

# Regional Health Status Indicators Southeast 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

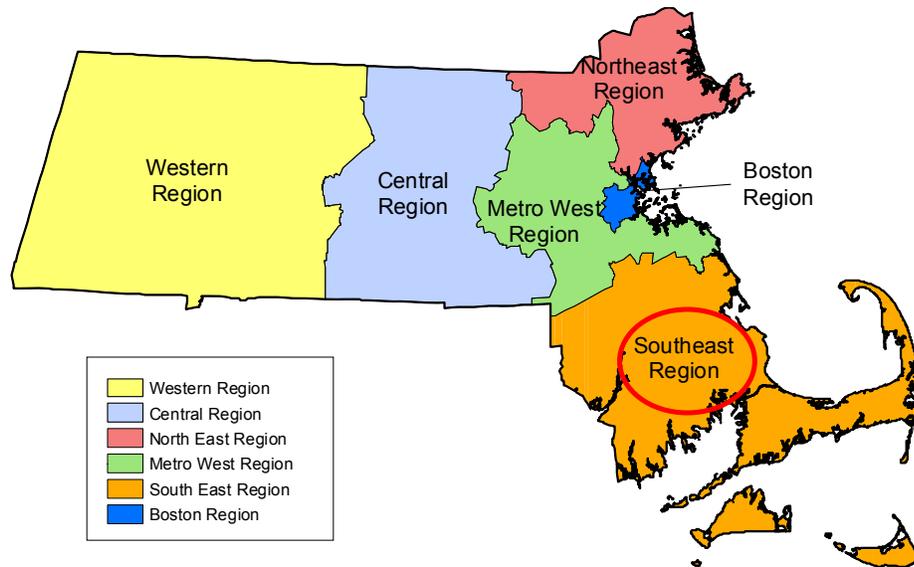
## Timetable

- 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**



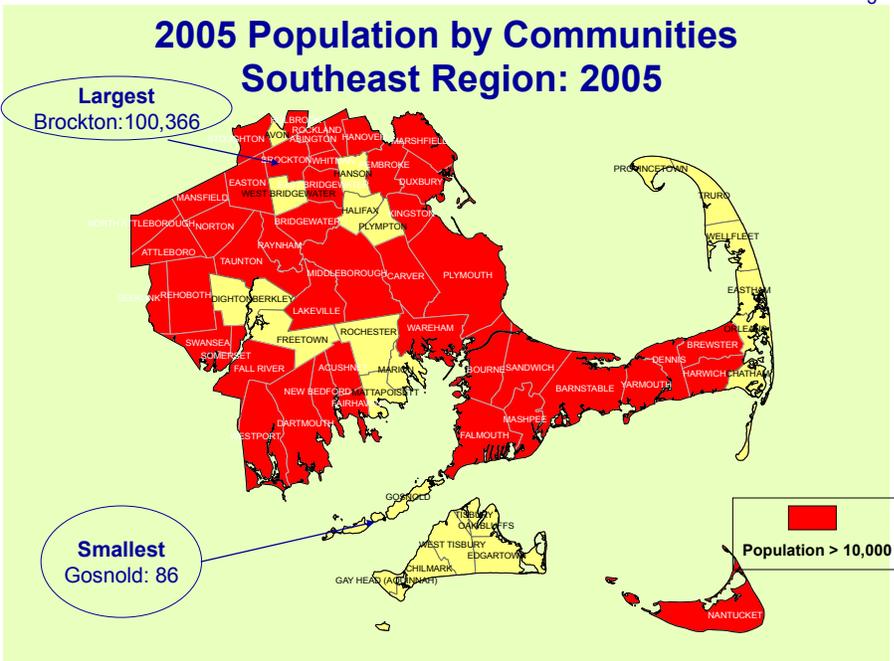
## Executive Office of Health and Human Services (EOHHS) Regions



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

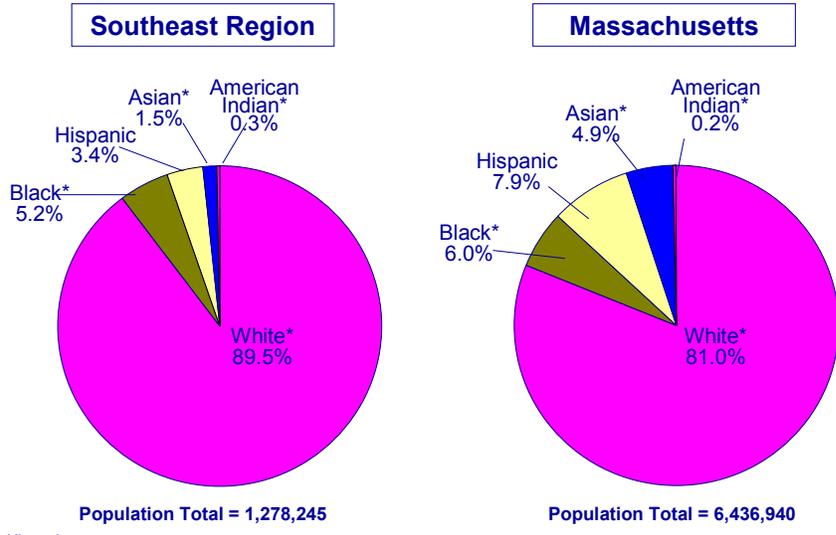
## A few comments about the limitations of this presentation

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



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

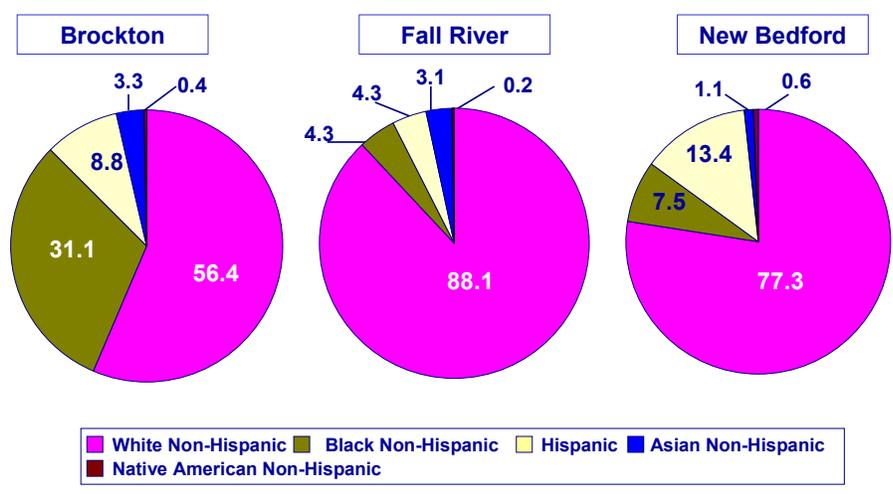
### Race and Ethnic Breakdown of Population Southeast Region and Massachusetts: 2005



\* Non-Hispanics

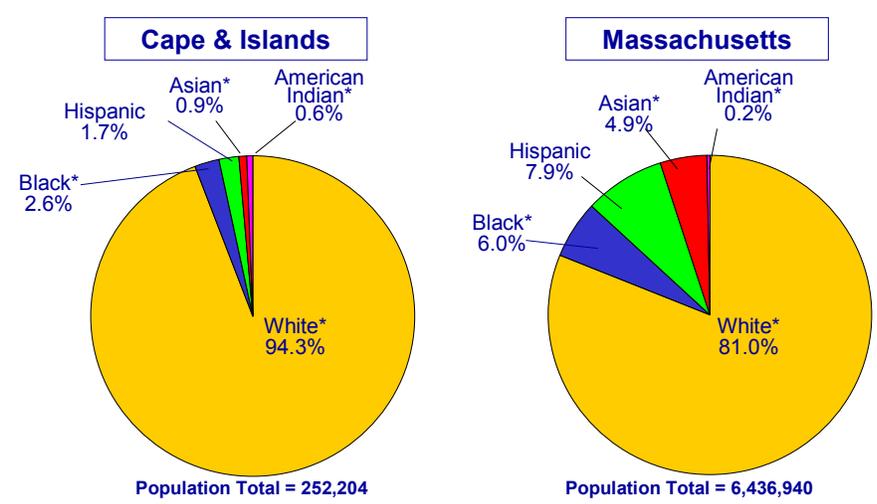
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

### Race/Ethnicity Proportions in the Largest Cities Southeast: 2005



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

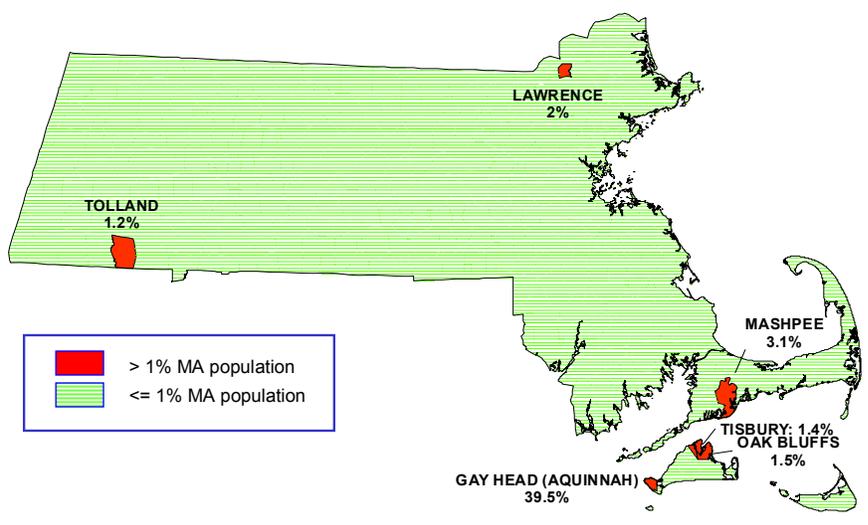
### Race and Ethnic Breakdown of Population Cape & Islands and Massachusetts: 2005



\* Non-Hispanics

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

## Towns by Percent Native American Population Massachusetts: 2000



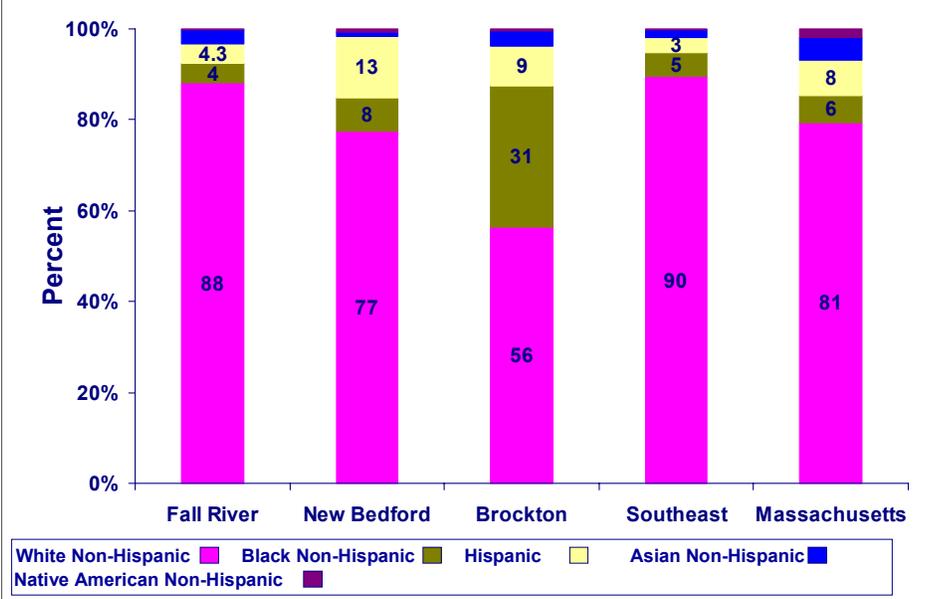
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

## Cities with the Largest American Indian Populations, Massachusetts: Census 2000

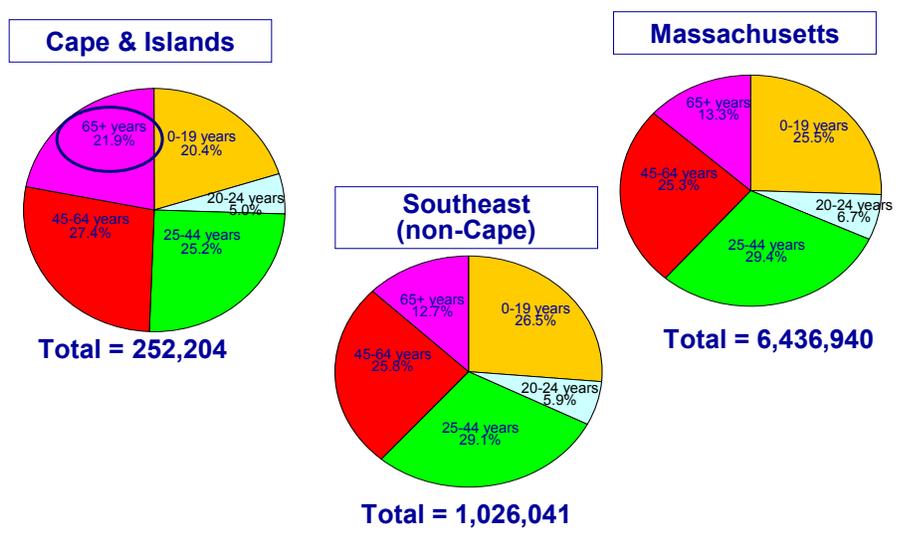
City / Town	American Indian (Alone)	City / Town	American Indian (Alone, or in Combination)
Boston	2,365	Boston	5,384
Worcester	769	Worcester	1,700
Lawrence	583	Springfield	1,473
New Bedford	579	New Bedford	1,288
Springfield	569	Lawrence	921
Mashpee	377	Brockton	876
Brockton	338	Cambridge	853
Lynn	332	Lynn	796
Cambridge	290	Lowell	676
Barnstable	283	Fall River	587

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

### Race/Ethnicity in the Largest Cities Southeast and Massachusetts: 2005



### Population by Age Group Cape & Islands and Massachusetts: 2005



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

## Language Spoken at Home, Southeast Region and Massachusetts: 2000

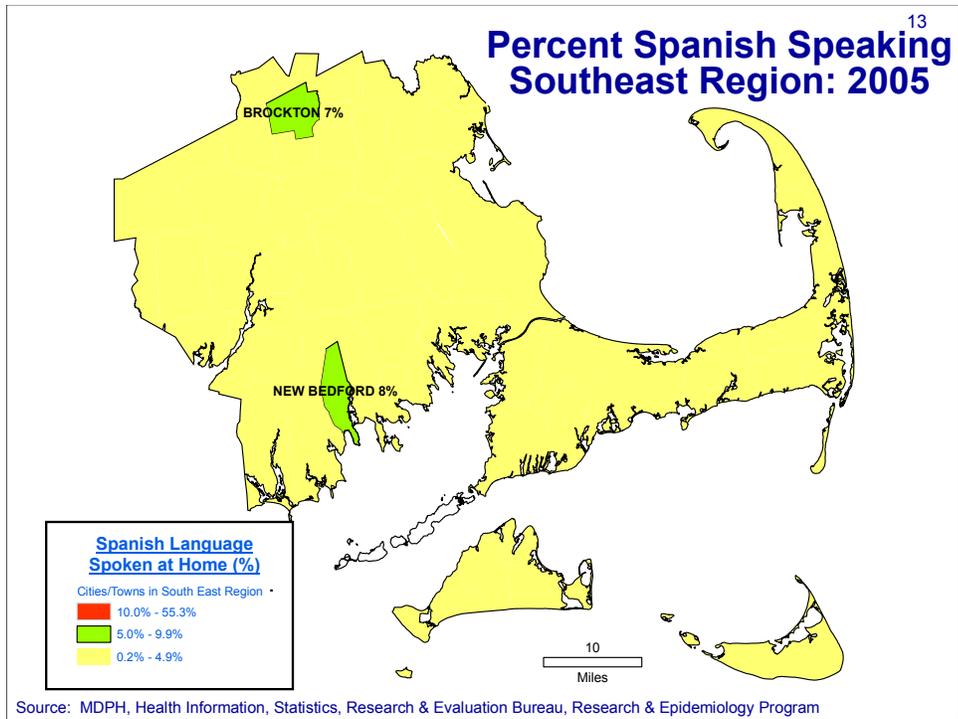
	Southeast Region	Massachusetts Overall
Only English	85.4	81.3
Spanish or Spanish Creole	2.5	6.2
Portuguese or Portuguese Creole	7.4	2.7
French	1.3	1.4
Chinese	0.2	1.2
Italian	0.4	1.0
French Creole	0.7	0.7
Russian	0.1	0.6
Vietnamese	0.1	0.5
Polish	0.2	0.5
Other languages	1.7	3.9

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

## Language Spoken at Home Southeast Region and Massachusetts: 2000

	Cape & Islands	Southeast (not including Cape & Islands)	Southeast Region	Massachusetts Overall
Only English	93.0	83.7	85.4	81.3
Spanish or Spanish Creole	1.5	2.7	2.5	6.2
Portuguese or Portuguese Creole	1.8	8.7	7.4	2.7
French	1.0	1.3	1.3	1.4
Chinese	0.1	0.2	0.2	1.2
Italian	0.4	0.3	0.4	1.0
French Creole	0.1	0.8	0.7	0.7
Russian	0.1	0.1	0.1	0.6
Vietnamese	-	0.1	0.1	0.5
Polish	0.1	0.2	0.2	0.5
Other languages	1.9	1.9	1.7	3.9

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



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### Socio-Demographic Indicators Southeast, Massachusetts, and US: 2000

	Southeast w/o 3 Largest Cities	Southeast Region	MA	US
Per Capita Income	\$24,695	\$22,789	\$25,952	\$21,587
Persons living below 100% poverty	5.6%	8.3%	9.3%	12.4%
Children < 18 living below 100% poverty	6.2%	10.9%	12.0%	16.1%
Less than a High School Education	12.8%	18.0%	15.2%	19.6%
Speak language other than English at home	9.0%	14.6%	18.7%	17.9%
Foreign born	5.6%	8.7%	12.2%	11.1%
Unemployed	2.9%	5.4%	5.1%	5.5%

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

## Socio-Demographic Indicators Southeast Region and Largest Cities: 2000

	Brockton	Fall River	New Bedford	Southeast w/o 3 Largest Cities	MA
<b>Per Capita Income</b>	\$17,163	\$16,118	\$15,602	\$24,695	\$25,952
<b>Persons living below 100% poverty</b>	14.5%	17.1%	20.2%	5.6%	9.3%
<b>Children &lt; 18 living below 100% poverty</b>	19.4%	25.4%	29.0%	6.2%	12.0%
<b>Less than a High School Education</b>	24.1%	43.4%	42.4%	12.8%	15.2%
<b>Foreign born</b>	18.4%	19.8%	19.6%	9.0%	12.2%
<b>Speak language other than English at home</b>	28.4%	34.6%	37.8%	5.6%	18.7%
<b>Unemployed</b>	6.7%	8.1%	8.4%	2.9%	5.1%

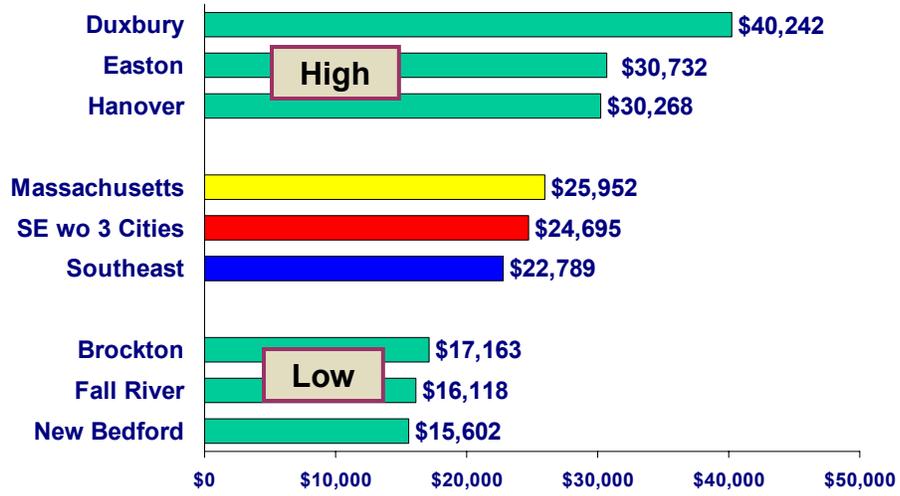
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

## Socio-Demographic Indicators Southeast Region, Cape & Islands and Massachusetts

	Cape & Islands	Southeast Region	Massachusetts Overall
<b>Per Capita Income (2000)</b>	NA	\$22,789	\$25,952
<b>Persons living below 100% poverty (2000)</b>	6.9%	8.3%	9.3%
<b>Children &lt; 18 living below 100% poverty (2000)</b>	8.5%	10.5%	11.6%
<b>Less than a High School Education (2000)</b>	8.3%	18.0%	15.2%
<b>Foreign born (2000)</b>	5.1%	8.7%	12.2%
<b>Speak language other than English at home (2000)</b>	7.0%	14.6%	18.7%
<b>Unemployed (2004)</b>	4.6%	5.5%	5.1%

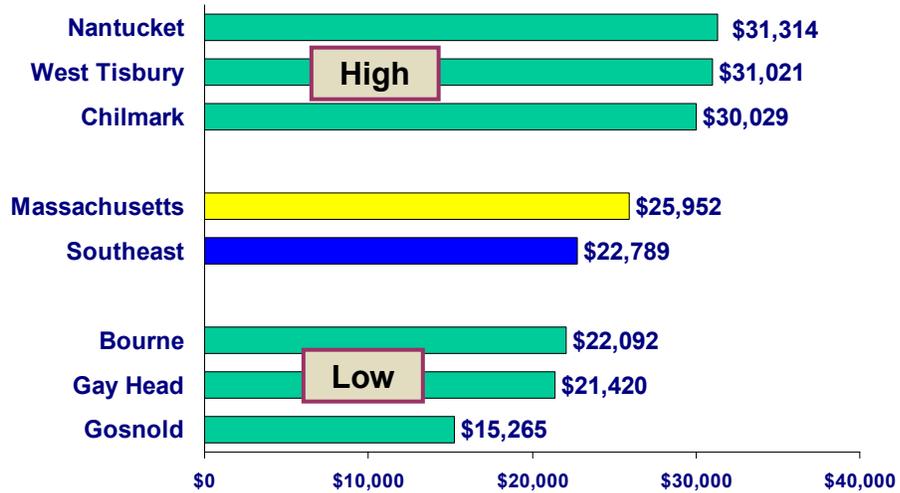
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

### Highest and Lowest Per Capita Income Communities in Southeast Region: 2000



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

### Highest and Lowest Per Capita Income Cape & Islands Communities : 2000



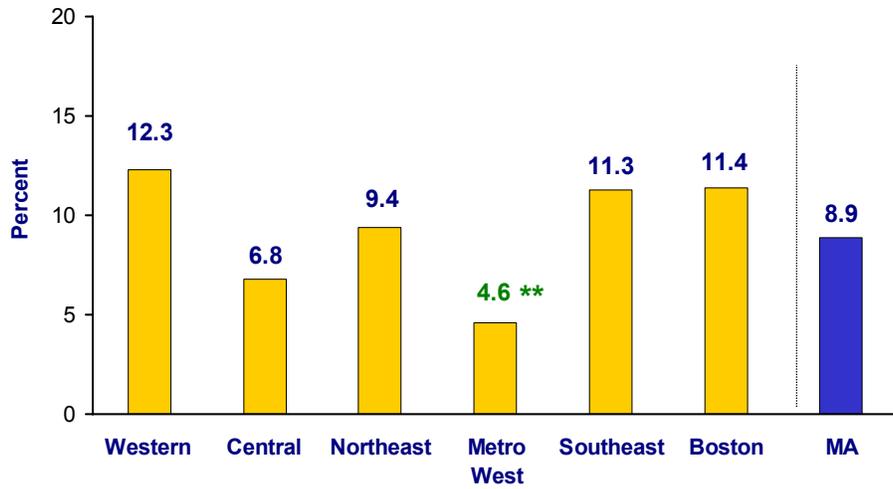
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program



# **HEALTH CARE ACCESS**



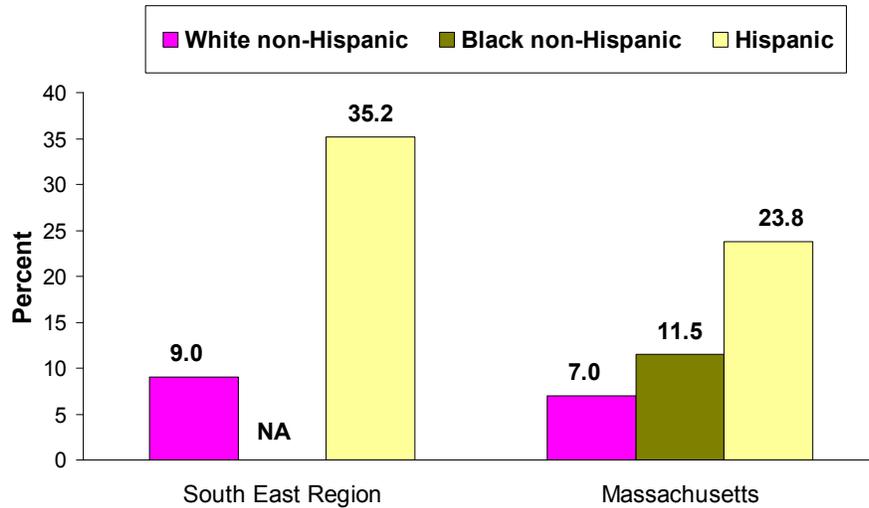
### Adults who Have No Health Insurance by EOHHS Region, Massachusetts: 2005



