKLIN	Upper Valley Health Web
	GOSHEN	HAMPSHIRE	Partnership for Health in Hampshire County
	GRANBY	HAMPSHIRE	Partnership for Health in Hampshire County
	GRANVILLE	HAMPDEN	The Community Health Connection
	GREAT BARRINGTON	BERKSHIRE	CHN of Berkshire
	GREENFIELD	FRANKLIN	Upper Valley Health Web
	HADLEY	HAMPSHIRE	Partnership for Health in Hampshire County
	HAMPDEN	HAMPDEN	The Community Health Connection
	HANCOCK	BERKSHIRE	CHN of Berkshire
	HATFIELD	HAMPSHIRE	Partnership for Health in Hampshire County
	HAWLEY	FRANKLIN	Upper Valley Health Web
	HEATH	FRANKLIN	Upper Valley Health Web
	HINSDALE	BERKSHIRE	CHN of Berkshire
	HOLYOKE	HAMPDEN	Four (For) Communities
	HUNTINGTON	HAMPSHIRE	Four (For) Communities
	LANESBOROUGH	BERKSHIRE	CHN of Berkshire
	LEE	BERKSHIRE	CHN of Berkshire
	LENOX	BERKSHIRE	CHN of Berkshire
	LEVERETT	FRANKLIN	Upper Valley Health Web
	LEYDEN	FRANKLIN	Upper Valley Health Web
	LONGMEADOW	HAMPDEN	The Community Health Connection

LUDLOW	HAMPDEN	Four (For) Communities
MIDDLEFIELD	HAMPSHIRE	Partnership for Health in Hampshire County
MONROE	FRANKLIN	Upper Valley Health Web
MONSON	HAMPDEN	The Community Health Connection
MONTAGUE	FRANKLIN	Upper Valley Health Web
MONTEREY	BERKSHIRE	CHN of Berkshire
MONTGOMERY	HAMPDEN	The Community Health Connection
MOUNT WASHINGTON	BERKSHIRE	CHN of Berkshire
NEW ASHFORD	BERKSHIRE	CHN of Berkshire
NEW MARLBOROUGH	BERKSHIRE	CHN of Berkshire
NEW SALEM	FRANKLIN	Upper Valley Health Web
NORTH ADAMS	BERKSHIRE	CHN of Berkshire
NORTHAMPTON	HAMPSHIRE	Partnership for Health in Hampshire County
NORTHFIELD	FRANKLIN	Upper Valley Health Web
ORANGE	FRANKLIN	Upper Valley Health Web
OTIS	BERKSHIRE	CHN of Berkshire
PALMER	HAMPDEN	The Community Health Connection
PELHAM	HAMPSHIRE	Partnership for Health in Hampshire County
PERU	BERKSHIRE	CHN of Berkshire
PETERSHAM	WORCESTER	Upper Valley Health Web
PHILLIPSTON	WORCESTER	Upper Valley Health Web
PITTSFIELD	BERKSHIRE	CHN of Berkshire
PLAINFIELD	HAMPSHIRE	Partnership for Health in Hampshire County
RICHMOND	BERKSHIRE	CHN of Berkshire
ROWE	FRANKLIN	Upper Valley Health Web
ROYALSTON	WORCESTER	Upper Valley Health Web
RUSSELL	HAMPDEN	The Community Health Connection
SANDISFIELD	BERKSHIRE	CHN of Berkshire
SAVOY	BERKSHIRE	CHN of Berkshire
SHEFFIELD	BERKSHIRE	CHN of Berkshire
SHELBURNE	FRANKLIN	Upper Valley Health Web
SHUTESBURY	FRANKLIN	Upper Valley Health Web
SOUTH HADLEY	HAMPSHIRE	Partnership for Health in Hampshire County
SOUTHAMPTON	HAMPSHIRE	Partnership for Health in Hampshire County
SOUTHWICK	HAMPDEN	The Community Health Connection
SPRINGFIELD	HAMPDEN	The Community Health Connection
STOCKBRIDGE	BERKSHIRE	CHN of Berkshire
SUNDERLAND	FRANKLIN	Upper Valley Health Web
TOLLAND	HAMPDEN	The Community Health Connection
TYRINGHAM	BERKSHIRE	CHN of Berkshire
WARE	HAMPSHIRE	Partnership for Health in Hampshire County
WARWICK	FRANKLIN	Upper Valley Health Web
WASHINGTON	BERKSHIRE	CHN of Berkshire
WENDELL	FRANKLIN	Upper Valley Health Web
WEST SPRINGFIELD	HAMPDEN	The Community Health Connection
WEST STOCKBRIDGE	BERKSHIRE	CHN of Berkshire
WESTFIELD	HAMPDEN	Four (For) Communities
WESTHAMPTON	HAMPSHIRE	Partnership for Health in Hampshire County
WHATELY	FRANKLIN	Upper Valley Health Web
WILBRAHAM	HAMPDEN	The Community Health Connection

	WILLIAMSBURG WILLIAMSTOWN WINDSOR WORTHINGTON	HAMPSHIRE BERKSHIRE BERKSHIRE HAMPSHIRE	Partnership for Health in Hampshire County CHN of Berkshire CHN of Berkshire Partnership for Health in Hampshire County
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DATA SOURCES

Massachusetts Division of Health Care Finance and Policy

MDPH, Bureau of Communicable Disease Control

MDPH, Bureau of Substance Abuse Services

MDPH, Environmental Health Bureau

MDPH, Health Information, Statistics, Research & Evaluation Bureau

SAMHSA, Office of Applied Studies