Statistically different from State (p ≤.05) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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

### Adults who Have No Health Insurance by Race and Ethnicity Southeast Region and Massachusetts: 2005

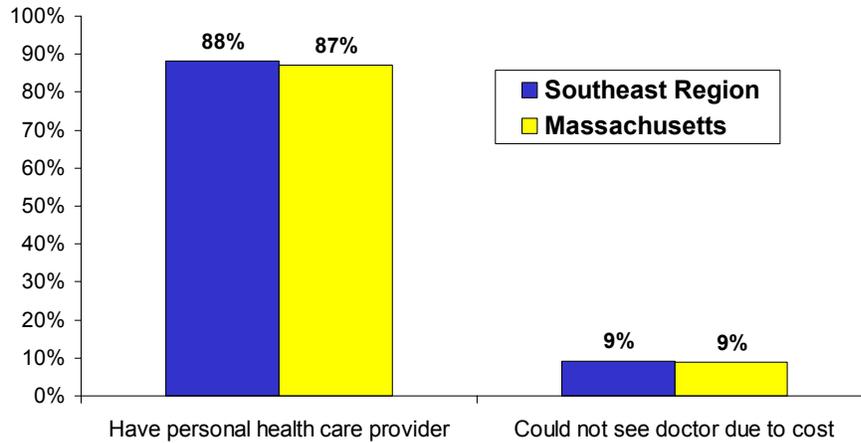


Statistically different from State (p ≤.05) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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

## Health Insurance Access Southeast Region and Massachusetts: 2005

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Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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

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

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Indicator	MA Total	Western	Central	North East	Metro West	Southeast	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

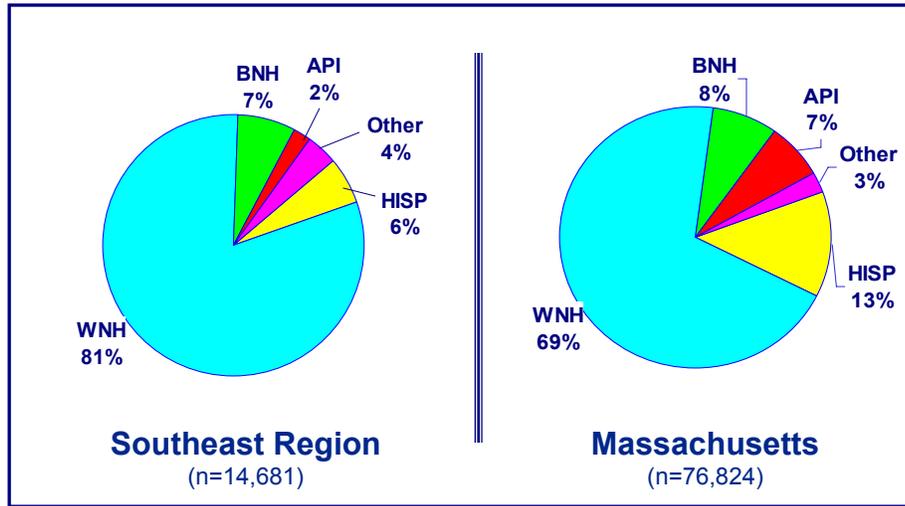
Better Outcome (significantly different from state)  Worse Outcome (significantly different from state)

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

# **BIRTH INDICATORS**

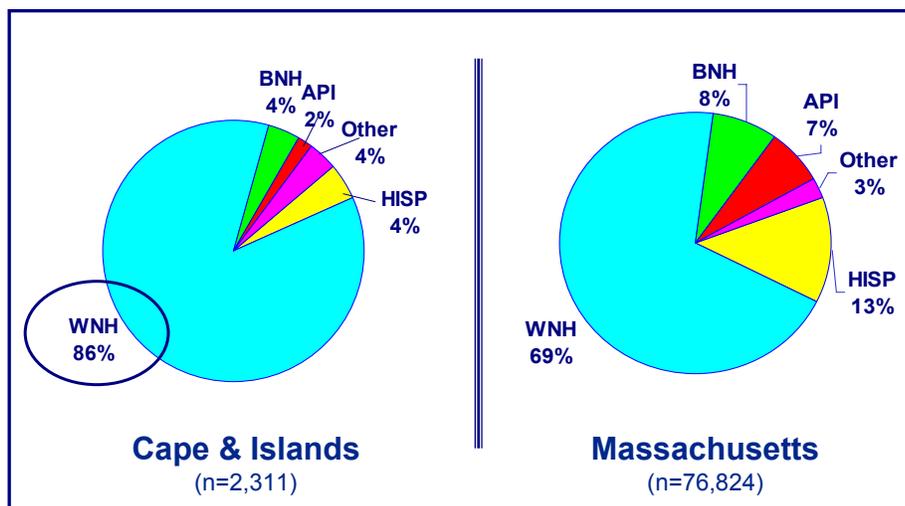


### Births by Race and Hispanic Ethnicity Southeast Region and Massachusetts: 2005



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

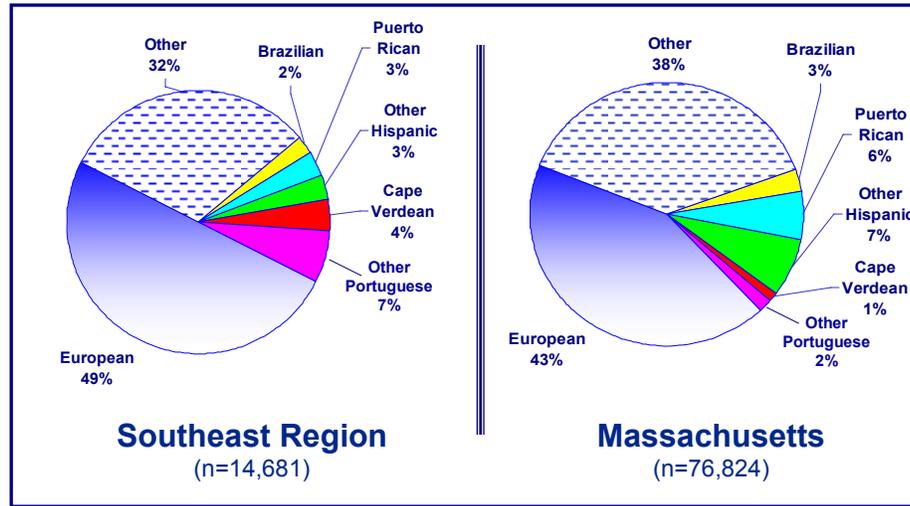
### Births by Race and Hispanic Ethnicity Cape & Islands and Massachusetts: 2005



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

## Percent Distribution of Births by Ethnicity Southeast Region and Massachusetts: 2005

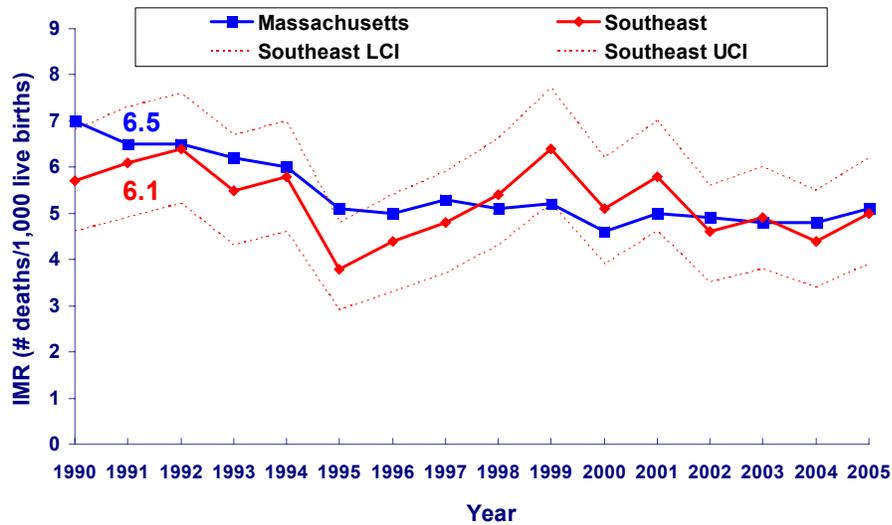
25



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

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

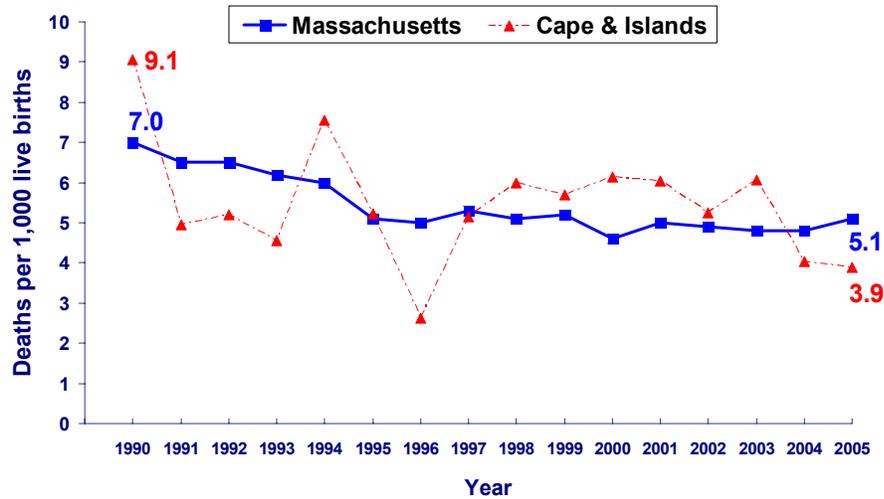
26



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 Rate Cape & Islands and Massachusetts: 1990-2005



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

### Highest Infant Mortality Rates Among the 30 Largest Communities<sup>1</sup> Massachusetts: 2005

	IMR	95% CI <sup>2</sup>	Number of Deaths
<b>State</b>	<b>5.1</b>	<b>[4.6, 5.6]</b>	<b>391</b>
Worcester	<b>13.9*</b>	[9.4, 18.4]	36
Malden	11.4	[4.0, 18.7]	9
Revere	10.9	[2.9, 18.9]	7
Springfield	<b>10.6*</b>	[6.4, 14.7]	25
New Bedford	8.6	[3.8, 13.5]	12

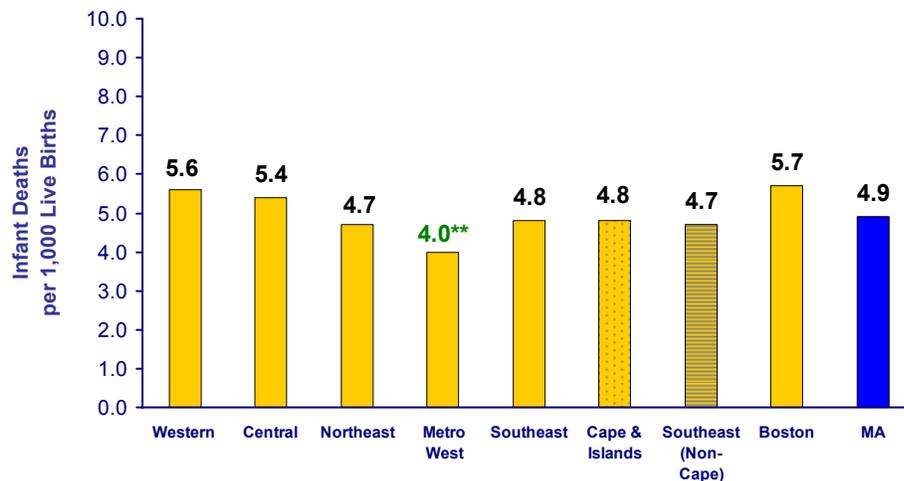
<sup>1</sup>Selected among the 30 Massachusetts communities with the largest populations. IMR = infant deaths per 1,000 live births.  
<sup>2</sup>A Confidence Interval for a population parameter is a range in which you are 95% certain that the true population estimate is within. It is a function of variability and the number of events.  
 Statistically different from State (p ≤ .05) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

## Highest IMR- 3 Year Averages Among the 30 Largest Communities<sup>1</sup> Massachusetts: 2003-2005

	<u>2003-2005 Rate</u>
<b>Massachusetts</b>	<b>4.9 (n = 1,150)</b>
Worcester	8.3 (n = 64) *
Lowell	7.8 (n = 39) *
Brockton	7.6 (n = 35)
Lawrence	7.5 (n = 32)
Weymouth	7.5 (n = 16)
Springfield	7.1 (n = 51)

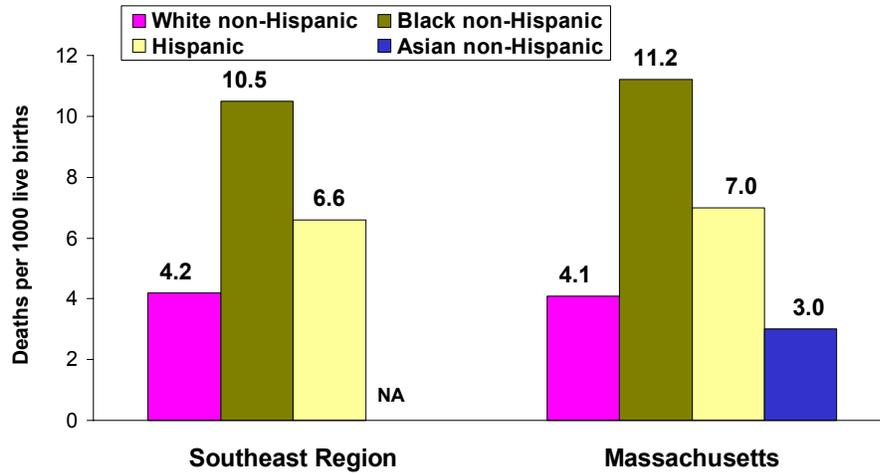
Statistically different from State (p ≤.05) Red (\*) = Statistically worse; Green (\*\*)= Statistically better  
<sup>1</sup>Selected among the 30 Massachusetts communities with the largest populations. Rate = infant deaths per 1,000 live births  
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Research & Epidemiology Program

## Infant Mortality Rates by EOHHS Region Massachusetts: 2002-2005



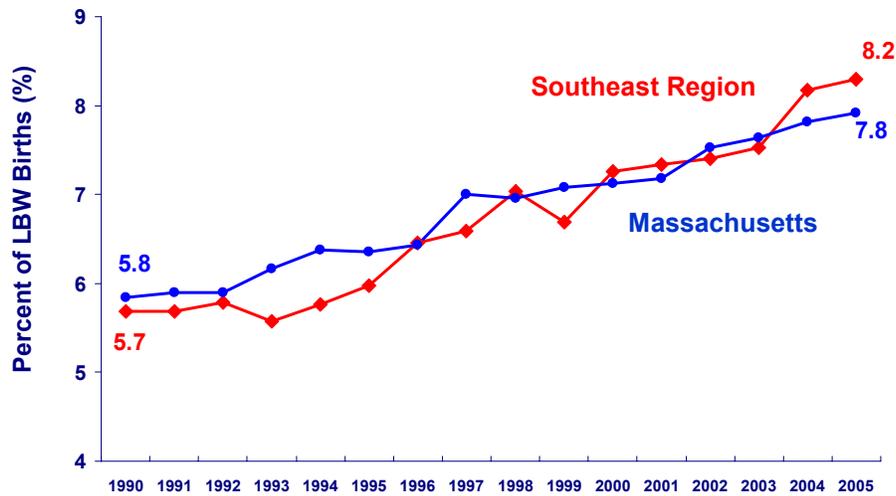
Statistically different from State (p ≤.05) Red (\*) = Statistically worse; Green (\*\*)= Statistically better  
 Infant Mortality Rate: deaths of infants less than one year of age per 1000 live births  
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology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

## Infant Mortality Rates by Race/Ethnicity Southeast Region and Massachusetts: 2002-2005



Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

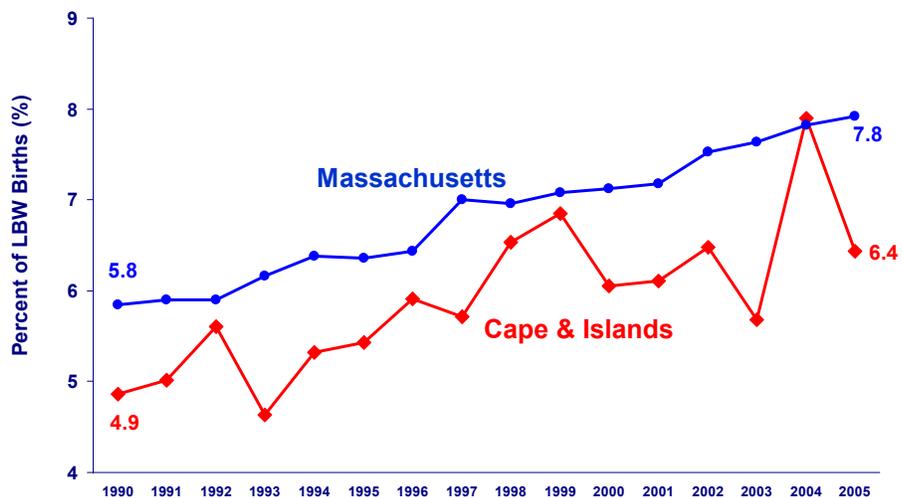
## Low Birthweight Infants Southeast Region and Massachusetts: 1990-2005



Low birthweight: less than 2,500 grams or 5.5 pounds  
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

## Low Birthweight Infants Cape & Islands and Massachusetts: 1990-2005

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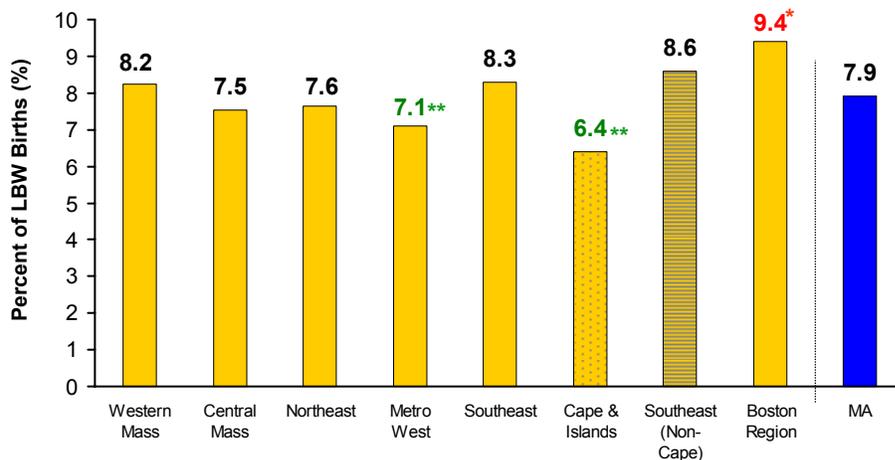


Low birthweight: less than 2,500 grams or 5.5 pounds

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

## Low Birthweight by EOHHS Region, Massachusetts: 2005

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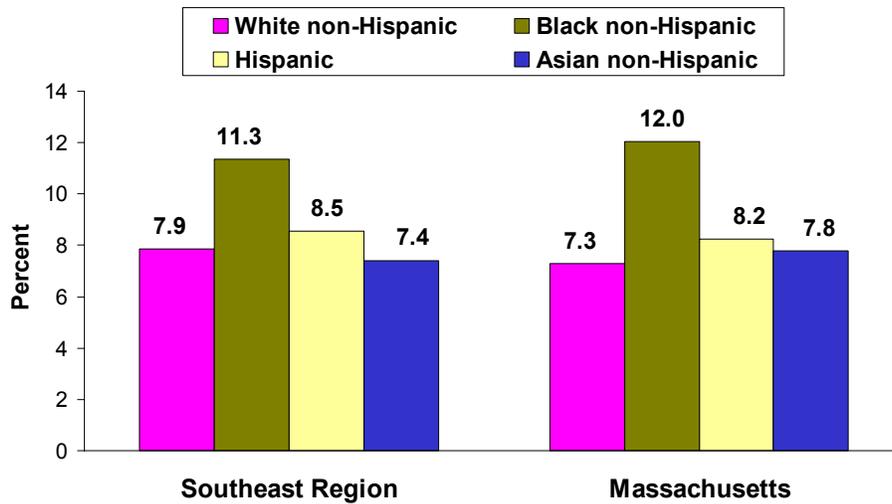


Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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

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

## Low birthweight by Race and Ethnicity Southeast Region and Massachusetts: 2005



Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
 Low birthweight: less than 2,500 grams or 5.5 pounds  
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

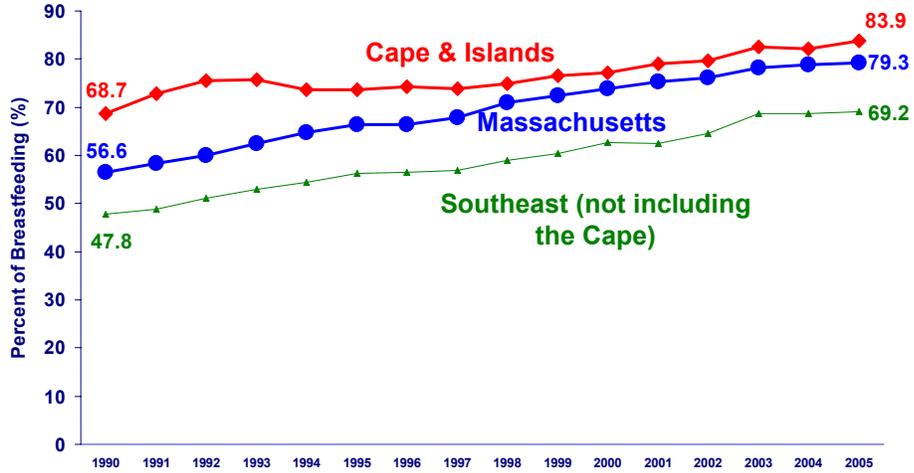
## % Low Birthweight Among the 30 Largest Communities, Massachusetts: 2005

<b>Massachusetts</b>	<b>7.9%</b>
<b><u>Best</u></b>	
<b>Leominster</b>	<b>5.5%**</b>
<b>Barnstable</b>	<b>6.2%</b>
<b><u>Worst</u></b>	
<b>Brockton</b>	<b>11.5%*</b>
<b>Revere</b>	<b>10.9%*</b>
<b>New Bedford</b>	<b>10.6%*</b>
<b>Springfield</b>	<b>9.8%*</b>
<b>Lowell</b>	<b>9.2%</b>

Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

## Percent of Mothers Breastfeeding Southeast Region and Massachusetts: 1990-2005

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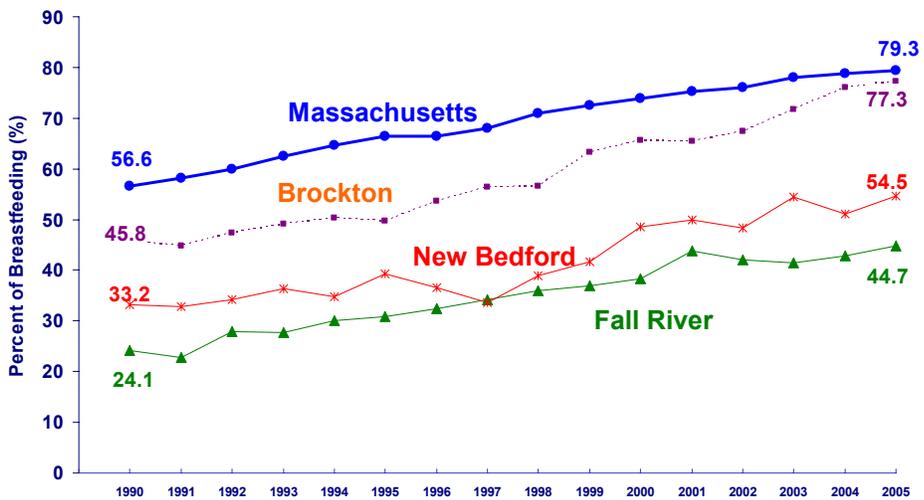


Mother was breastfeeding or intending to breastfeed at the time the birth certificate was completed.

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

## Percent of Mothers Breastfeeding Selected Communities and Massachusetts: 1990-2005

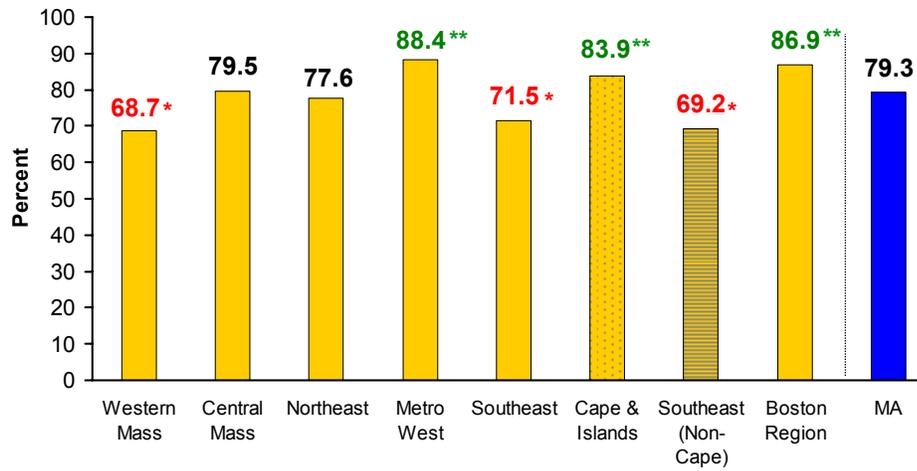
38



Mother was breastfeeding or intending to breastfeed at the time the birth certificate was completed.

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

### Breastfeeding by EOHHS Region Massachusetts: 2005



Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
 Mother was breastfeeding or intending to breastfeed at the time the birth certificate was completed.  
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

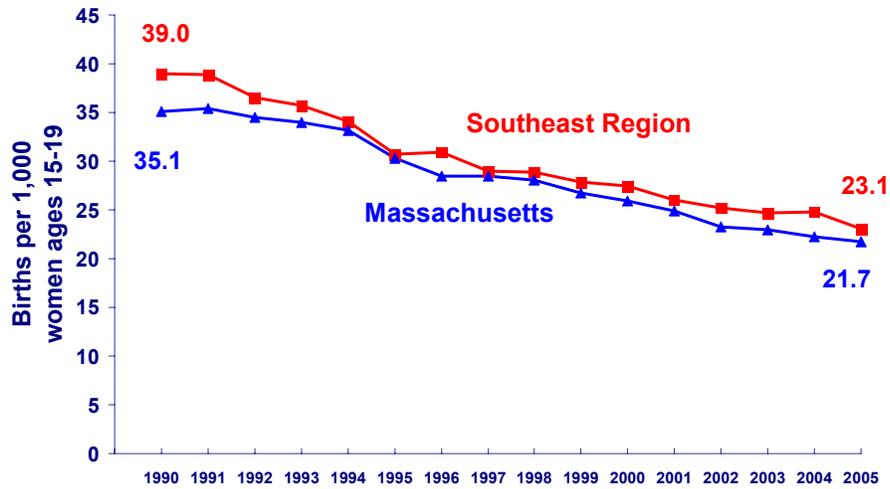
### Percent Breastfeeding Among 30 Largest Communities Massachusetts: 2005

<b>Massachusetts</b>	<b>79.3%</b>
<b>Highest</b>	
<b>Brookline</b>	<b>97.1%**</b>
<b>Cambridge</b>	<b>96.8%**</b>
<b>Newton</b>	<b>92.6%**</b>
<b>Lowest</b>	
<b>Fall River</b>	<b>44.7%*</b>
<b>New Bedford</b>	<b>54.5%*</b>
<b>Springfield</b>	<b>56.2%*</b>

Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

## Teen Birth Rate Southeast Region and Massachusetts: 1990-2005

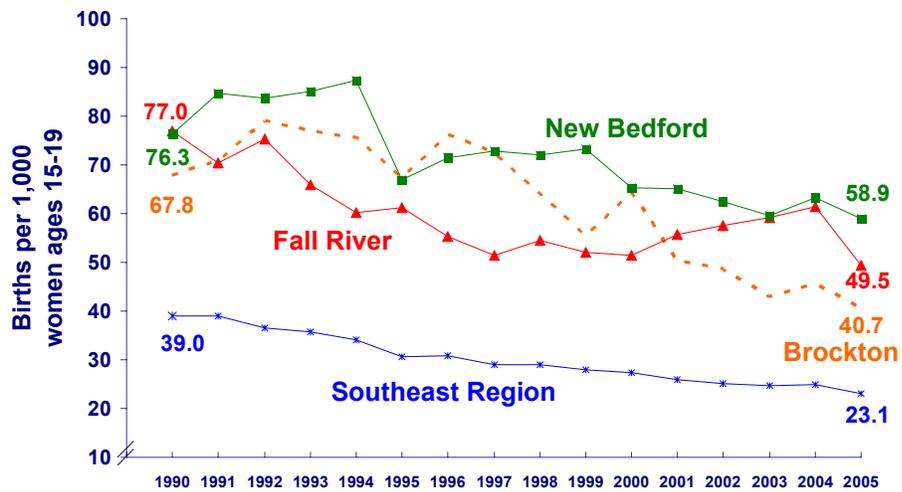
41



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

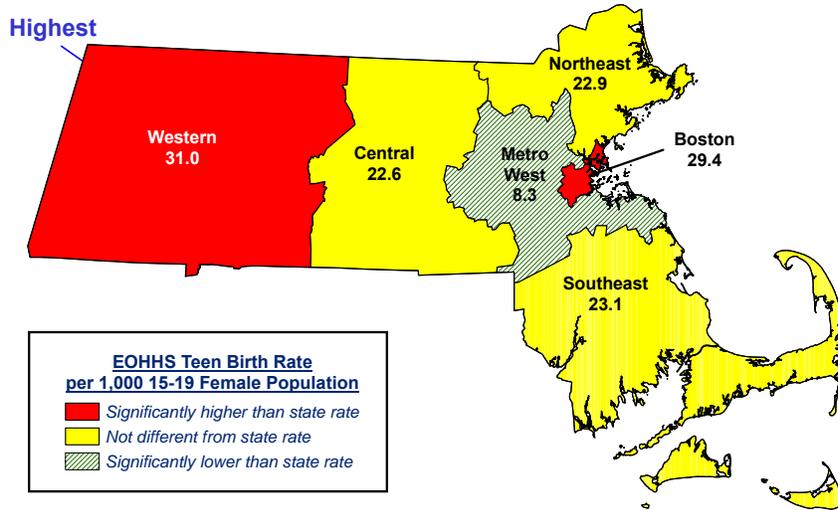
## Teen Birth Rate Selected Communities and Massachusetts: 1990-2005

42



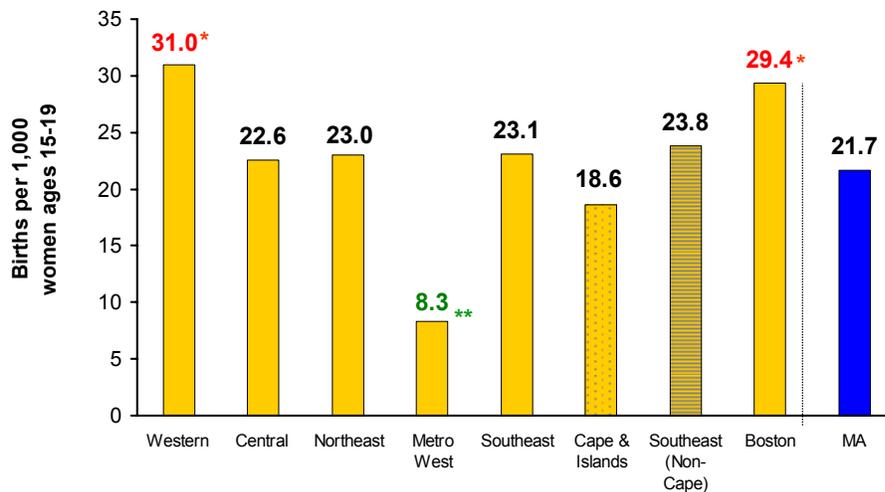
Teen birth rates are number of births to women ages 15-19 per 1000 females ages 15-19.  
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

### 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 & Evaluation Bureau, Research & Epidemiology Program

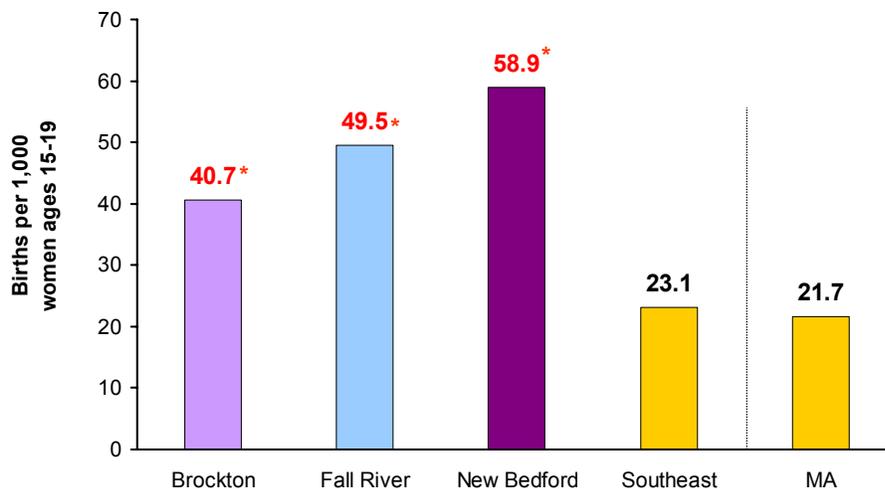
### Teen Birth Rates<sup>1</sup> by EOHHS Region Massachusetts: 2005



Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
<sup>1</sup>Teen birth rates are number of births to women ages 15-19 per 1000 females ages 15-19.  
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

## Teen Birth Rates<sup>1</sup> by EOHHS Region Selected Communities, Southeast Region and Massachusetts: 2005

45



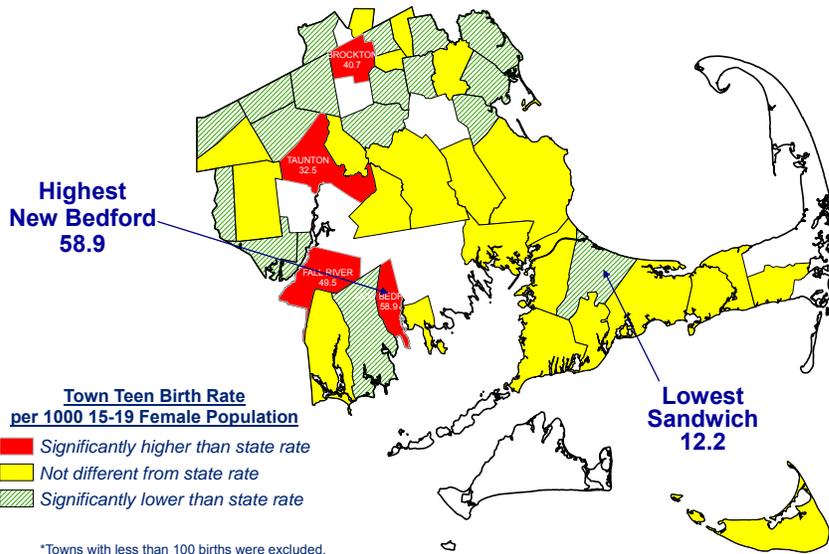
Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

<sup>1</sup>Teen birth rates are number of births to women ages 15-19 per 1000 females ages 15-19.

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

## Teen Birth Rates by Community Southeast Region: 2005

46



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

## Teen Birth Rates (Communities with Highest # of Teen Births) Massachusetts: 2005

47

Rank <sup>1</sup>		Birth Rate <sup>2</sup>	% Change 1995 & 2005
1	HOLYOKE	96.8	-23%
2	CHELSEA	75.0	-10%
3	LAWRENCE	71.7	-38% *
4	SPRINGFIELD	71.6	-14%
5	NEW BEDFORD	58.9	-12%
6	LOWELL	51.4	-39% *
7	FALL RIVER	49.5	-19%
8	LYNN	47.3	-37% *
9	BROCKTON	40.7	-40% *
10	WORCESTER	37.2	-34% *
<b>Massachusetts</b>		<b>21.7</b>	<b>-28% *</b>

<sup>1</sup> Ranking in order of highest teen birth rates among the communities with highest numbers of teen births

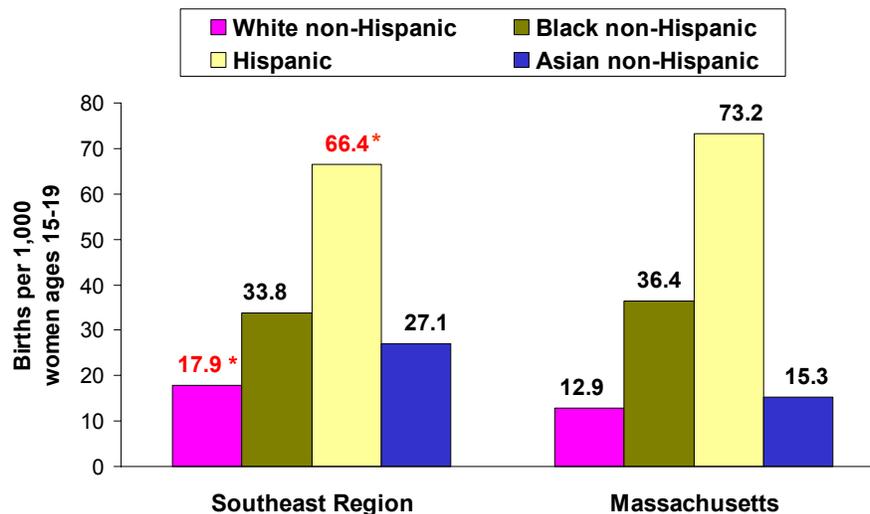
<sup>2</sup> Births to females 15-19 per 1,000 females ages 15-19

Statistically different from State (p ≤.05) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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

## Teen Birth Rates by Race and Ethnicity Southeast Region and Massachusetts: 2005

48

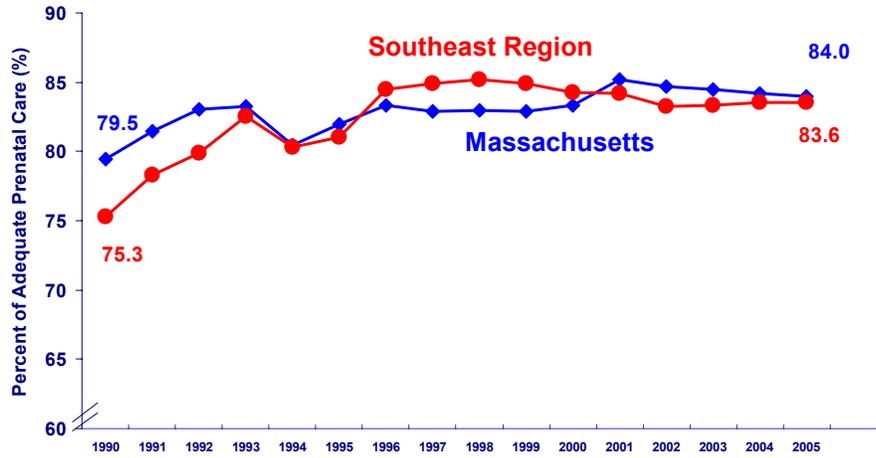


Statistically different from State (p ≤.05) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

Teen birth rates are number of births to women ages 15-19 per 1000 females ages 15-19.

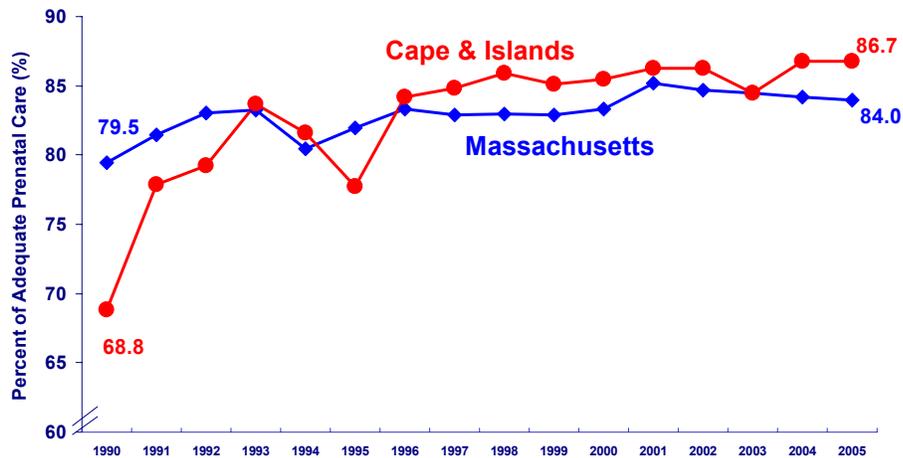
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

### Adequate Prenatal Care Southeast Region and Massachusetts: 1990-2005



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

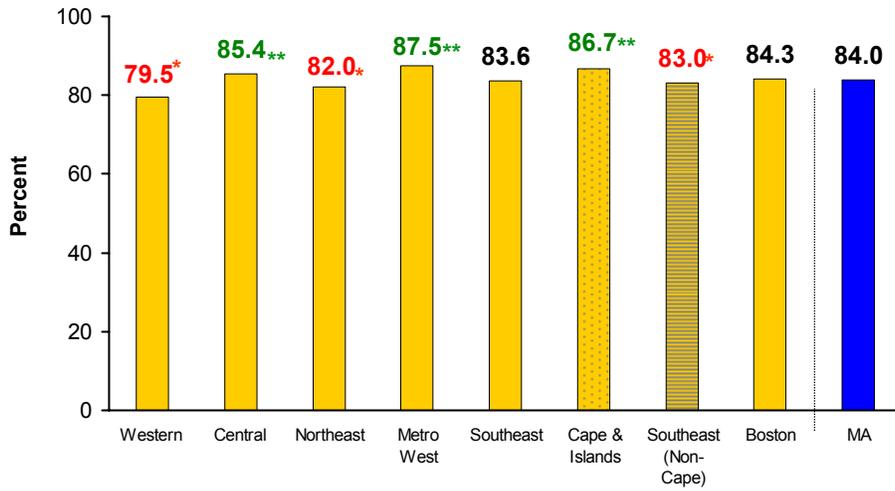
### Adequate Prenatal Care Cape & Islands and Massachusetts: 1990-2005



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

## Adequate Prenatal Care by EOHHS Region Massachusetts: 2005

51



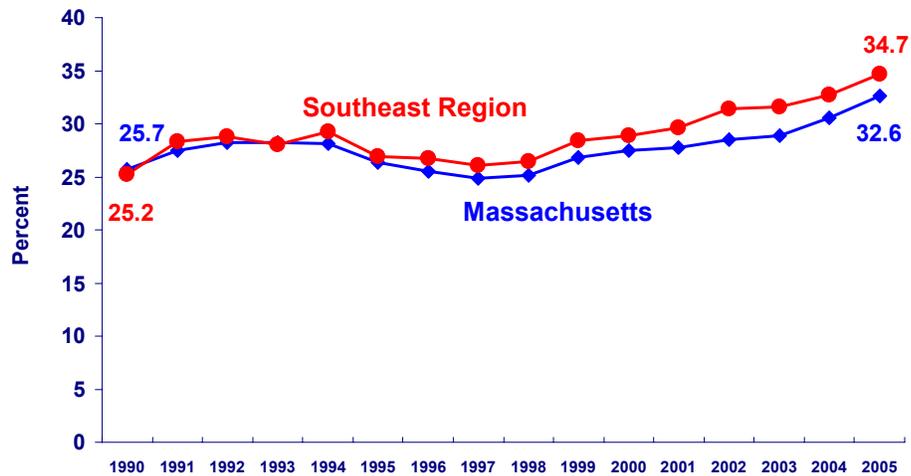
Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

Based on Adequacy of Prenatal Care Utilization (APNCU) Index.

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

## Public Source<sup>1</sup> of Payment for Prenatal Care Southeast Region and Massachusetts: 1990-2005

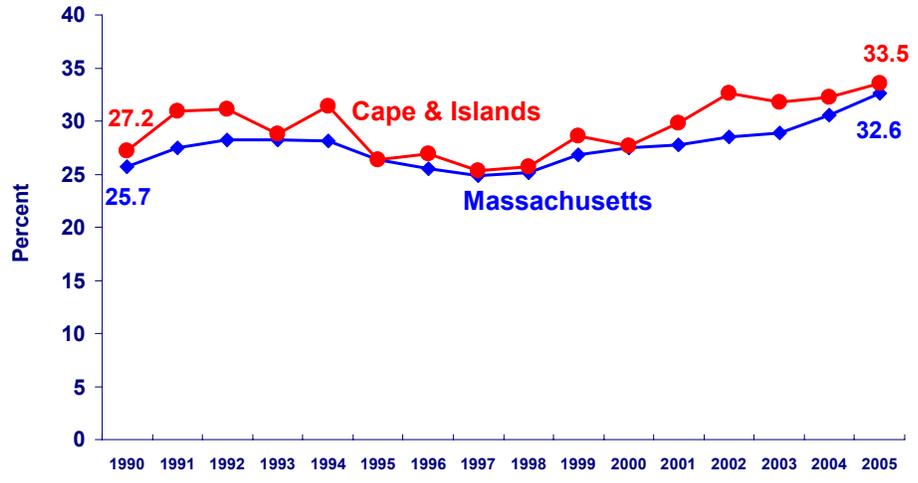
52



<sup>1</sup>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.

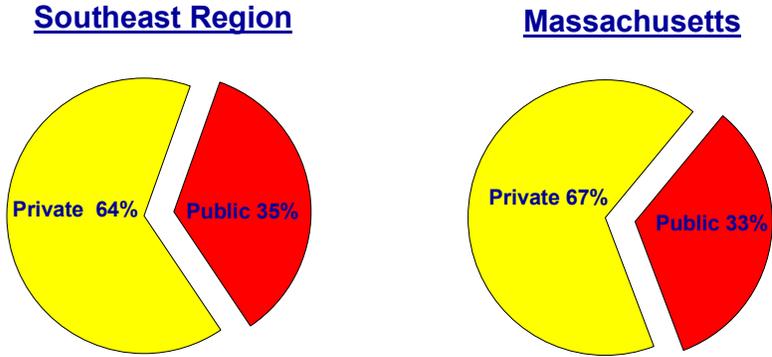
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

### Public Source<sup>1</sup> of Payment for Prenatal Care Cape & Islands and Massachusetts: 1990-2005



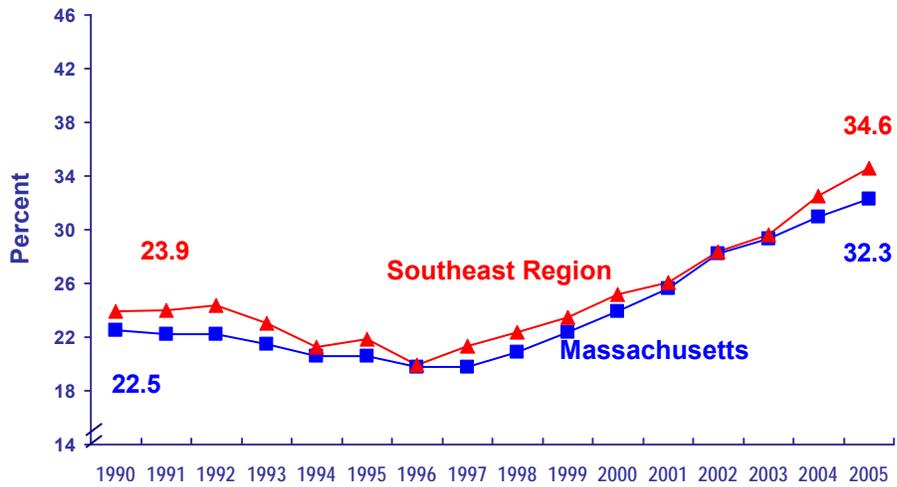
<sup>1</sup>Public: Government programs including Commonhealth, Healthy Start, Medicaid/MassHealth, or free care. Private: Commercial indemnity plan, commercial Managed care (HMO, PPO, IPP, IPA and other) or other private insurance.  
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

### Public Source<sup>1</sup> of Payment for Prenatal Care Southeast Region and Massachusetts: 2005



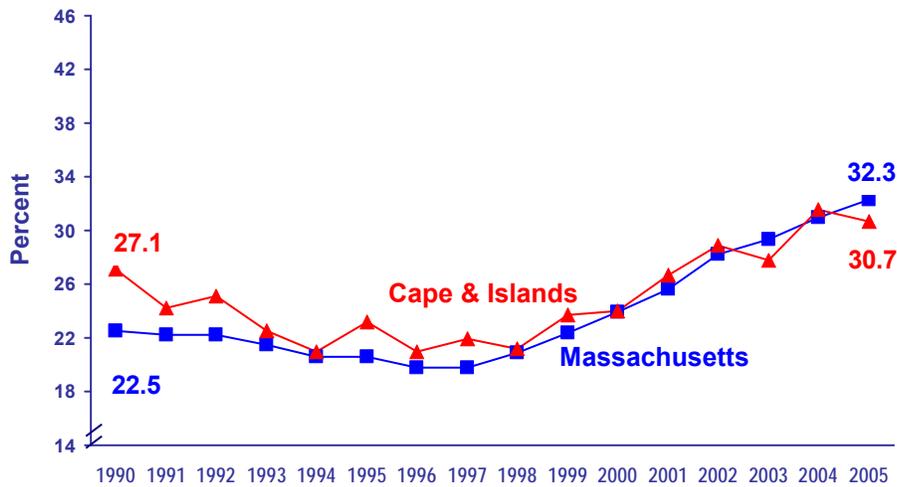
\* Statistically different from State (p ≤ .05)  
<sup>1</sup>Public: Government programs including Commonhealth, Healthy Start, Medicaid/MassHealth, or free care. Private: Commercial indemnity plan, commercial Managed care (HMO, PPO, IPP, IPA and other) or other private insurance.  
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

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



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

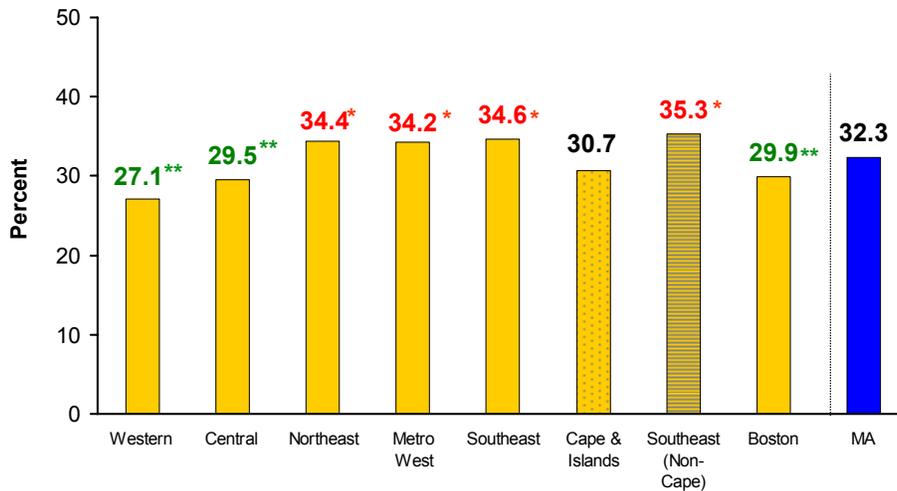
### Infants Delivered by C-Section Cape & Islands and Massachusetts: 1990-2005



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

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

57

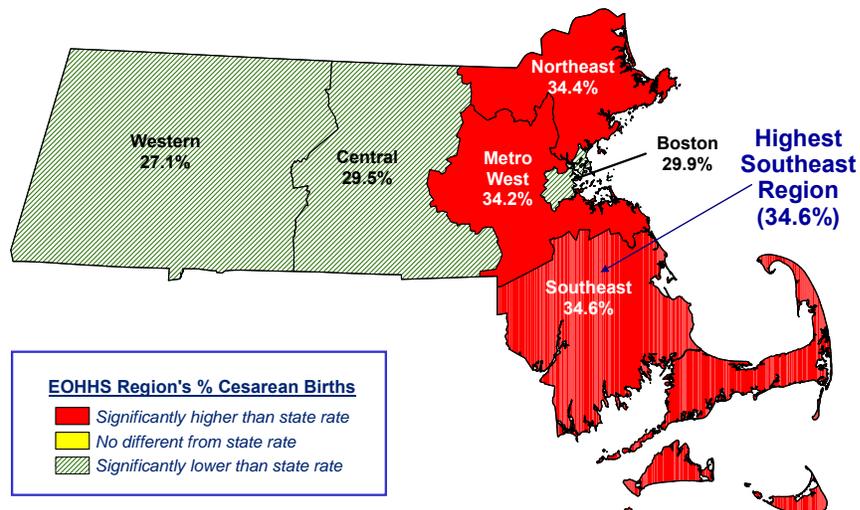


Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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

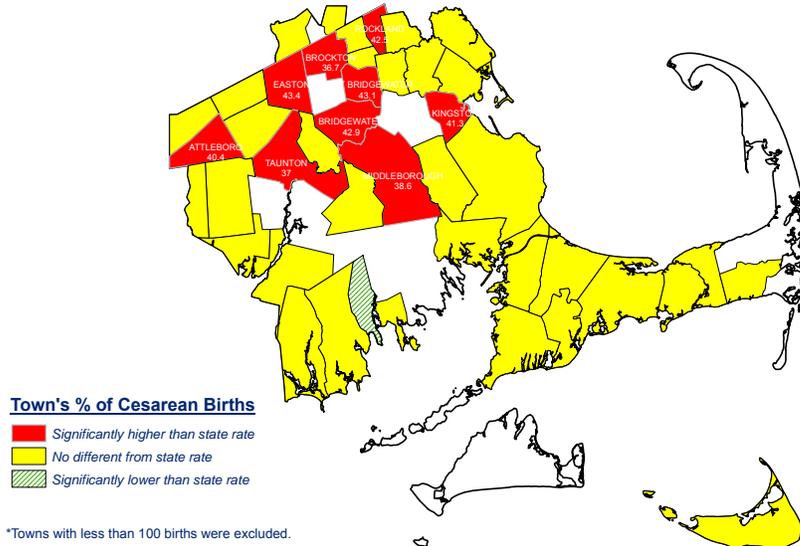
## Cesarean Deliveries by EOHHS Region Massachusetts: 2005

58



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

### Cesarean Deliveries by Community Southeast Region: 2005



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

### Summary Birth Indicators by EOHHS Region, Massachusetts: 2005

Indicator	MA Total (n=76,824)	Western (n=8,935)	Central (n=10,532)	North East (n=15,939)	Metro West (n=17,093)	Southeast (n=14,681)	Boston (n=9,644)
<b>Adequate Prenatal Care</b> (Kotelchuck index)	84.0	79.5	85.4	82.0	87.5	83.6	84.3
<b>Cesareans</b>	32.3	27.1	29.5	34.4	34.2	34.6	29.9
<b>Low Birth Weight</b> (<5.5 lb)	7.9	8.2	7.5	7.6	7.1	8.3	9.4
<b>Breastfeed</b>	79.3	68.7	79.5	77.6	88.4	71.5	86.9
<b>Public Pay for Prenatal Care</b>	32.6	47.4	27.9	33.7	17.2	34.7	46.4
<b>Smoking During Pregnancy</b>	7.1	13.5	7.6	7.2	3.2	10.2	3.9

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

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

## Summary Birth Indicators Southeast Region and Massachusetts: 2005

Indicator (as % of race group births)	MA Total (n=76,824)	Southeast (n=14,681)	Southeast (not incl. the Cape) (n=12,450)	Cape & Islands (n=2,311)
<b>Adequate Prenatal Care</b> (Kotelchuck index)	<b>84.0</b>	83.6	83.0	<b>86.7</b>
<b>Cesareans</b>	<b>32.3</b>	34.6	35.3	30.7
<b>Low Birth weight</b> (<5.5 lb)	<b>7.9</b>	8.3	8.6	<b>6.4</b>
<b>Breastfeeding</b>	<b>79.3</b>	71.5	69.1	<b>83.9</b>
<b>Public Pay for Prenatal Care</b>	<b>32.6</b>	34.7	34.8	33.5
<b>Smoking during pregnancy</b>	<b>7.1</b>	10.2	10.1	10.1

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

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

## Summary Birth Indicators Selected Communities in the Southeast Region Massachusetts: 2005

Indicator	MA Total (n=76,824)	Brockton (n=1,541)	Fall River (n=1,196)	New Bedford (n=1,391)	Southeast (n=14,681)
<b>Adequate Prenatal Care</b> (Kotelchuck index)	<b>84.0</b>	74.6	85.7	77.4	83.6
<b>Cesareans</b>	<b>32.3</b>	36.7	34.4	<b>27.7</b>	34.6
<b>Low Birth Weight</b> (<5.5 lb)	<b>7.9</b>	11.5	7.9	10.6	8.3
<b>Breastfeeding</b>	<b>79.3</b>	77.3	44.7	54.5	71.5
<b>Public Pay for Prenatal Care</b>	<b>32.6</b>	60.8	61.9	59.1	34.7
<b>Smoking during pregnancy</b>	<b>7.1</b>	10.2	18.4	16.1	10.2

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

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

## Summary Birth Indicators by EOHHS Region

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Indicator	MA Total	Western	Central	North East	Metro West	Southeast	Boston
<b>Infant Mortality Rate</b> (2002-2005) (infant deaths per 1,000 live births)	<b>4.9</b>	5.6	5.4	4.7	4.0	4.8	5.7
<b>Teen birth rate</b> (2005) (births to women ages 15-19 per 1,000 women ages 15-19)	<b>21.7</b>	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 & Evaluation Bureau, Research & Epidemiology Program

## Teen Birth Rate Largest Communities, Southeast, Massachusetts: 2005

64

Indicator	MA Total	Brockton	Fall River	New Bedford	Southeast
<b>Teen birth rate</b> (2005) (births to women ages 15-19 per 1000 women ages 15-19)	<b>21.7</b>	40.7	49.5	58.9	23.1

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

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

## Summary Birth Indicators Southeast Region and Massachusetts

Indicator	MA Total	Southeast	Southeast (not including Cape & Islands)	Cape & Islands
<b>Infant Mortality Rate</b> (2002-2005) (infant deaths per 1000 live births)	<b>4.9</b>	4.8	4.7	4.8
<b>Teen birth rate (2005)</b> (births to women ages 15-19 per 1000 women ages 15-19)	<b>21.7</b>	23.1	23.8	18.6

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

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

# **LEADING CAUSES OF DEATH**



## Leading Causes of Death Southeast Region and Massachusetts: 2005

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<b>Southeast Region</b> N=11,675			<b>Massachusetts</b> N=53,776		
Heart Disease	3,023	25.9%*	Heart Disease	13,248	24.6%
Cancer	2,766	23.7%	Cancer	13,159	24.5%
Stroke	647	5.5%	Stroke	2,979	5.5%
All Injuries	614	5.3%	All Injuries	2,657	4.9%
Chronic Lower Respiratory Disease	586	5.0%	Chronic Lower Respiratory Disease	2,643	4.9%
Influenza and pneumonia	437	3.7%	Influenza and pneumonia	1,932	3.6%
Alzheimer's	387	3.3%	Alzheimer's	1,635	3.0%
Nephritis	290	2.5%	Nephritis	1,403	2.6%
Diabetes	258	2.2%	Diabetes	1,271	2.4%
Septicemia	202	1.7%	Septicemia	982	1.8%

Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

## Leading Causes of Death Southeast v. Cape & Islands: 2005

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<b>Southeast (Non-Cape) (N=8,805)</b>			<b>Cape &amp; Islands (N=2,869)</b>		
1. Heart Disease	2,302	25.9%*	1. Heart Disease	721	25.1%
2. Cancer	2,059	23.7%	2. Cancer	707	24.6%
3. All Injuries	486	5.5%	3. Stroke	168	5.9%
4. Stroke	479	5.4%	4. Chronic Lower Respiratory Disease (COPD)	145	5.1%
5. Chronic Lower Respiratory Disease (COPD)	441	5.0%	5. Alzheimer's	135	4.7%*
6. Influenza and pneumonia	341	3.9%	6. All Injuries	128	4.5%
7. Alzheimer's	252	2.9%	7. Influenza and pneumonia	96	3.4%
8. Nephritis	226	2.6%	8. Nephritis	64	2.2%
9. Diabetes	198	2.3%	9. Diabetes	60	2.1%
10. Septicemia	168	1.9%	10. Septicemia	34	1.2%

Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  = Same Rank  
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

## Leading Causes of Death Cape & Islands and Massachusetts: 2005

<b>Cape &amp; Islands</b> N=2,869			<b>Massachusetts</b> N=53,776		
Heart Disease	721	25.1%	Heart Disease	13,248	24.6%
Cancer	707	24.6%	Cancer	13,159	24.5%
Stroke	168	5.9%	Stroke	2,979	5.5%
Chronic Lower Respiratory Disease (formerly COPD)	145	5.1%	All Injuries	2,657	4.9%
Alzheimer's	135	4.7%*	Chronic Lower Respiratory Disease (formerly COPD)	2,643	4.9%
All Injuries	128	4.5%	Influenza and pneumonia	1,932	3.6%
Influenza and pneumonia	96	3.3%	Alzheimer's	1,635	3.0%
Nephritis	64	2.2%	Nephritis	1,403	2.6%
Diabetes	60	2.1%	Diabetes	1,271	2.4%
Parkinson's Disease	36	1.3%	Septicemia	982	1.8%

Statistically different from State (p < .05) Red (\*) = Statistically worse, Green (\*\*) = Statistically better

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

# **CHRONIC DISEASE OUTCOMES AND OVERWEIGHT/OBESITY**

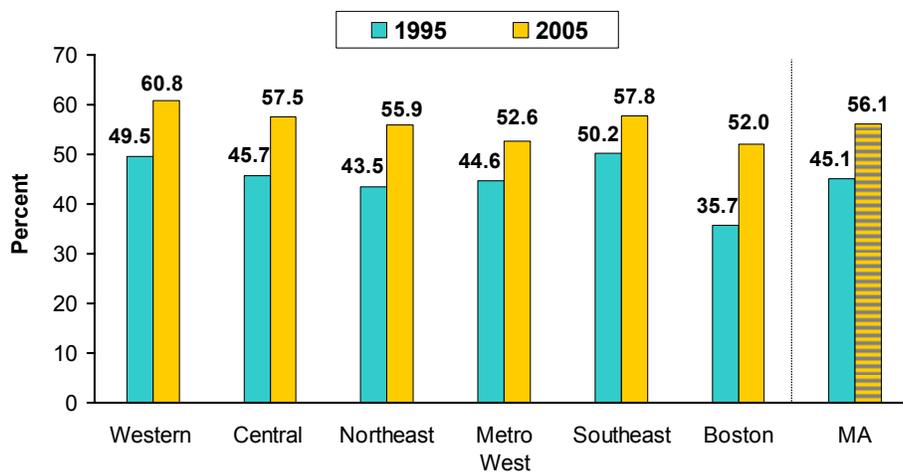


## Thresholds for Defining Overweight and Obesity

<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
<b>5'4"</b>	<b>145</b>	<b>174</b>
5'6"	155	186
5'8"	164	197
6'	184	221
6'2"	195	234

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

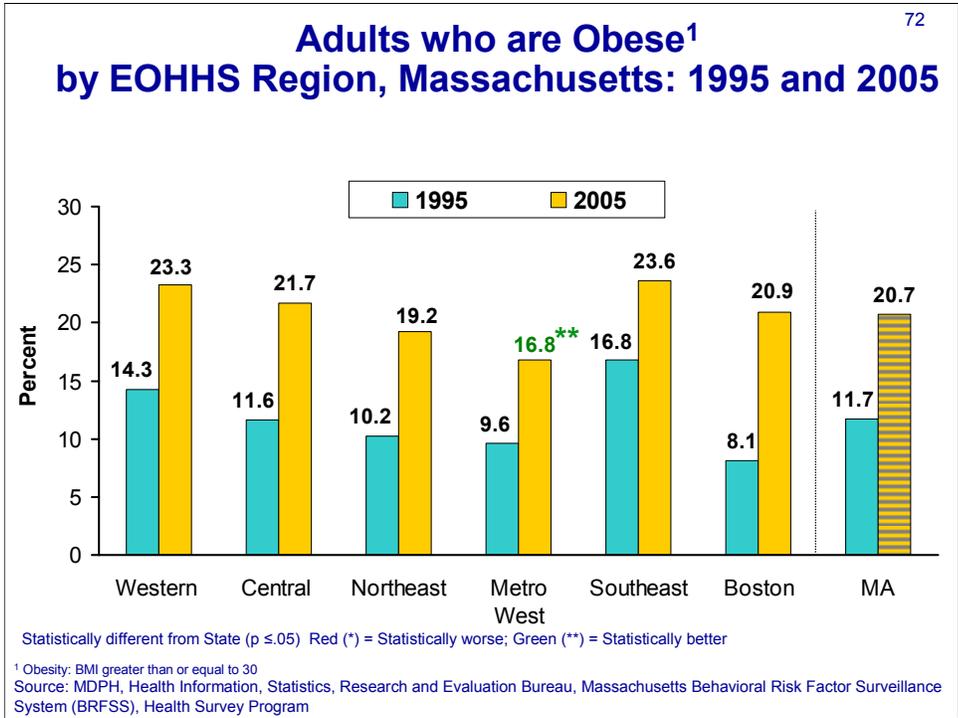
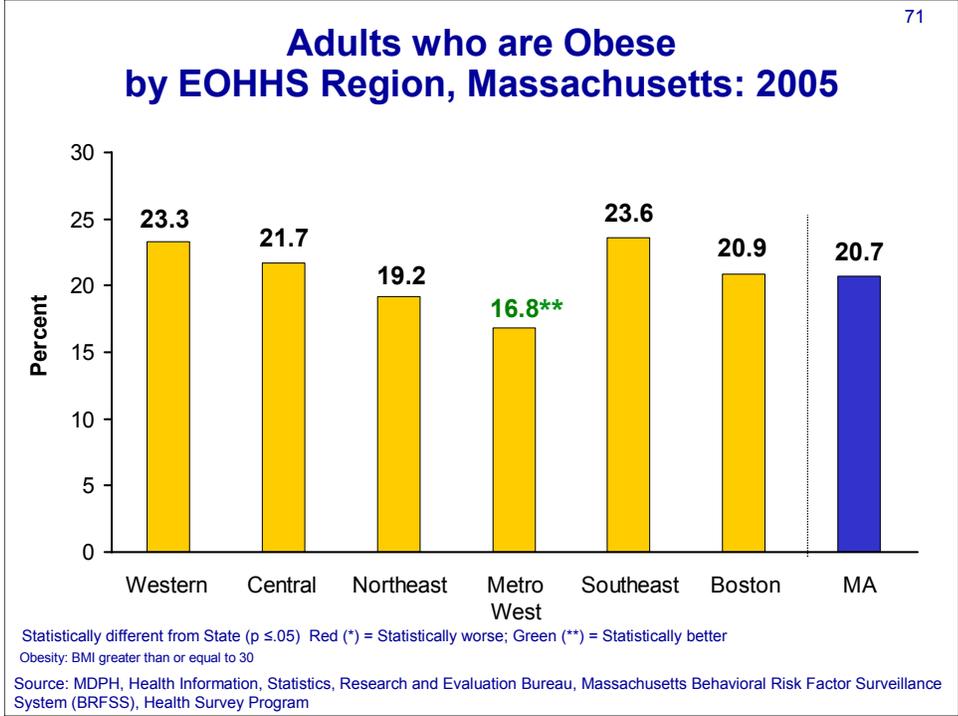
## Adults who are Overweight<sup>1</sup> by EOHHS Region, Massachusetts: 1995 and 2005



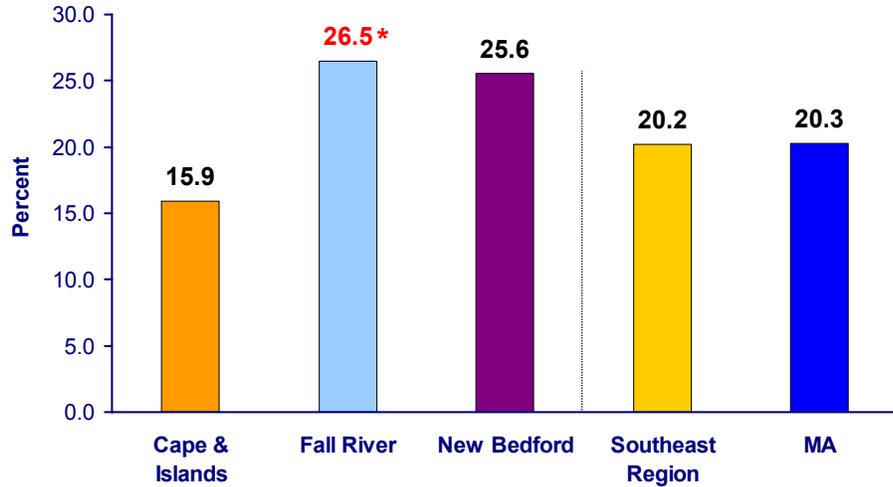
Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

<sup>1</sup> 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



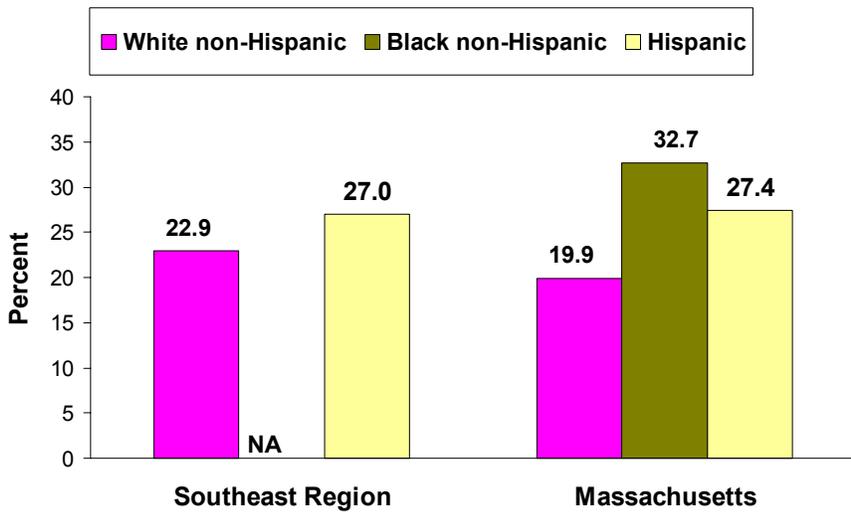
### Adults who are Obese Southeast, Cities, Cape, and Massachusetts: 2006



Statistically different from State (p ≤.05) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
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

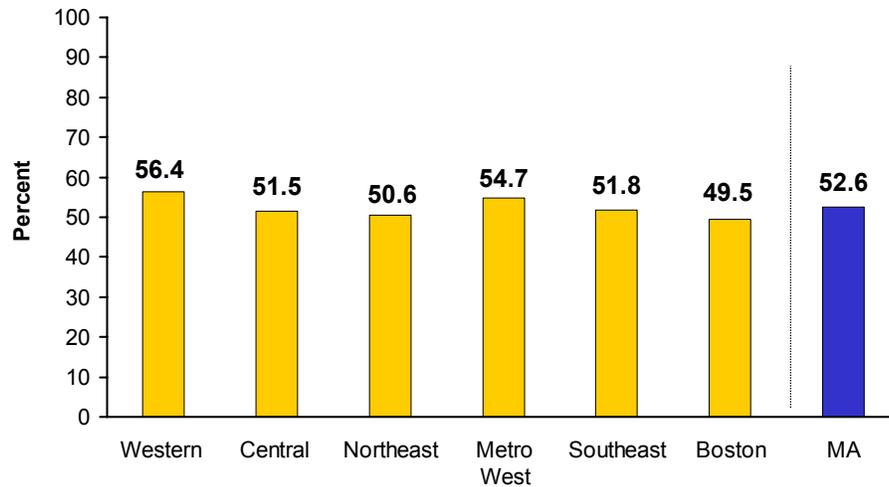
### Adult Obesity by Race and Ethnicity Southeast Region and Massachusetts: 2005



Statistically different from State (p ≤.05) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

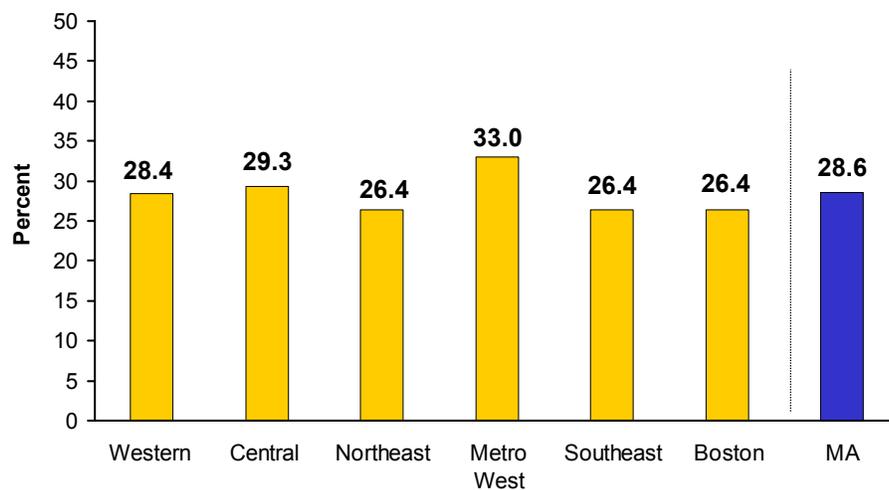
Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), Health Survey Program

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



Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), Health Survey Program

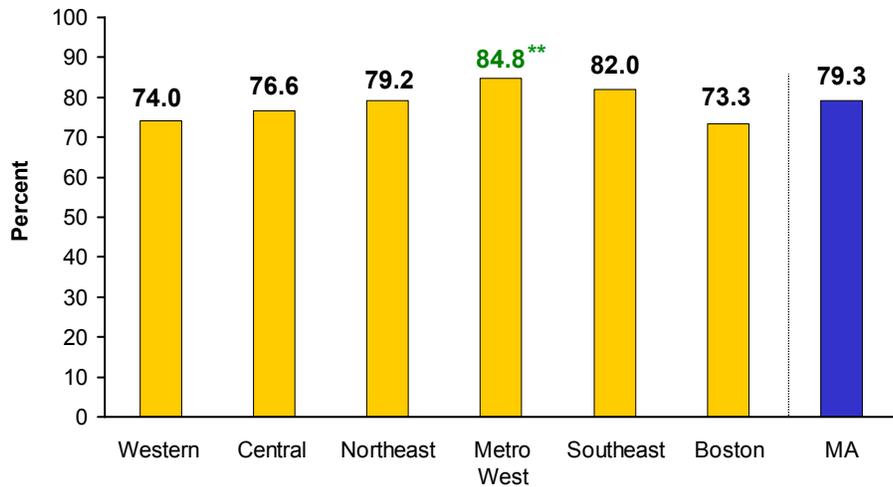
### Adults who have 5+ Servings of Fruit or Vegetables by EOHHS Region, Massachusetts: 2005



Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), Health Survey Program

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### Adults who had their Cholesterol Checked in Past 5 Years by EOHHS Region, Massachusetts: 2005

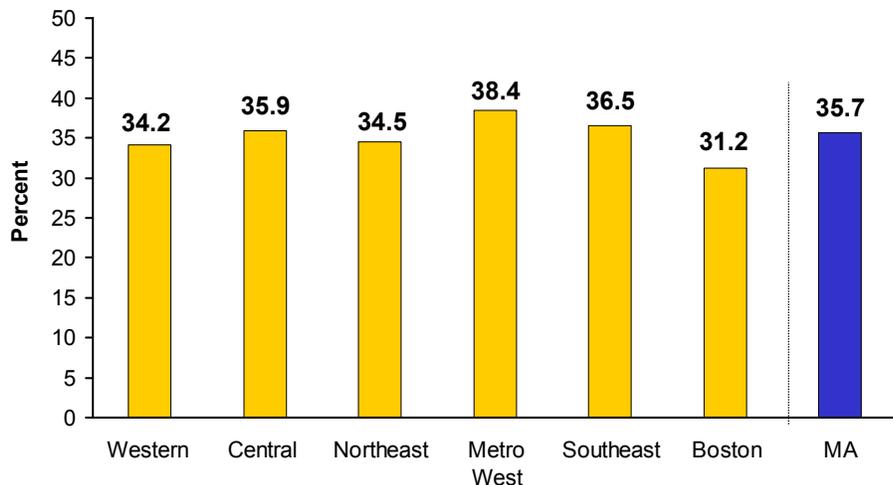


Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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

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### Adults who were Told by a Health Care Provider that they have High Cholesterol<sup>1</sup> by EOHHS Region Massachusetts: 2005

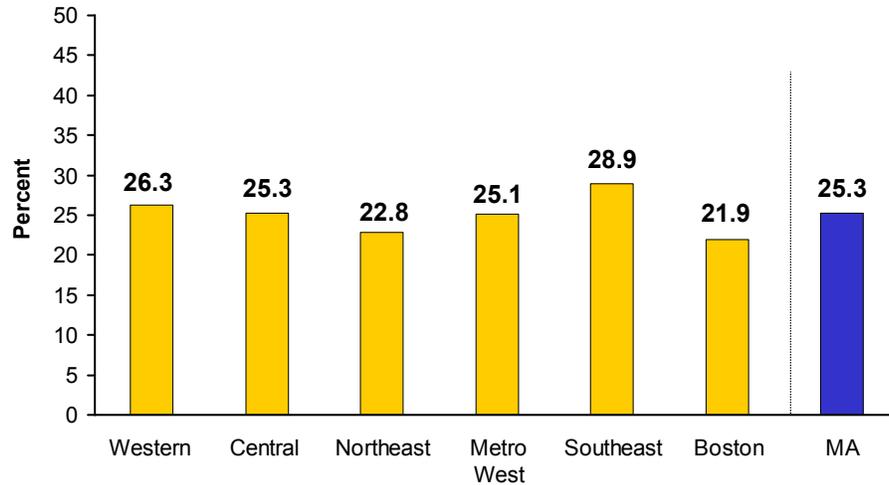


\* Statistically different from State ( $p \leq .05$ )

<sup>1</sup> Among those who reported having their cholesterol checked

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

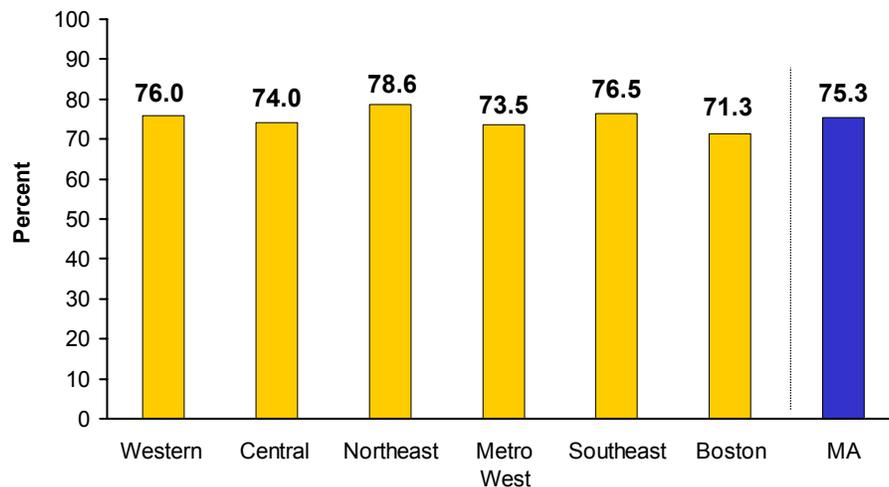
### Adults who were told by a health care provider that they have high blood pressure by EOHHS Region Massachusetts: 2005



Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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

### Adults who take Medicine for High Blood Pressure<sup>1</sup> by EOHHS Region, Massachusetts: 2005



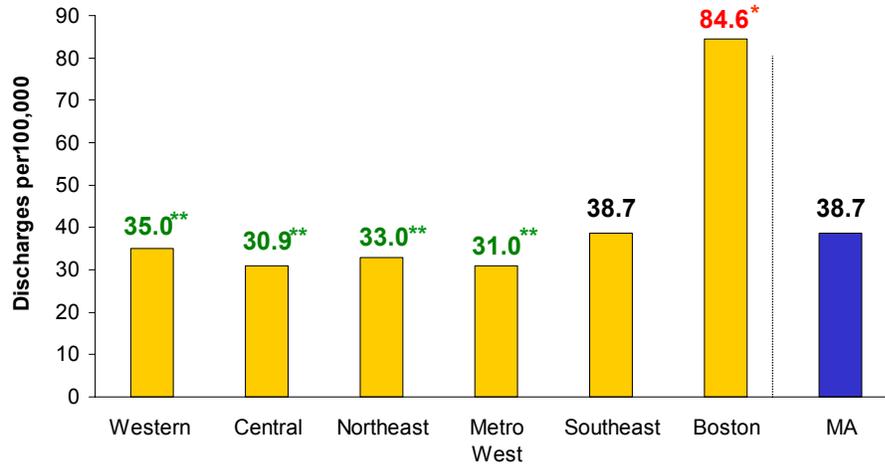
Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

<sup>1</sup> Among those who reported having high blood pressure

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

## Hypertension Hospital Discharges by EOHHS Region, Massachusetts: 2003-2005

81



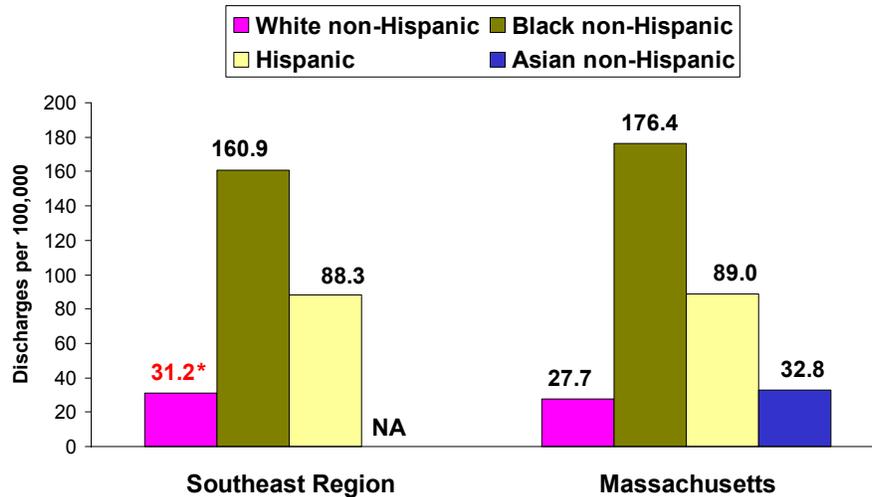
Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

Age-adjusted to the 2000 US standard population.

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

## Hypertension Hospital Discharge Rate by Race/Ethnicity Southeast Region, Massachusetts: 2003-2005

82



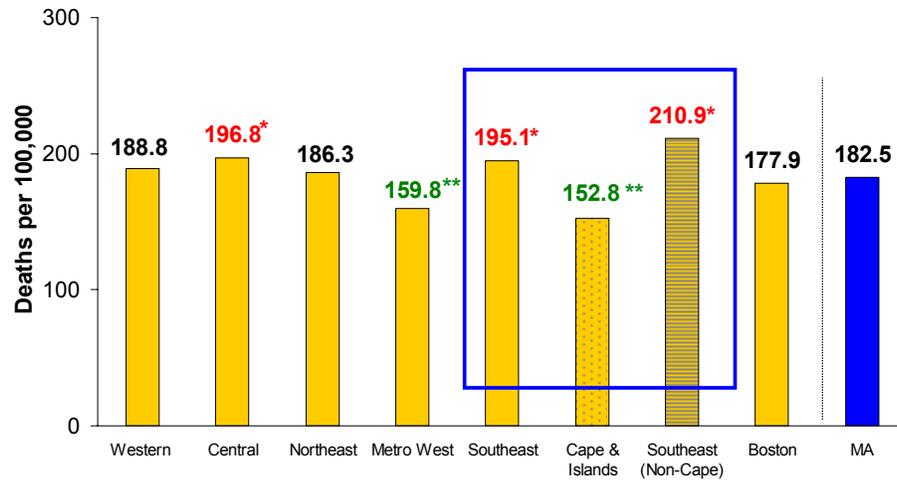
Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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

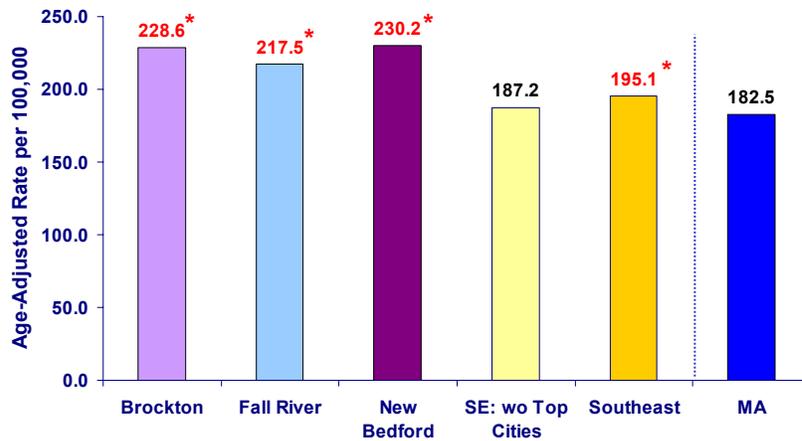
83



Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
 Age-adjusted to the 2000 US standard population.  
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

## Heart Disease Mortality Rates Southeast, Cities, and Massachusetts: 2003-2005

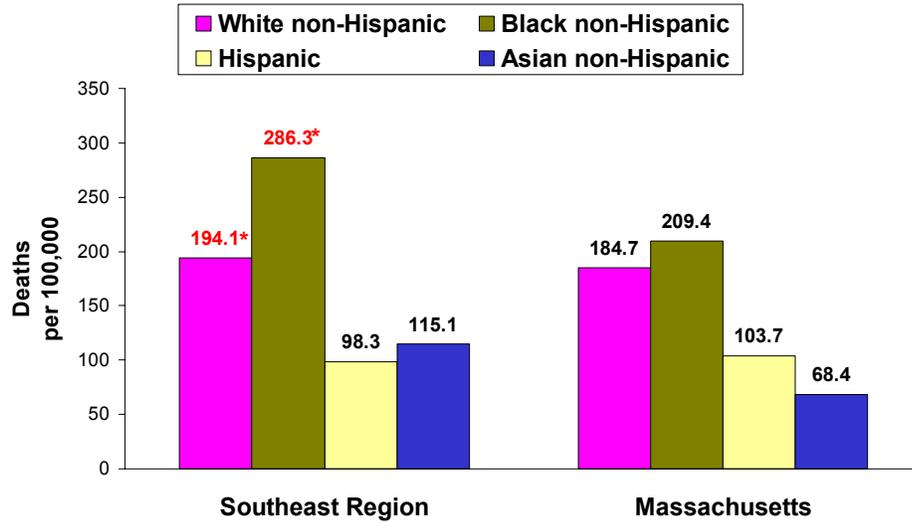
84



Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
 Age-adjusted to the 2000 US standard population.  
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

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

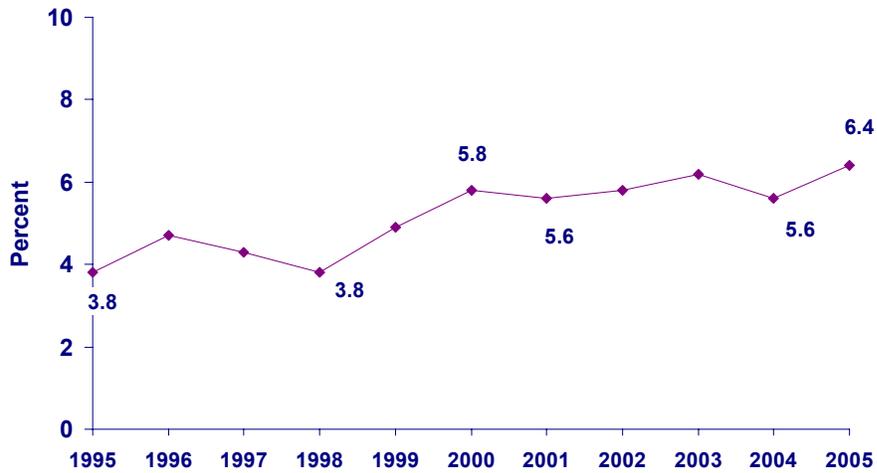
85



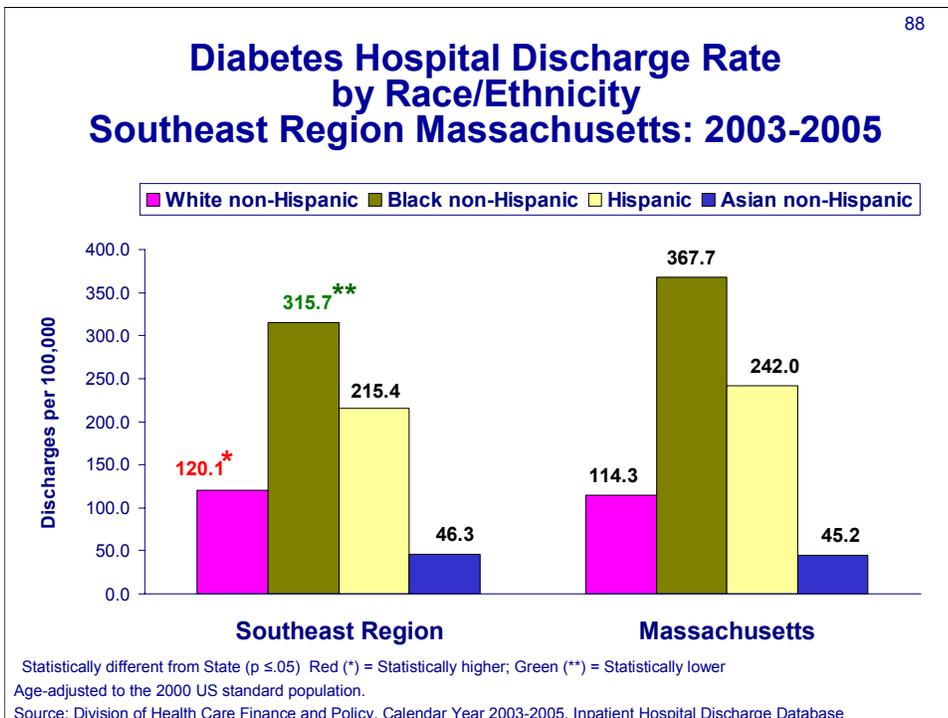
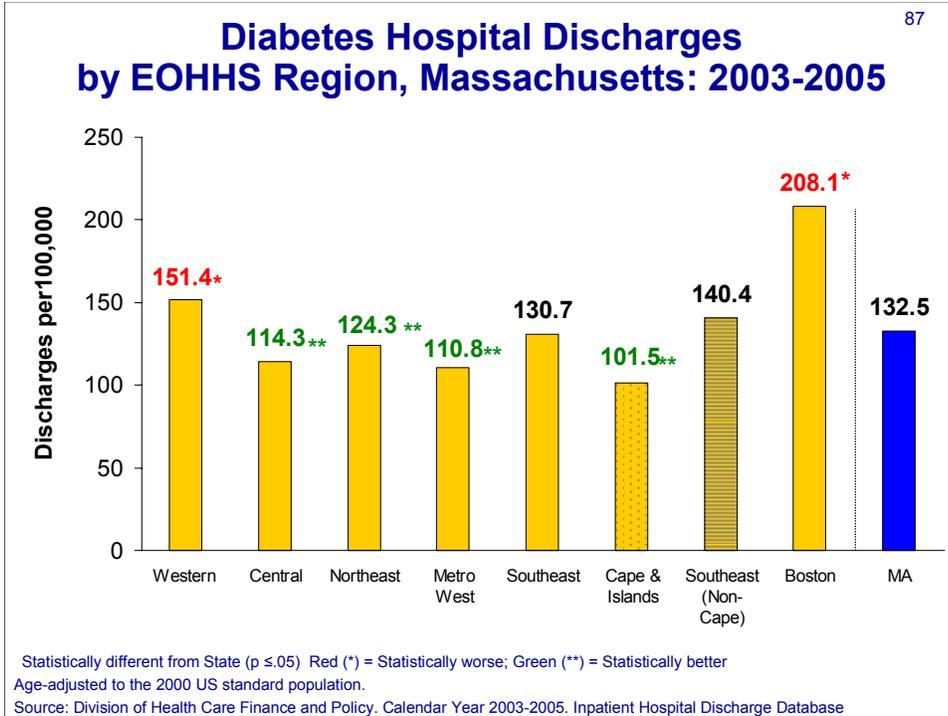
Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
 Age-adjusted to the 2000 US standard population.  
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

## Prevalence of Diabetes Massachusetts: 1994-2005

86

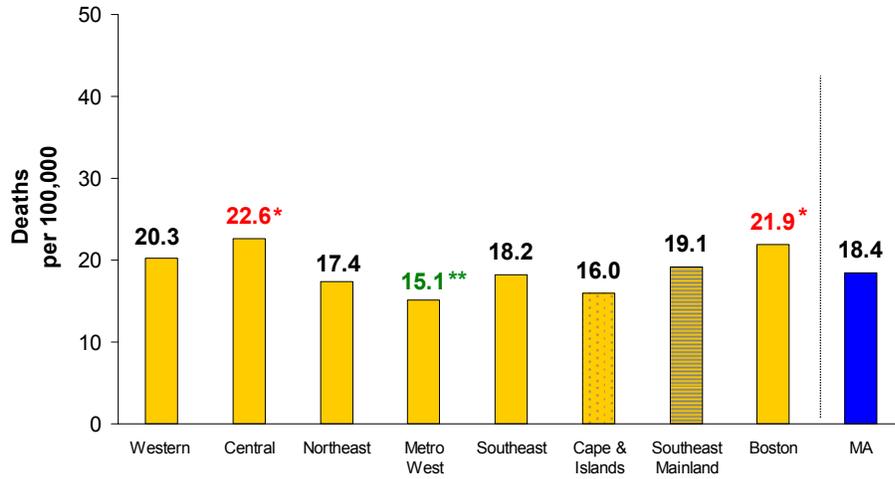


Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), Health Survey Program



## Diabetes Mortality Rates by EOHHS Region Massachusetts: 2003-2005

89



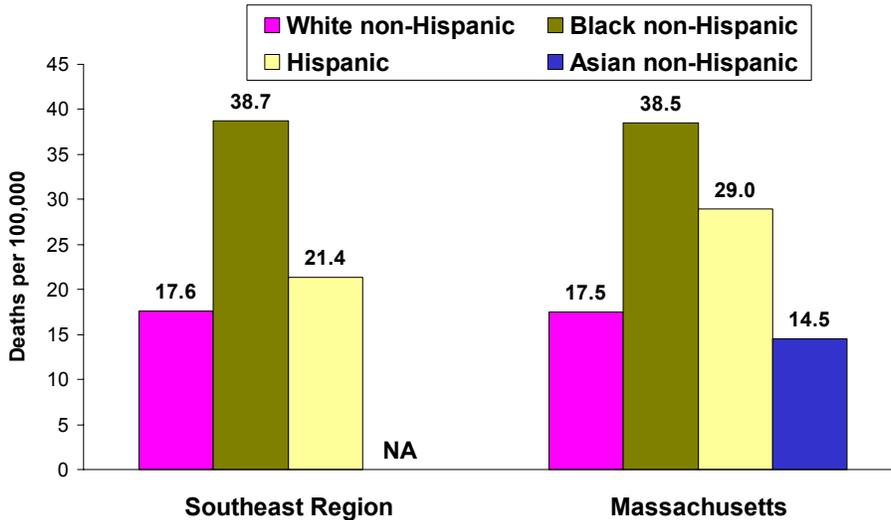
Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

Age-adjusted to the 2000 US standard population.

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

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

90

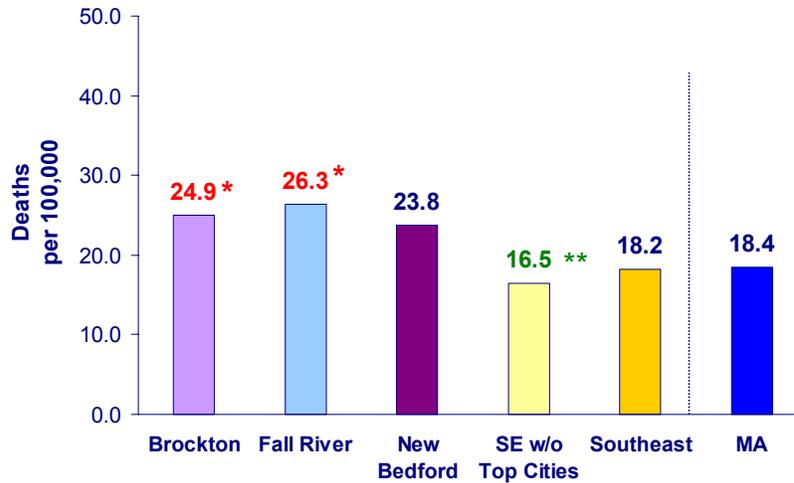


Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

Age-adjusted to the 2000 US standard population.

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

### Diabetes Mortality Rates Southeast, Cities, and Massachusetts: 2003-2005



Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
 Age-adjusted to the 2000 US standard population.  
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

### Summary Indicators for Overweight/Obesity by EOHHS Region, Massachusetts: 2005<sup>92</sup>

Indicator	MA Total	Western	Central	North East	Metro West	Southeast	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, Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), Health Survey Program

## Summary Indicators for Chronic Disease Outcomes for Overweight/Obesity by EOHHS Region

Indicator	MA Total	Western	Central	North East	Metro West	Southeast	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)

## Summary Indicators for Chronic Disease Outcomes for Overweight/Obesity Southeast Region and Massachusetts: 2003-2005

Indicator	MA Total	Southeast	Southeast (not including Cape & Islands)	Cape & Islands
% Obese Adults (2006)	20.3	20.2	NA	15.9
Hypertension Hospital Discharges	38.7	38.7	43.6	23.1
Heart Disease Death Rate	182.5	195.1	210.9	152.8
Diabetes Hospital Discharges	132.5	130.7	140.4	101.5
Diabetes Death Rate	18.4	18.2	19.1	15.9

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

## Summary Indicators for Chronic Disease Outcomes for Overweight/Obesity for Communities in the SE Region

Indicator	MA Total	Brockton	Fall River	New Bedford	Southeast
% Obese Adults	20.7	NA	31.7	31.9	23.6
Hypertension Hospital Discharges (2003-2005)	38.7	102.7	40.4	56.4	38.7
Heart Disease Death Rate (2003-2005)	182.5	228.6	217.5	230.2	195.1
Diabetes Hospital Discharges (2003-2005)	132.5	226.1	179.3	182.0	130.7
Diabetes Death Rate (2003-2005)	18.4	24.9	26.3	23.8	18.2

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

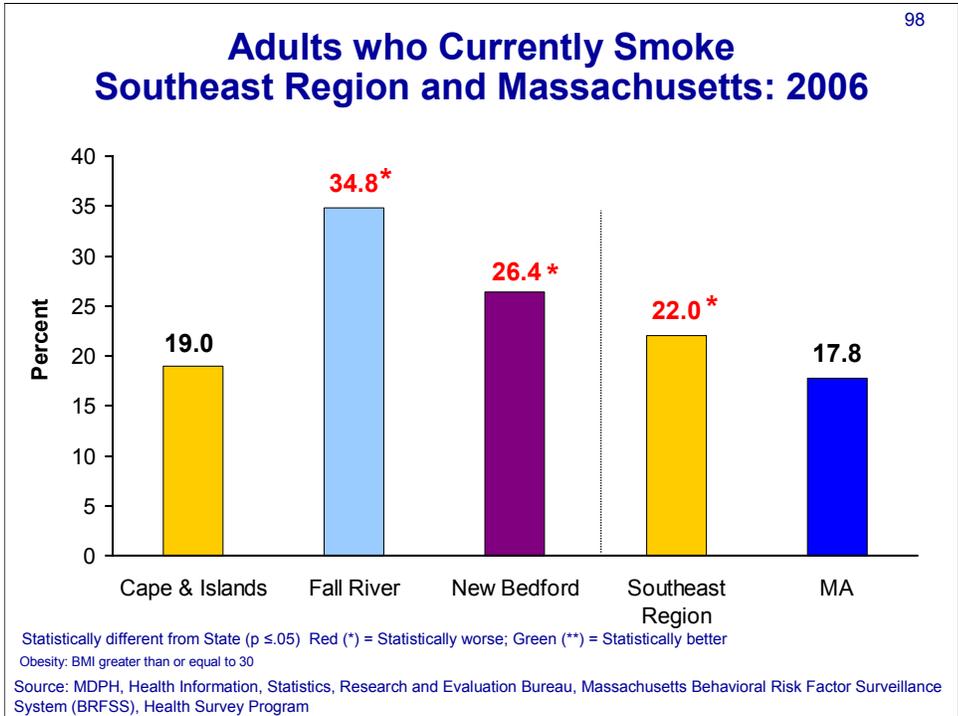
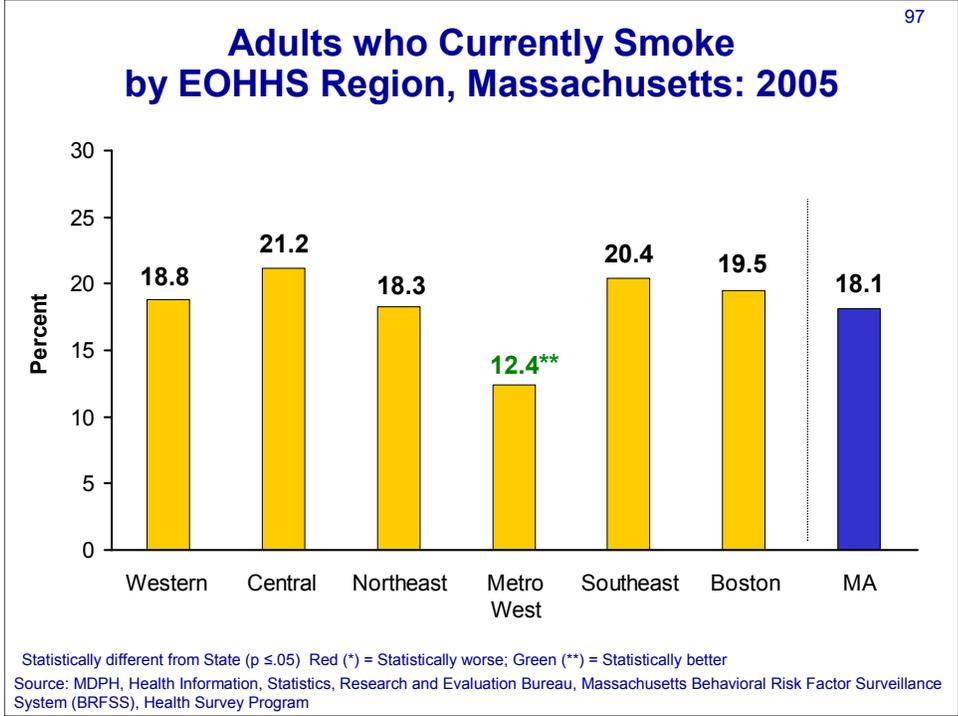
## Summary Indicators for Chronic Disease Outcomes for Overweight/Obesity by Southeast Region, Cape & Islands and Massachusetts: 2003-2005

Indicator	MA Total	Southeast	Cape & Islands
Hypertension Hospital Discharges	38.7	38.7	23.1
Heart Disease Death Rate	182.5	195.1	152.8
Diabetes Hospital Discharges	132.5	130.7	101.5
Diabetes Death Rate	18.4	18.2	15.9

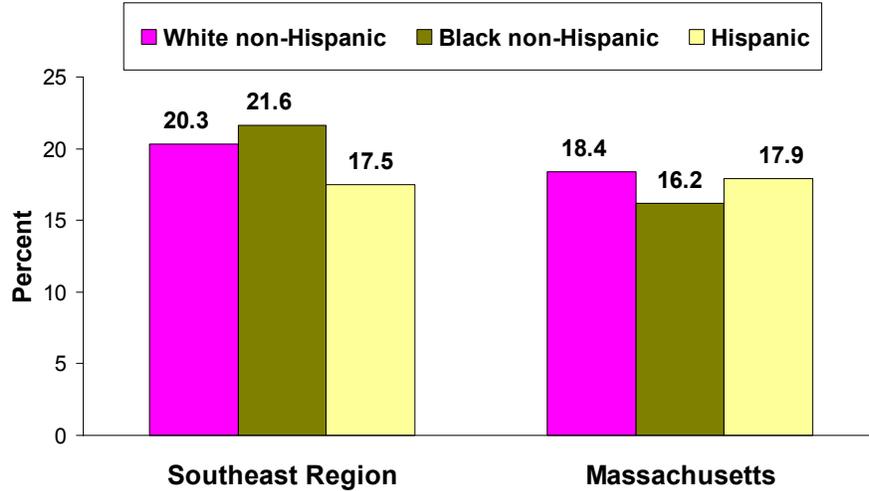
 Better Outcome (significantly different from state)  Worse Outcome (significantly different from state)

# CANCER





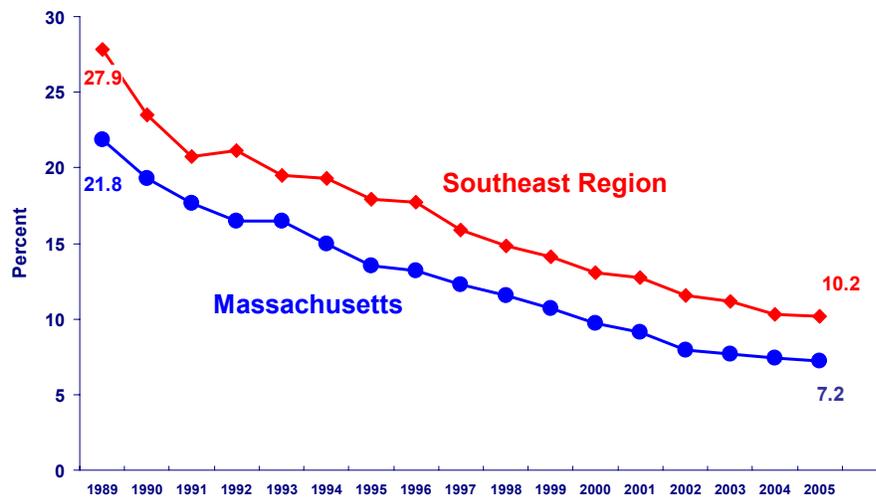
### Current Smoker by Race and Ethnicity Southeast Region and Massachusetts: 2005



Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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

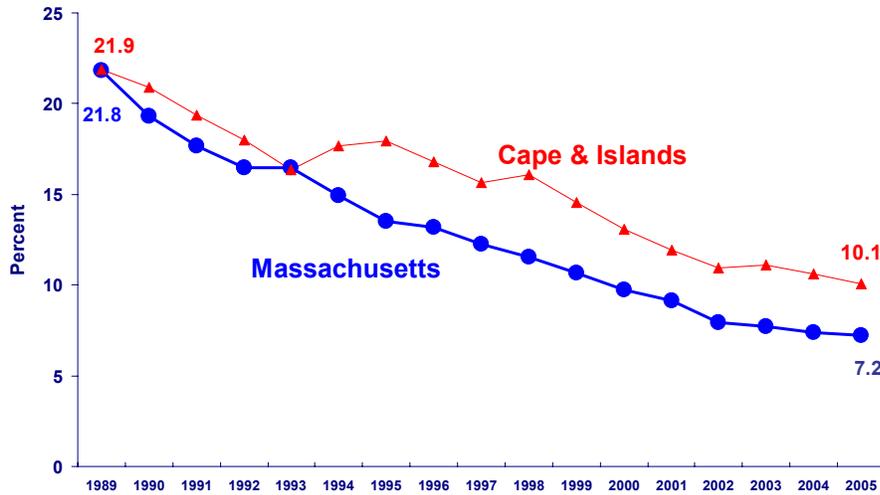
### Smoking During Pregnancy Southeast Region and Massachusetts: 1990-2005



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

## Smoking During Pregnancy Cape & Islands and Massachusetts: 1990-2005

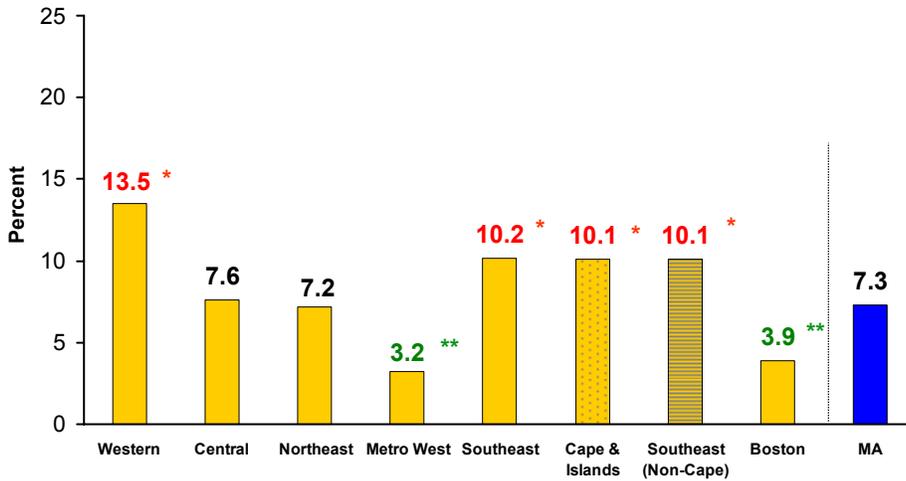
101



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

## Smoking During Pregnancy by EOHHS Region Massachusetts: 2005

102



Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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

## Percent of Mothers Smoking During Pregnancy for Largest Communities Southeast Region: 2005

	<u>%</u>	<u>Smokers</u>	<u>Births</u>
Massachusetts	7.2%	5,555	76,653
Southeast Region	<b>10.2%*</b>	1,486	14,681
<b><u>Lowest</u></b>			
Marshfield	2.4%**	8	290
Easton	3.0%**	6	205
Stoughton	4.6%**	13	283
<b><u>Highest</u></b>			
Wareham	<b>19.7%*</b>	50	254
Fall River	<b>18.4%*</b>	220	1,196
Taunton	<b>17.1%*</b>	126	737
New Bedford	<b>16.1%*</b>	224	1,391

Statistically different from State (p ≤.05) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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

## Percent of Mothers Smoking During Pregnancy by Communities Cape & Islands: 2005

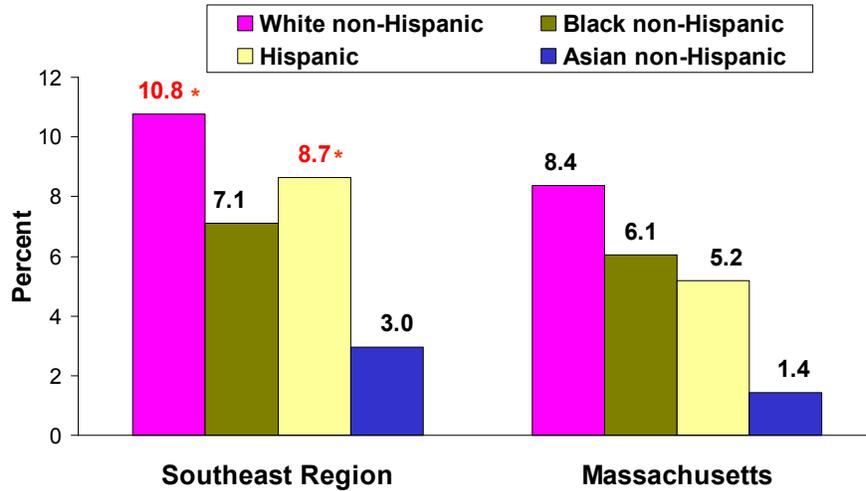
	<u>%</u>	<u>Smokers</u>	<u>Births</u>
Massachusetts	7.2%	5,555	76,824
Southeast Region	<b>10.2%*</b>	1,486	14,681
Cape & Islands	<b>10.1%*</b>	232	2,311
<b><u>Lowest</u></b>			
Sandwich	5.8%	12	208
Nantucket	4.5%	7	155
<b><u>Highest</u></b>			
Dennis	<b>22.1%*</b>	27	123
Falmouth	11.3%	33	291

Statistically different from State (p ≤.05) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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

### Smoking During Pregnancy by Race and Ethnicity Southeast Region and Massachusetts: 2005

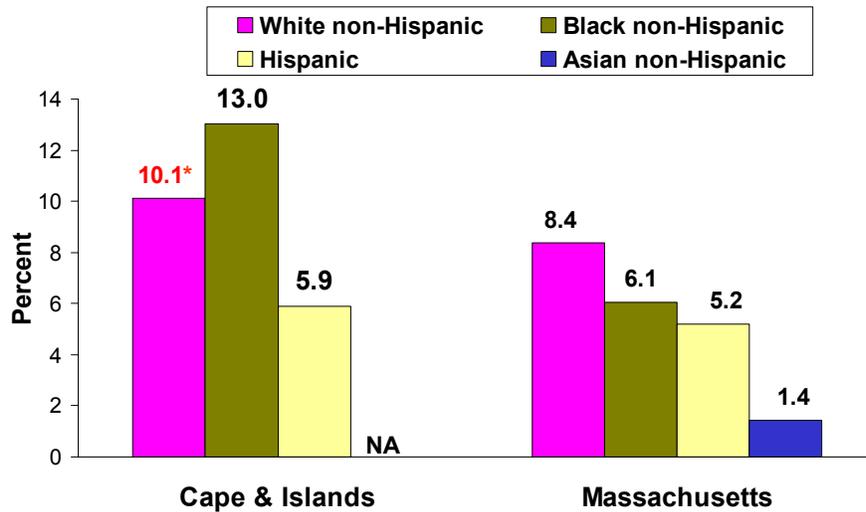
105



Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

### Smoking During Pregnancy by Race and Ethnicity Cape & Islands and Massachusetts: 2005

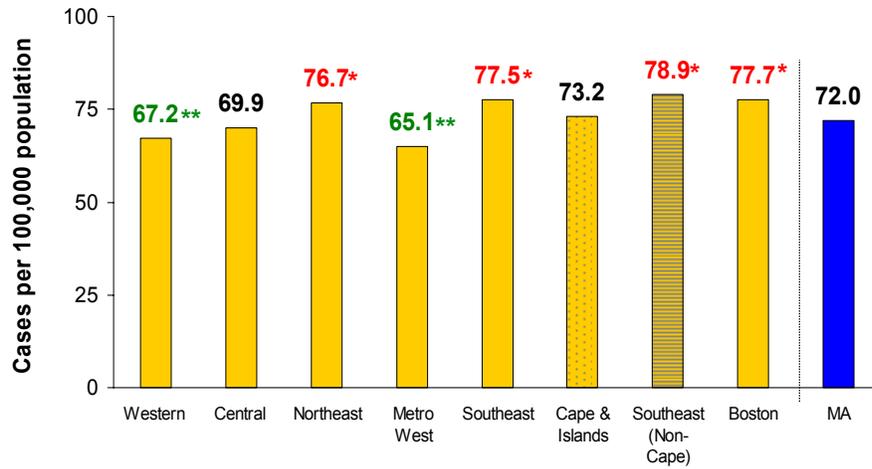
106



Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

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

107



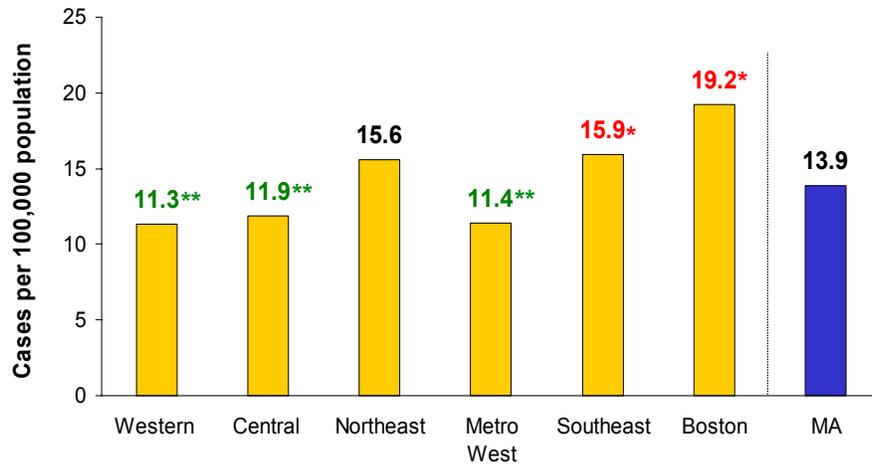
Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

Age-adjusted to the 2000 US standard population.

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

## Incidence Rates for Early Stage Lung Cancer Males by EOHS Region, Massachusetts: 1999-2003

108



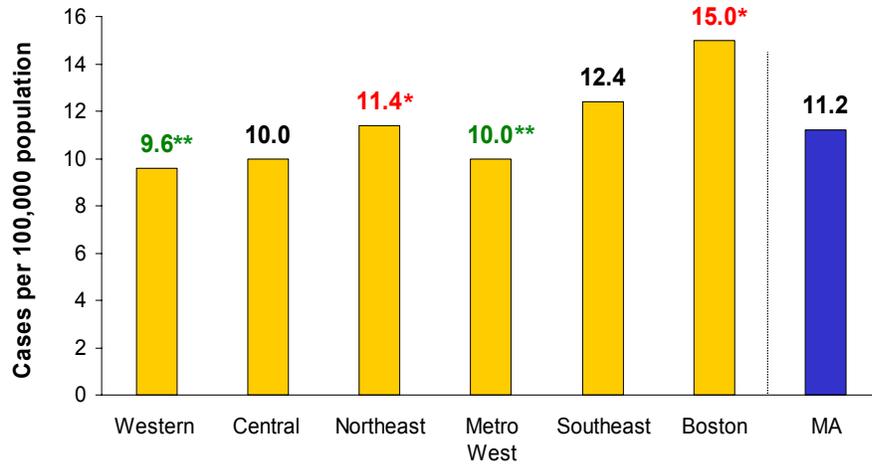
Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

Age-adjusted to the 2000 US standard population.

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

### Incidence Rates for Early Stage Lung Cancer Females by EOHS Region Massachusetts: 1999-2003

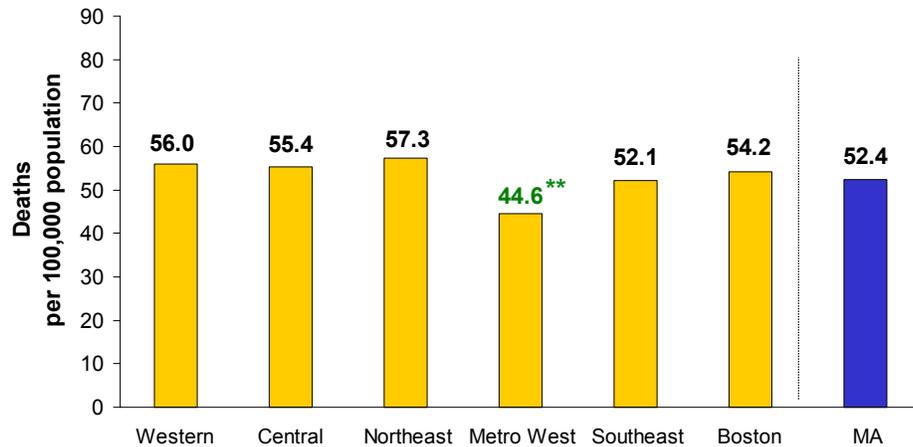
109



Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
Age-adjusted to the 2000 US standard population.  
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Cancer Registry

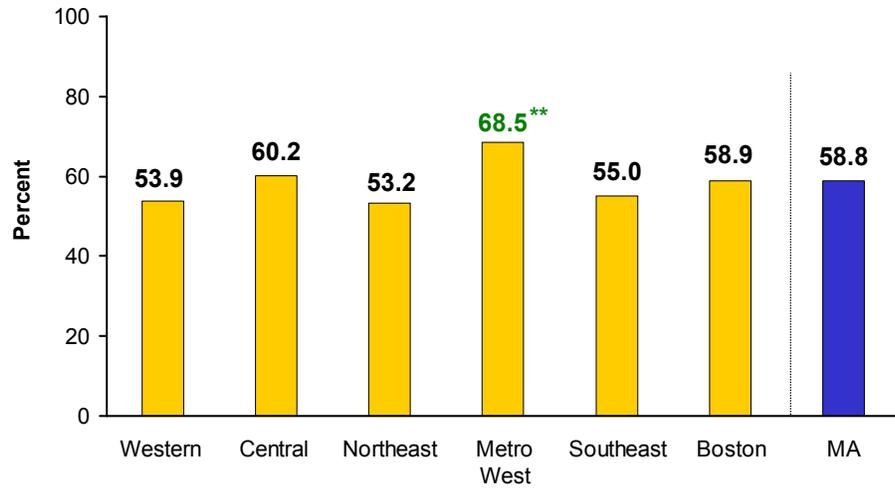
### Lung Cancer Mortality Rates by EOHS Region, Massachusetts: 2005

110



Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
Age-adjusted to the 2000 US standard population.  
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

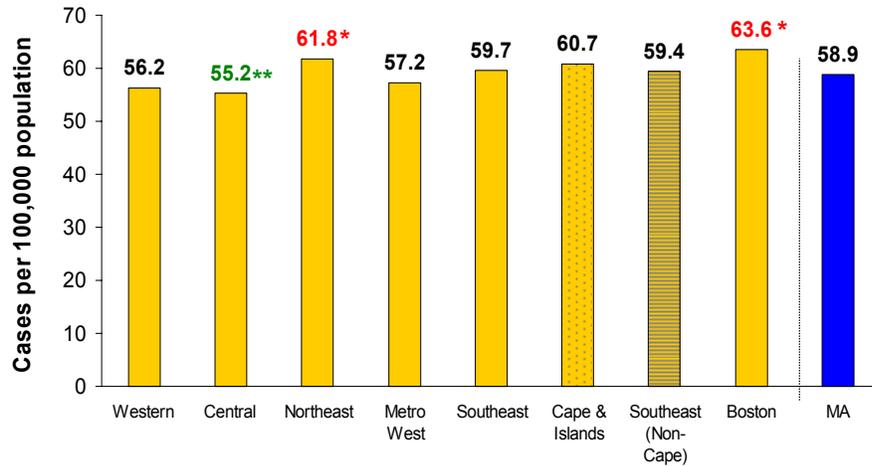
### Adults Ages 50+ who have had a Sigmoidoscopy or Colonoscopy in Past 5 Years by EOHHS Region Massachusetts: 2005



Statistically different from State (p ≤.05) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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

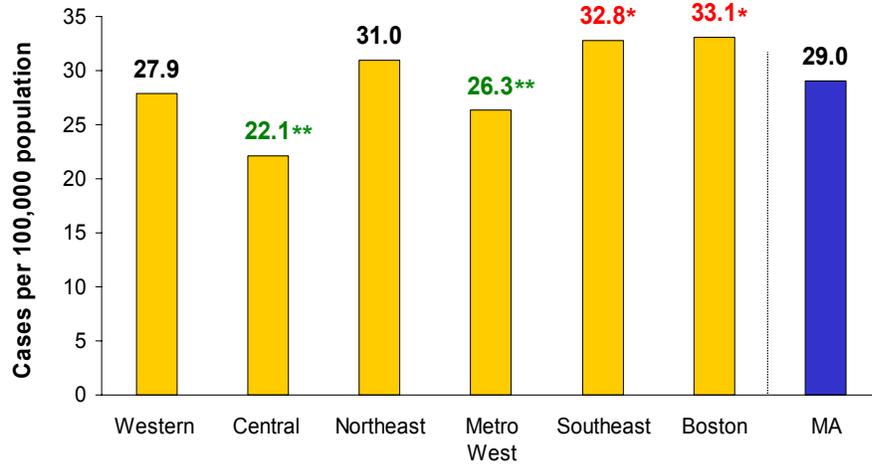
### Incidence Rates for Invasive Colorectal Cancer by EOHHS Region, Massachusetts: 1999-2003



Statistically different from State (p ≤.05) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

Age-adjusted to the 2000 US standard population.  
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Cancer Registry

### Incidence Rates for Early Stage Colorectal Cancer Males by EOHS Region, Massachusetts: 1999-2003

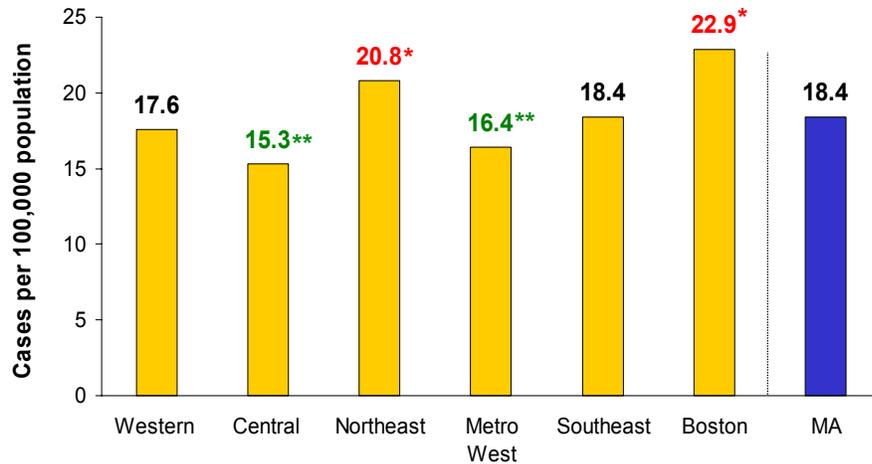


Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

Age-adjusted to the 2000 US standard population.

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

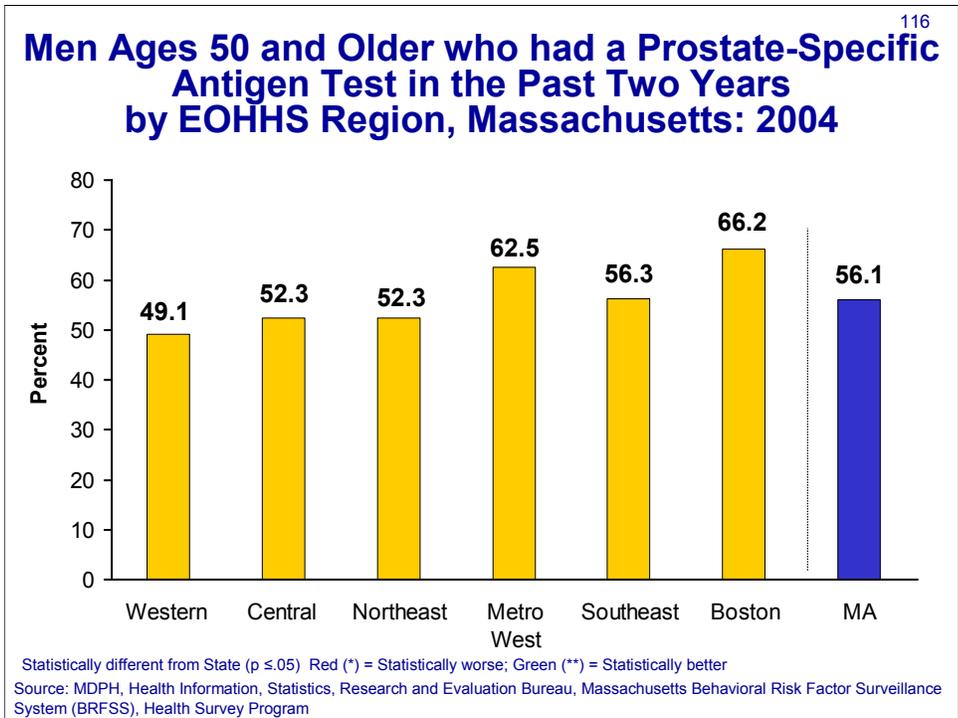
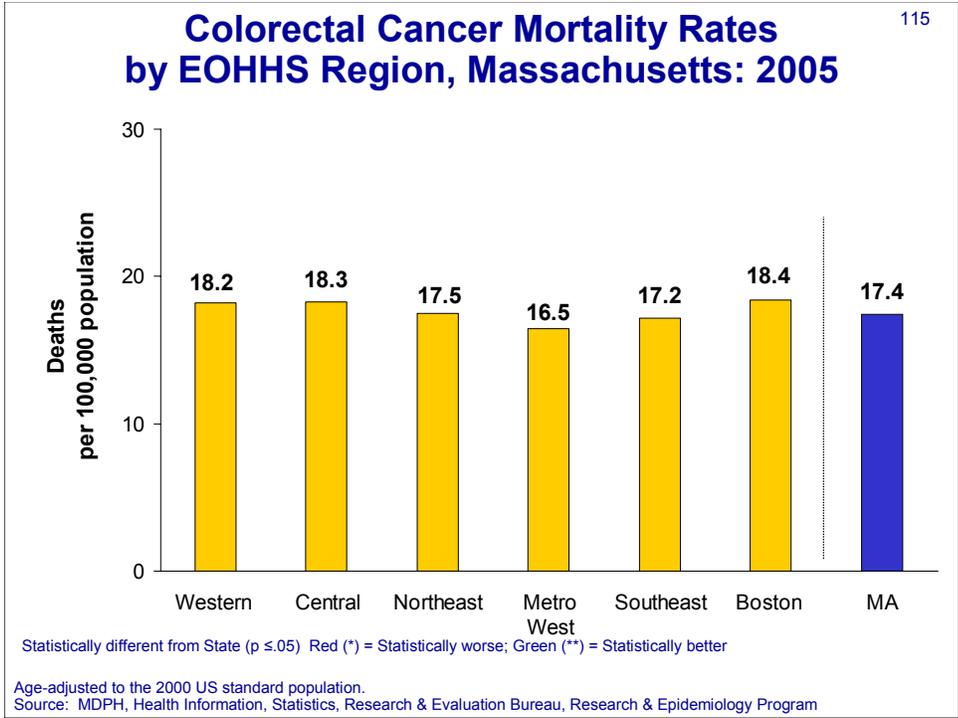
### Incidence Rates for Early Stage Colorectal Cancer Females by EOHS Region Massachusetts: 1999-2003



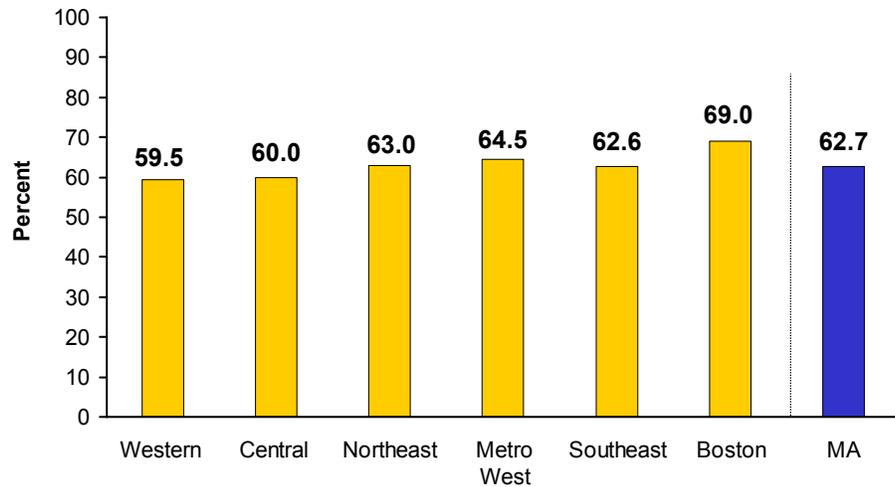
Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

Age-adjusted to the 2000 US standard population.

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

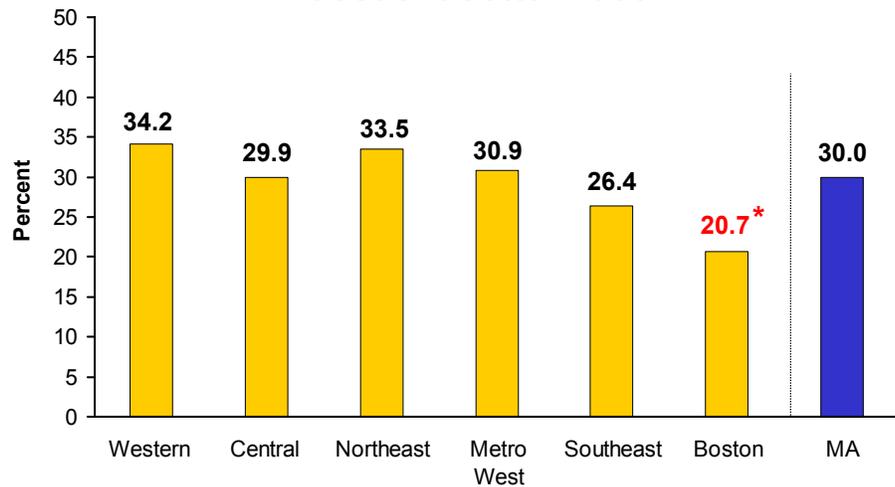


### Men Ages 50 and Older who had a Digital Rectal Exam in the Past Two Years by EOHHS Region Massachusetts: 2004 <sup>117</sup>



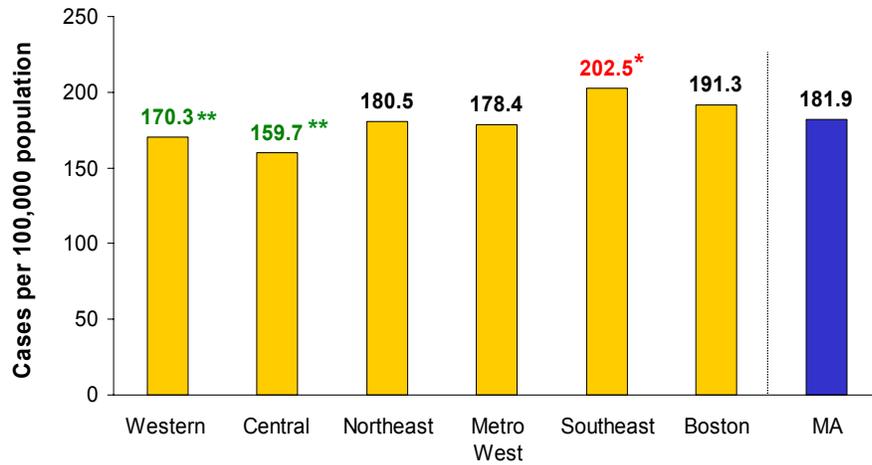
Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), Health Survey Program

### Adults Ages 50 and Older who had a Blood Stool Test in the Past Two Years by EOHHS Region Massachusetts: 2005 <sup>118</sup>



Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), Health Survey Program

## Incidence Rates for Invasive Prostate Cancer by EOHHS Region, Massachusetts: 1999-2003 119

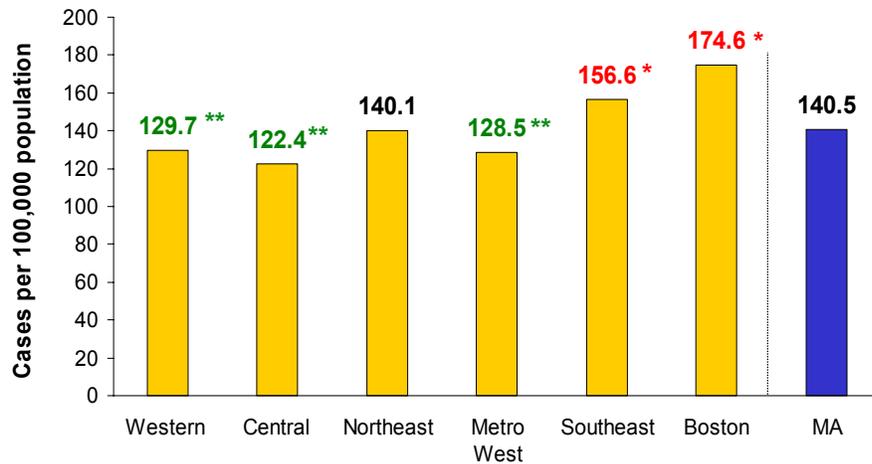


Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

Age-adjusted to the 2000 US standard population.

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

## Incidence Rates for Early Stage Prostate Cancer by EOHHS Region, Massachusetts: 1999-2003 120



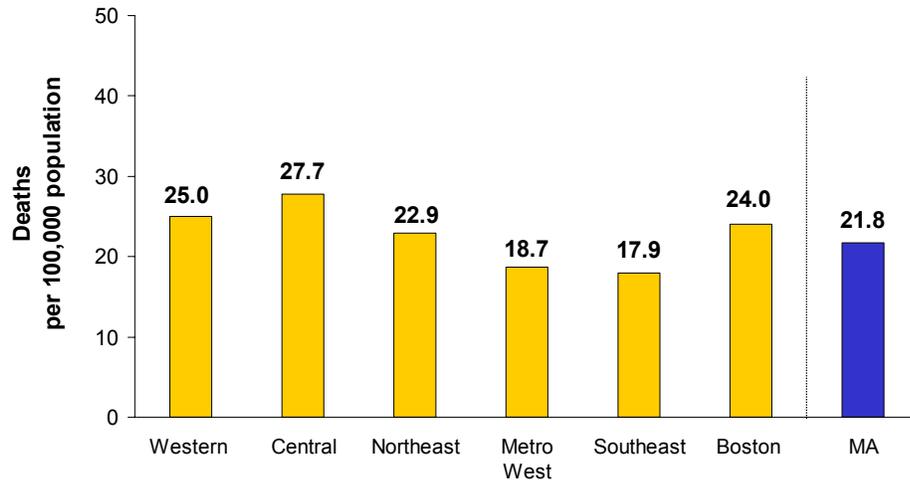
Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

Age-adjusted to the 2000 US standard population.

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

## Prostate Cancer Mortality Rates by EOHHS Region, Massachusetts: 2005

121



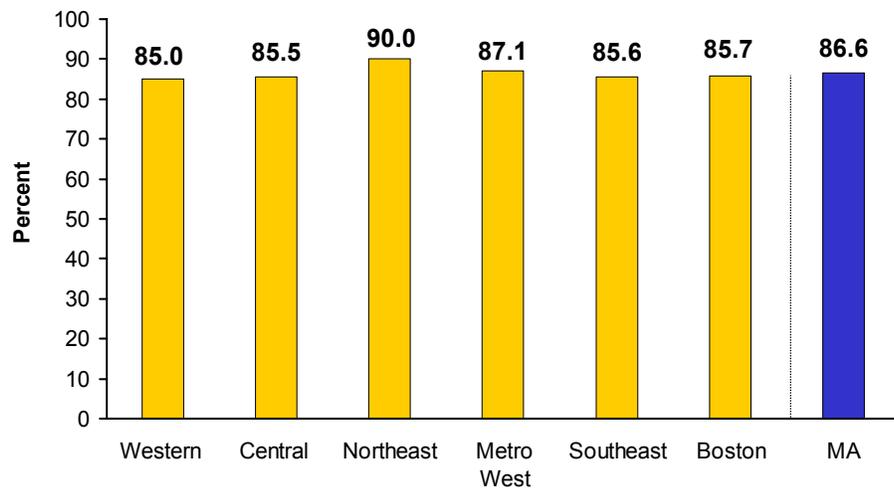
Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

Age-adjusted to the 2000 US standard population.

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

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

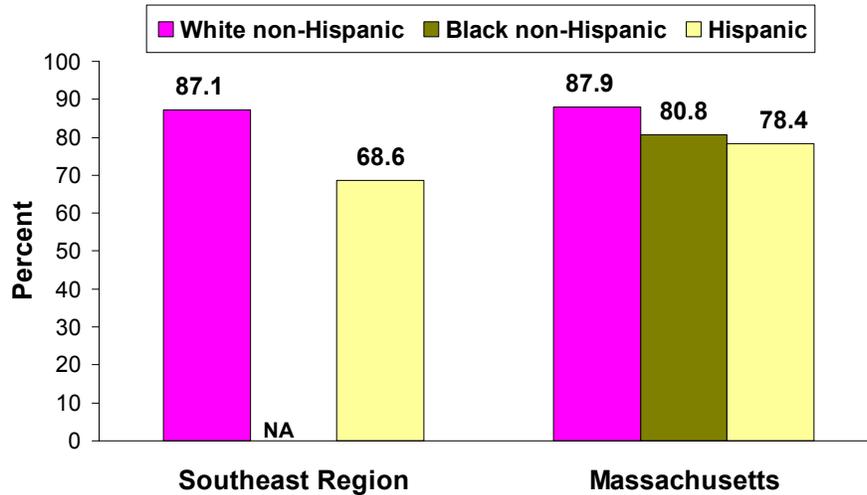
122



Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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

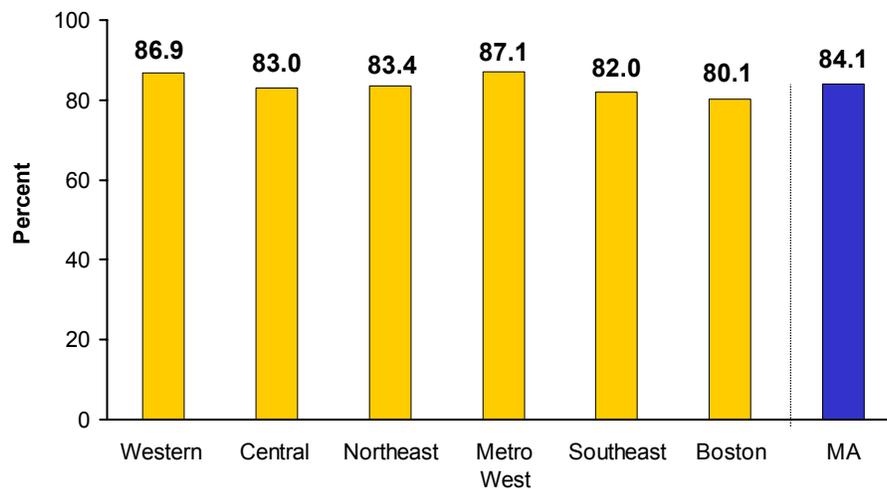
### 123 Women who had a Clinical Breast Exam in the Past Two Years by Race and Ethnicity Southeast Region and Massachusetts: 2004



Statistically different from State (p ≤.05) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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

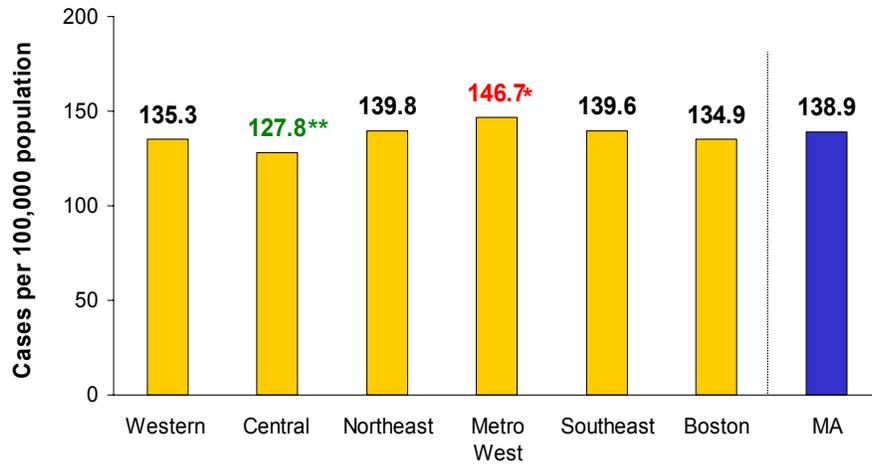
### 124 Women Ages 40+ who have had a Mammogram In the Past 2 Years by EOHHS Region Massachusetts: 2005



Statistically different from State (p ≤.05) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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

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

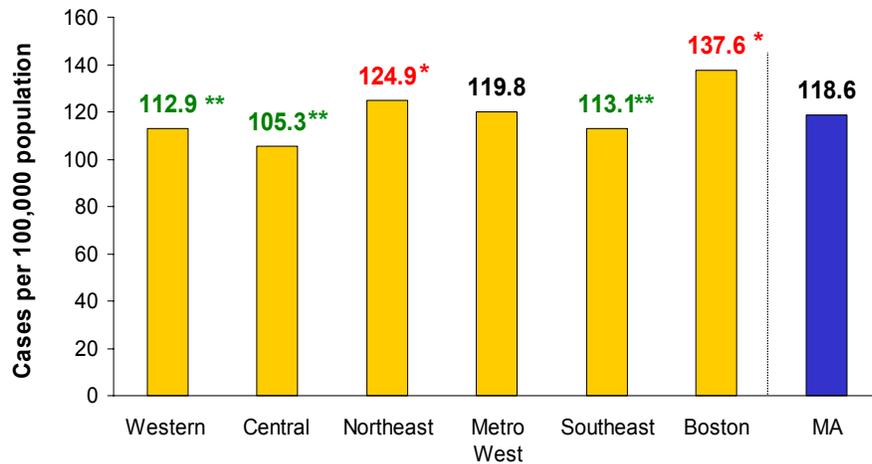


Statistically different from State (p ≤ .05) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

Age-adjusted to the 2000 US standard population.

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

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



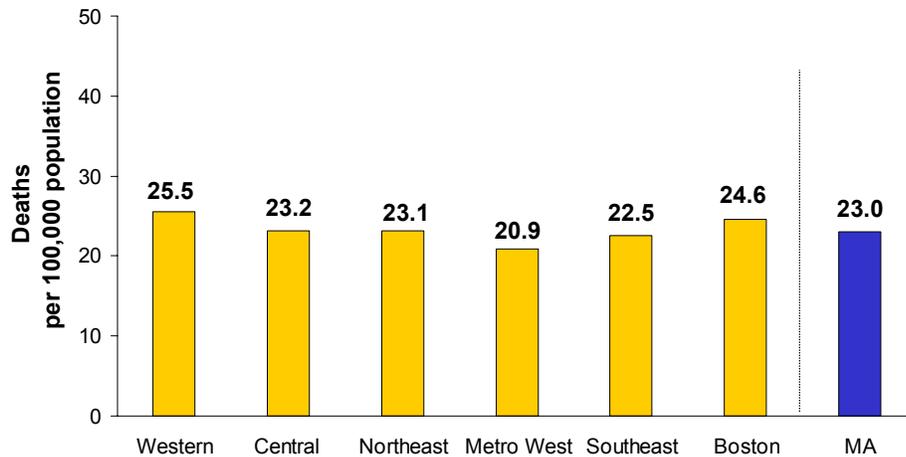
Statistically different from State (p ≤ .05) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

Age-adjusted to the 2000 US standard population.

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

## Female Breast Cancer Mortality Rates by EOHHS Region, Massachusetts: 2005

127



Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

Age-adjusted to the 2000 US standard population.

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

## Summary Indicators for Cancer Screening by EOHHS Regions, Massachusetts: 2005

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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 Indicators for Cancer Screening by Southeast Region and Massachusetts: 2006

Indicator	MA Total	Fall River	New Bedford	Cape & Islands	Southeast
% Blood Stool Test †	28.4	32.2	33.8	35.2	28.8
% Adults Sigmoidoscopy or Colonoscopy†	57.4	50.2	48.1	56.5	58.5
% Women* Mammography	84.8	80.6	83.8	85.7	83.4

\*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	North East	Metro West	Southeast	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 & Evaluation Bureau, Cancer Registry

## Summary Cancer Indicators (Late Stage) by EOHS Regions, Massachusetts: 1999-2003

131

Indicator (age-adjusted per 100,000)	MA Total	Western	Central	North East	Metro West	Southeast	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 & Evaluation Bureau, Cancer Registry

## Summary Cancer Incidence Rates by EOHS Region, Massachusetts: 1999-2003

132

Indicator (age-adjusted per 100,000)	MA Total	Western	Central	North East	Metro West	Southeast	Boston
Prostate Cancer	181.9	170.3	159.7	180.5	178.4	202.5	191.3
Female Breast Cancer	138.9	135.3	127.8	139.8	146.7	139.6	134.9
Colorectal Cancer	58.9	56.2	55.2	61.8	57.2	59.7	63.6
Lung Cancer	72.0	67.2	69.9	76.7	65.1	77.5	77.7
Total Cancer	517.0	485.6	478.2	529.4	509.9	543.1	545.1

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

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

## Summary Cancer Incidence Rates Southeast Region, Cape & Islands and Massachusetts : 1999-2003

133

Indicator (age-adjusted per 100,000)	MA Total	South East	Cape & Islands
Prostate Cancer	181.9	202.5	239.4
Female Breast Cancer	138.9	139.6	161.5
Colorectal Cancer	58.9	59.7	60.6
Lung Cancer	72.0	77.5	73.2
Total Cancer	517.0	543.1	582.5

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

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

## Summary Cancer Mortality Rates by EOHHS Region, Massachusetts: 2005

134

Indicator (age-adjusted per 100,000)	MA Total	Western	Central	North East	Metro West	Southeast	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 & Evaluation Bureau, Research & Epidemiology Program

## Summary Cancer Mortality Rates Selected Communities in Southeast Region

135

Indicator (age-adjusted per 100,000)	MA Total	Brockton	Fall River	New Bedford	Southeast
Prostate Cancer Death Rate	21.8	17.9	10.7	14.0	17.9
Colorectal Cancer Death Rate	17.4	15.2	11.4	20.2	17.2
Female Breast Cancer Death Rate	23.0	23.6	14.3	20.8	22.5
Lung Cancer Death Rate	52.4	70.0	66.0	59.2	52.1

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

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

## Summary Cancer Mortality Rates Southeast Region, Cape & Islands and Massachusetts: 2005

136

Indicator (age-adjusted per 100,000)	MA Total	Southeast	Cape & Islands
Prostate Cancer Death Rate	21.8	17.9	19.8
Colorectal Cancer Death Rate	17.4	17.2	15.3
Female Breast Cancer Death Rate	23.0	22.5	21.7
Lung Cancer Death Rate	52.4	52.1	46.2

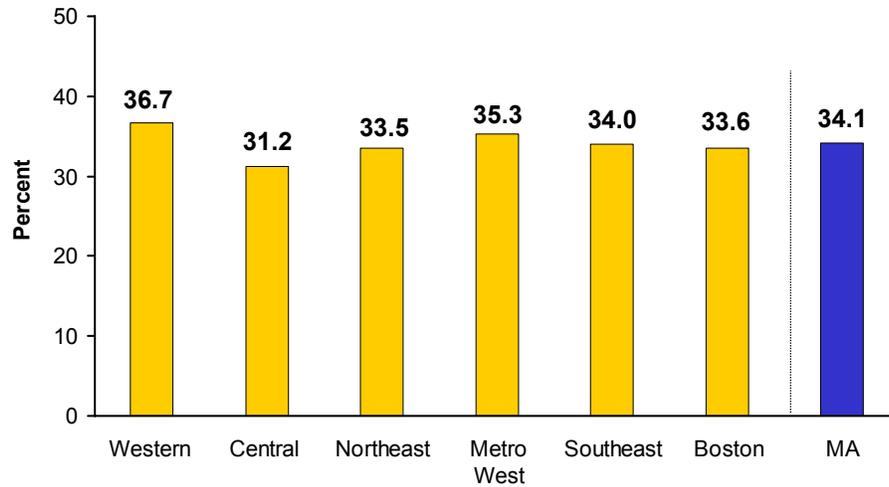
■ Better Outcome (significantly different from state)
 ■ Worse Outcome (significantly different from state)

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

# **SUBSTANCE ABUSE**

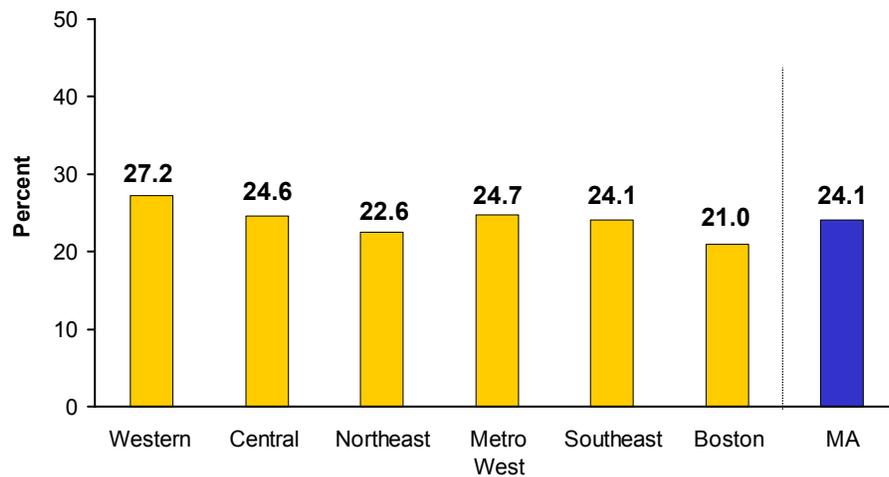


### Alcohol Use in Past Month Persons Aged 12 to 20 by EOHHS Region, Massachusetts: 2002, 2003, 2004



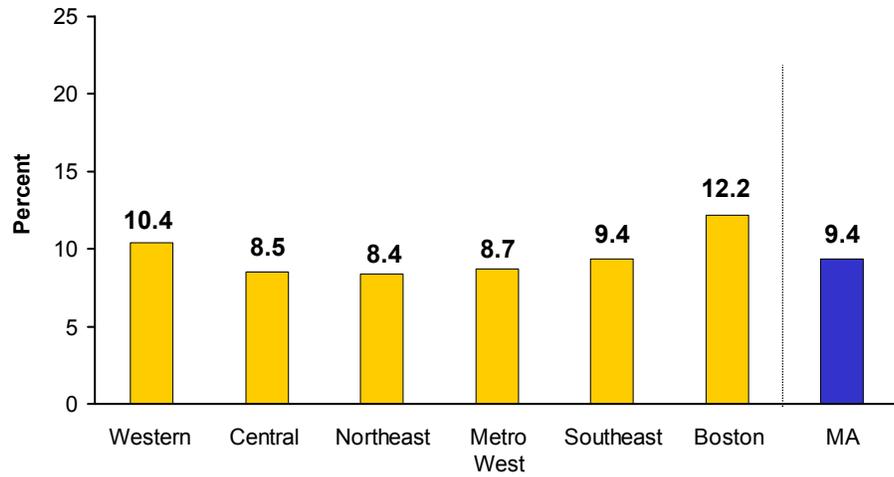
Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
 Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2002, 2003, and 2004.

### Binge Drinking<sup>1</sup> in Past Month Persons Aged 12 to 20 by EOHHS Region, Massachusetts: 2002, 2003, 2004



Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
<sup>1</sup> 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.

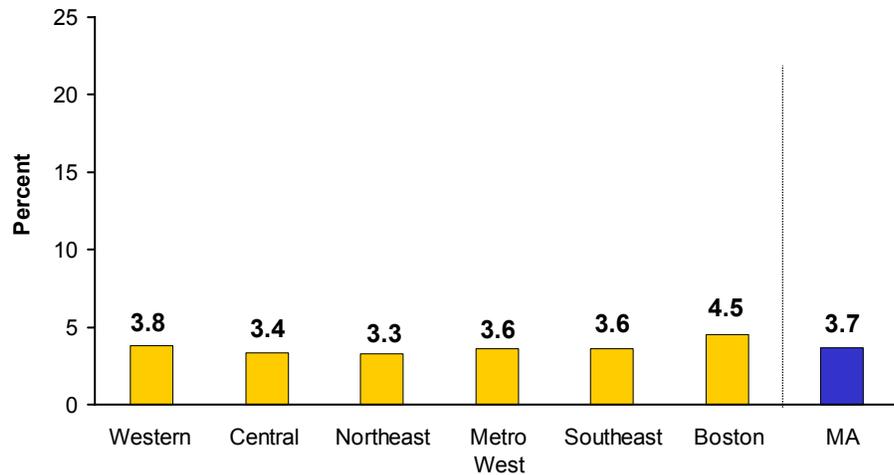
### Any Illicit Drug Use in Past Month Persons Aged 12+ by EOHHS Region, Massachusetts: 2002, 2003, 2004



Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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

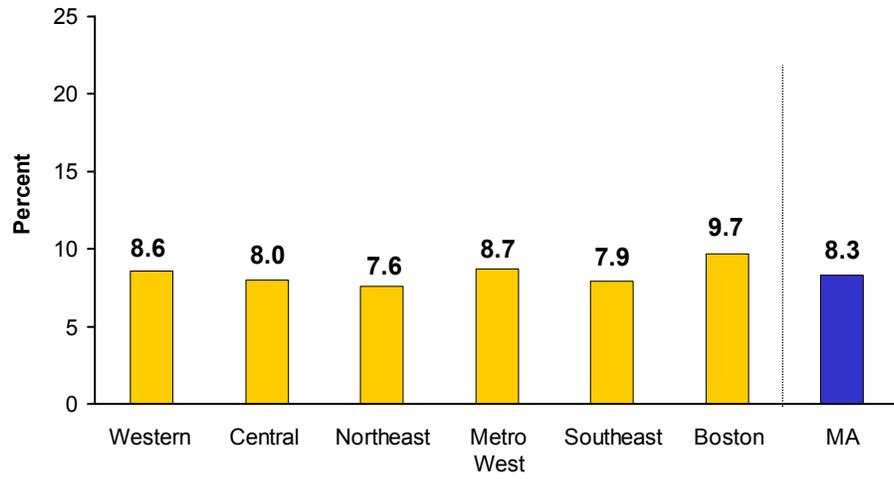


Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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

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

141

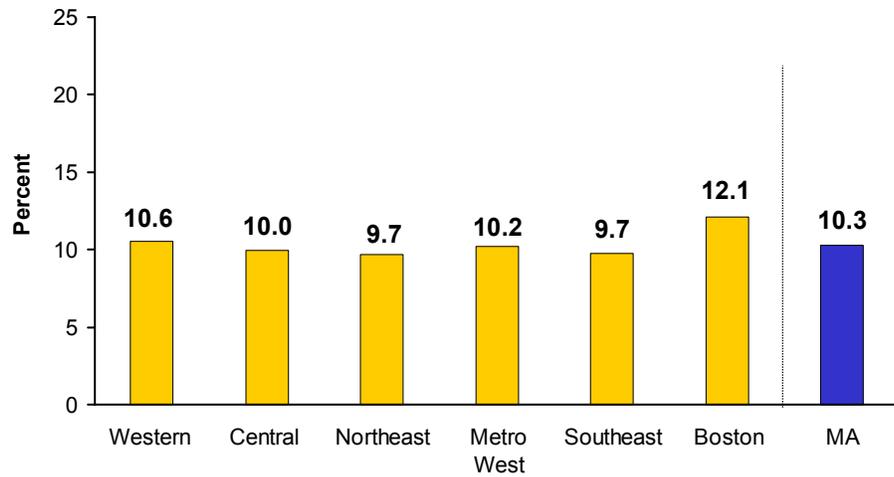


Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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

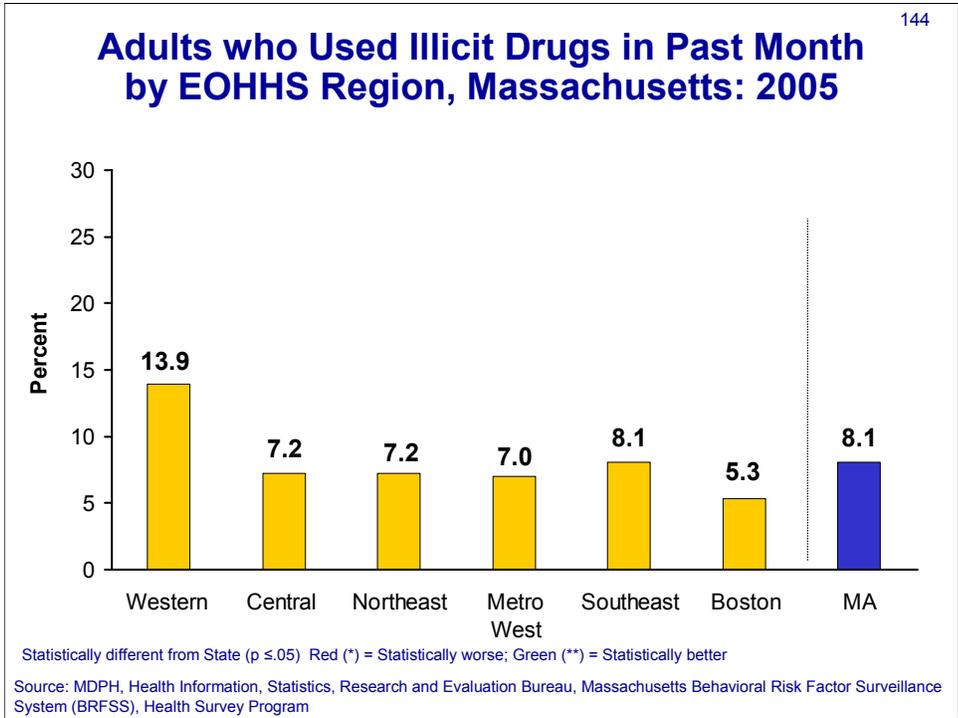
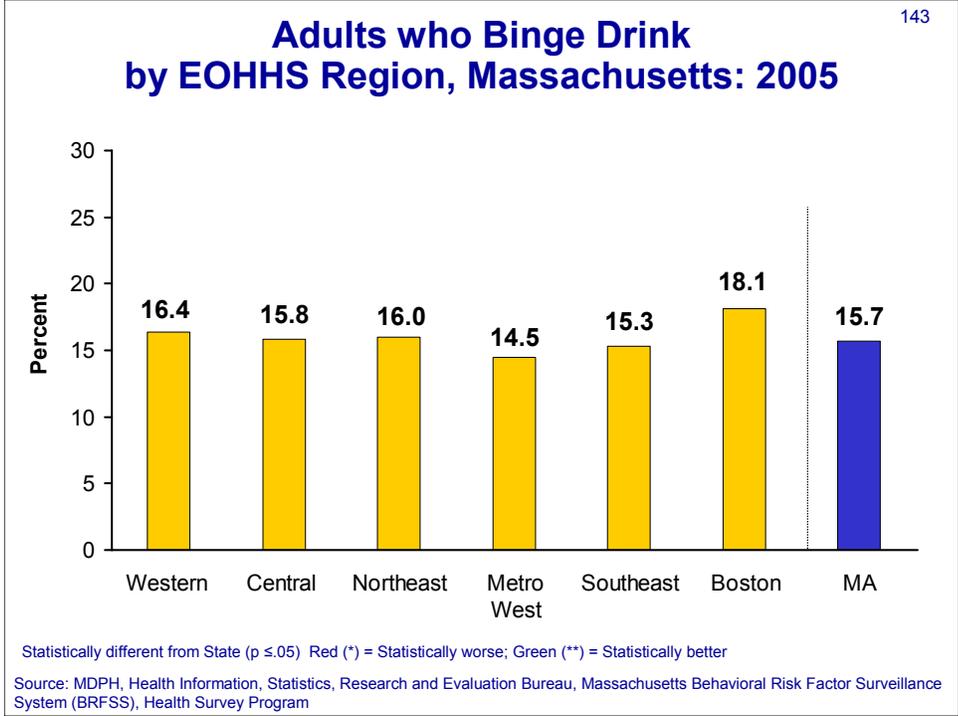
**Dependence or Abuse of Any Illicit Drug or Alcohol  
in Past Year, Persons Aged 12+ by EOHHS Region  
Massachusetts: 2002, 2003, 2004**

142

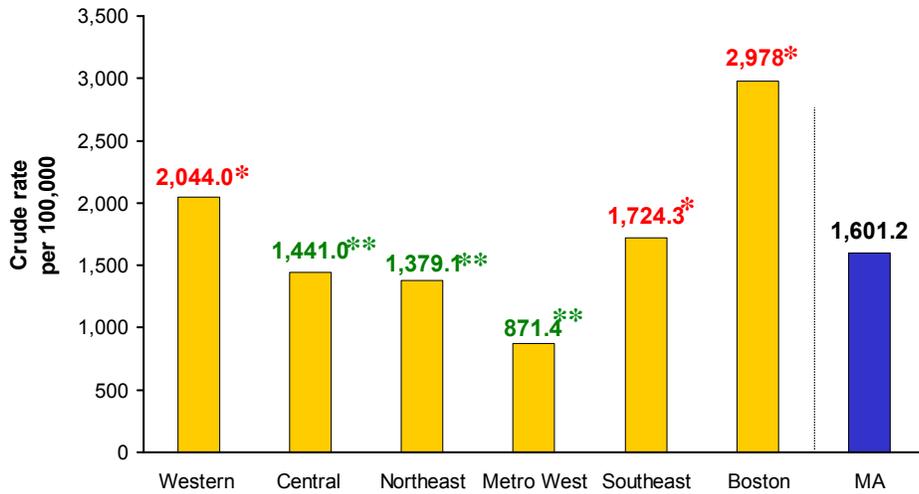


Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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



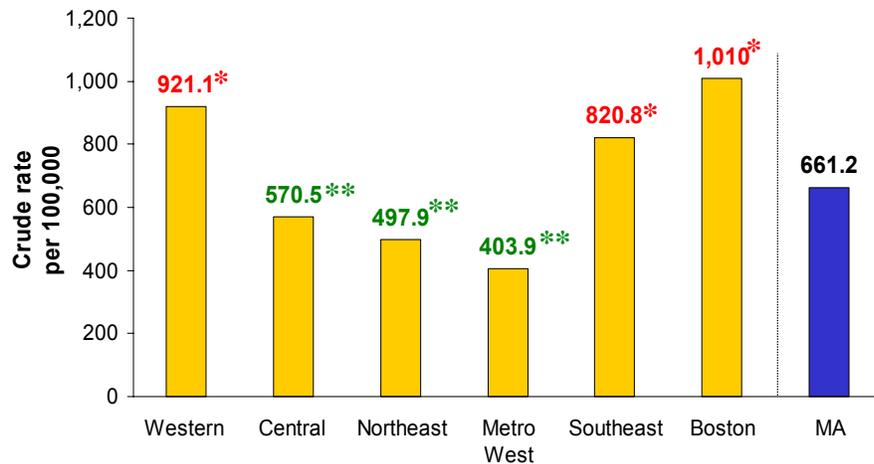
### Substance Abuse Treatment Program Admissions by EOHHS Region, Massachusetts: 2005



Statistically different from State (p ≤ .05) Red (\*) = Statistically higher; Green (\*\*) = Statistically lower

Source: Massachusetts Department of Public Health. BSAS Substance Abuse Treatment Programs 2005.

### Substance Abuse Treatment Program Admissions- Alcohol Primary Substance by EOHHS Region, Massachusetts: 2005

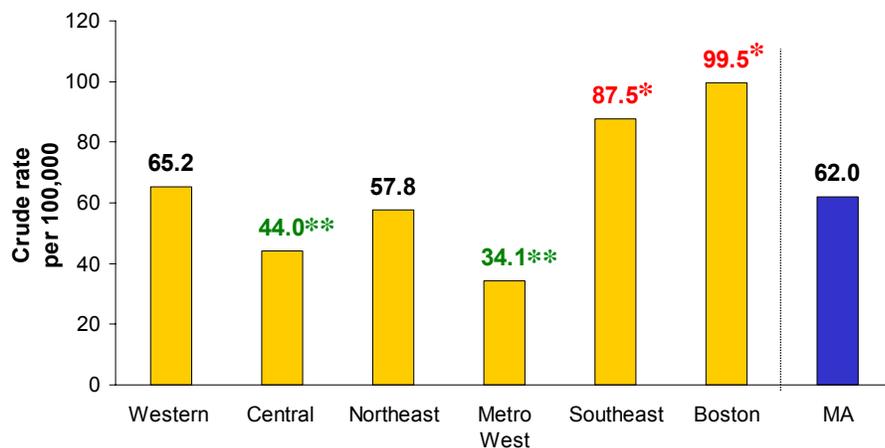


Statistically different from State (p ≤ .05) Red (\*) = Statistically higher; Green (\*\*) = Statistically lower

Source: Massachusetts Department of Public Health. BSAS Substance Abuse Treatment Programs 2005.

147

### Substance Abuse Treatment Program Admissions- Cocaine Primary Substance by EOHHS Region, Massachusetts: 2005

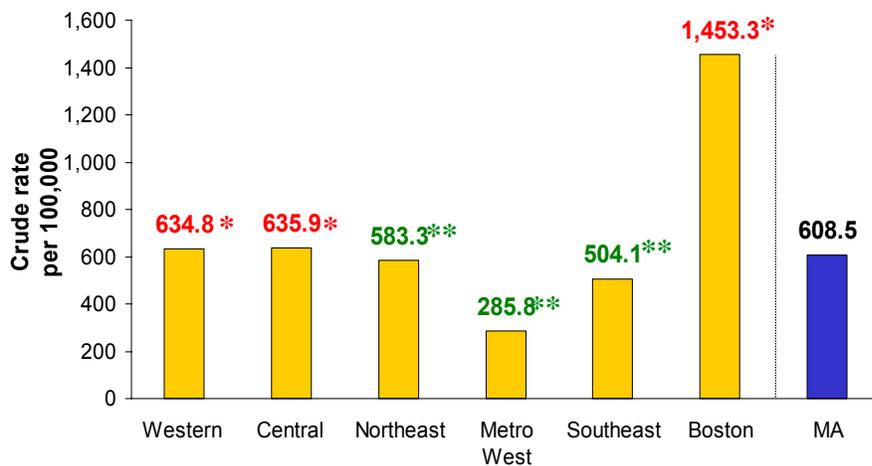


Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically higher; Green (\*\*) = Statistically lower

Source: Massachusetts Department of Public Health. BSAS Substance Abuse Treatment Programs 2005.

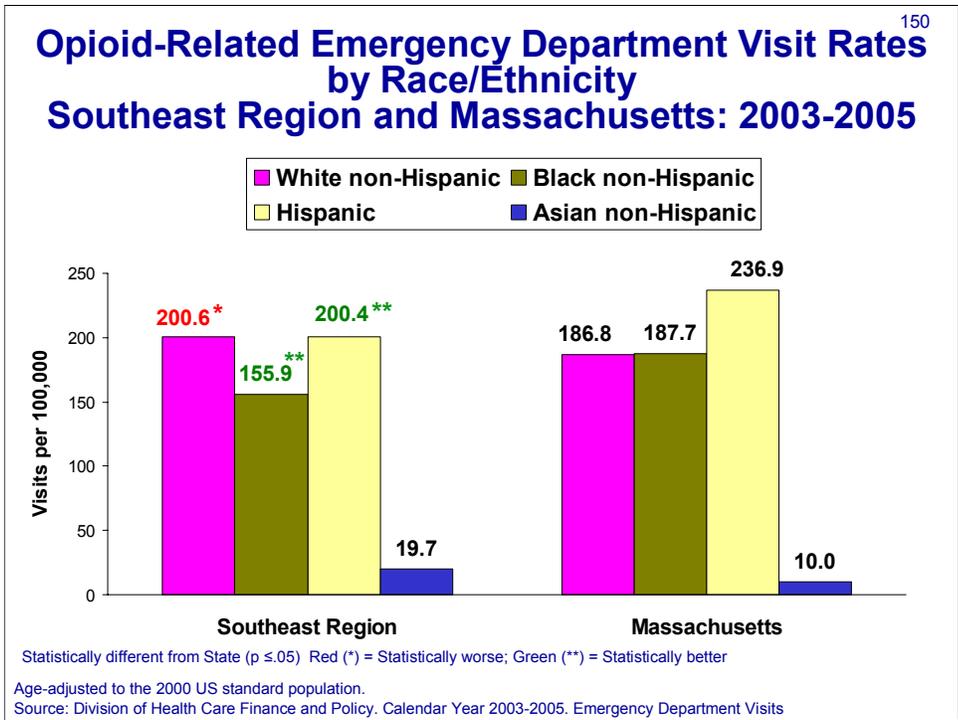
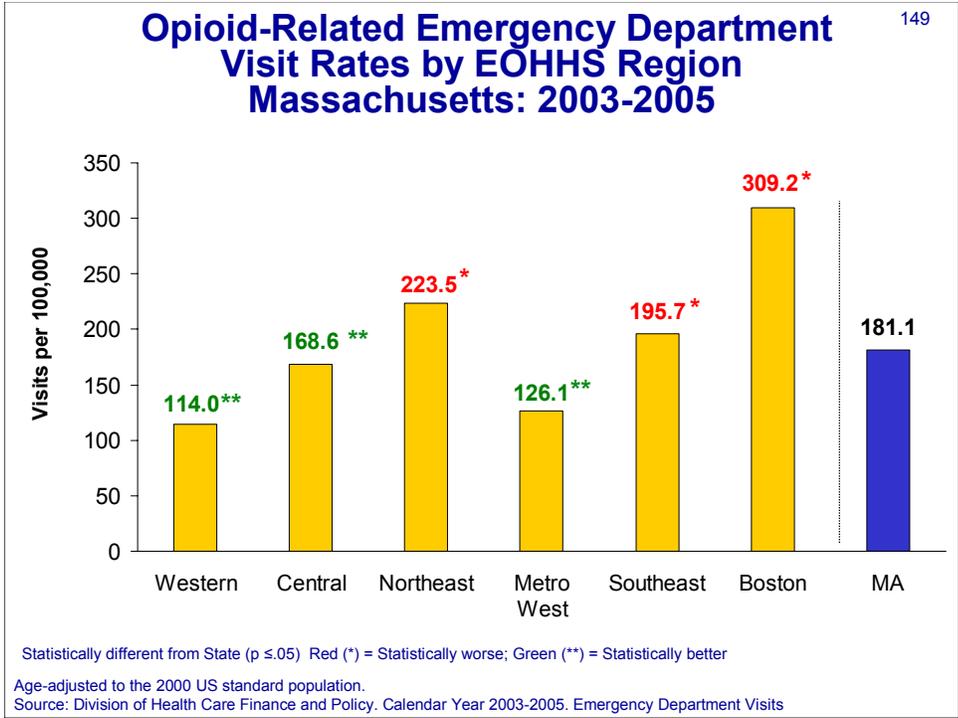
148

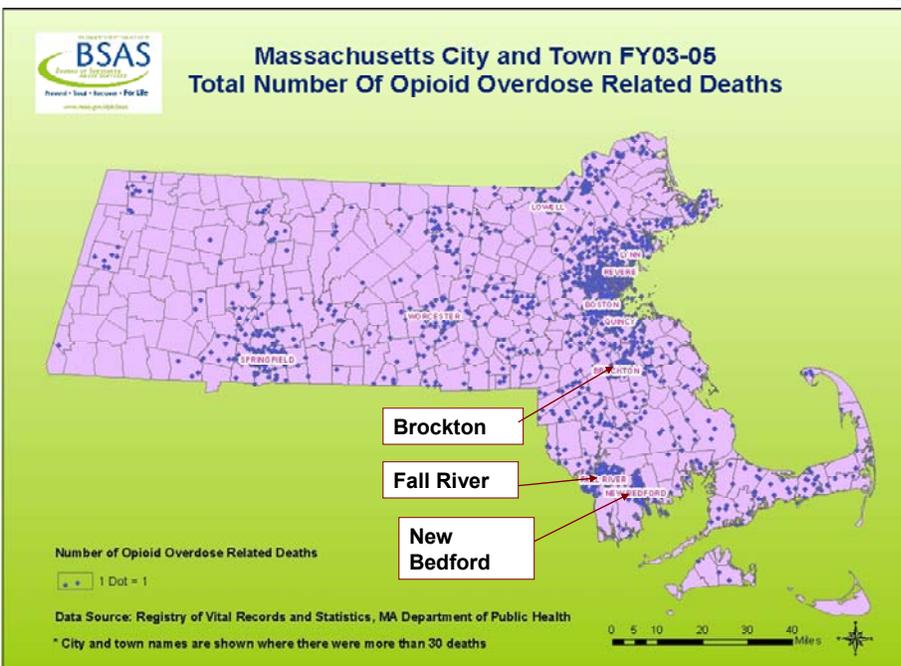
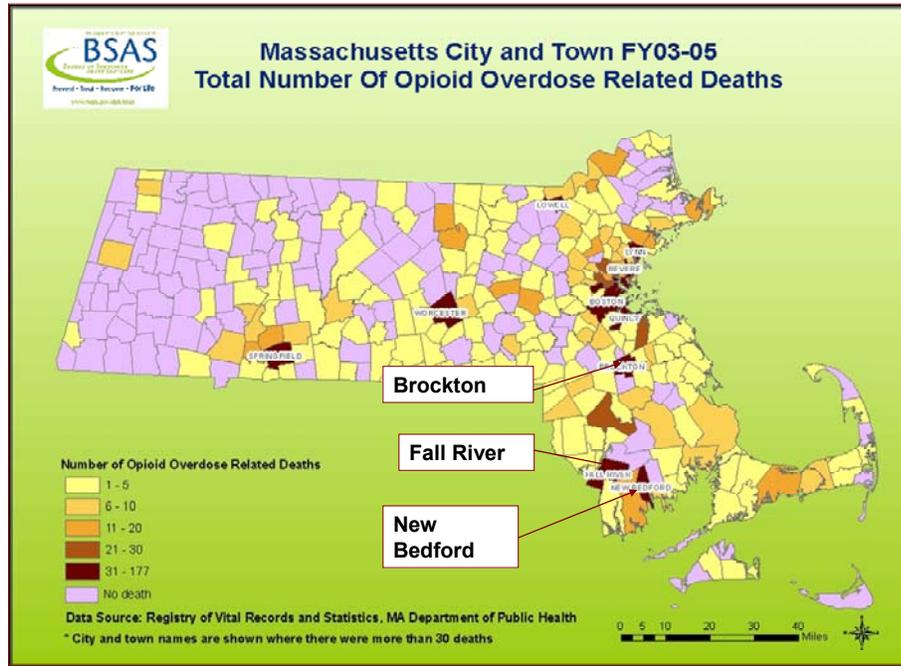
### Substance Abuse Treatment Program Admissions- Heroin Primary Substance by EOHHS Region, Massachusetts: 2005

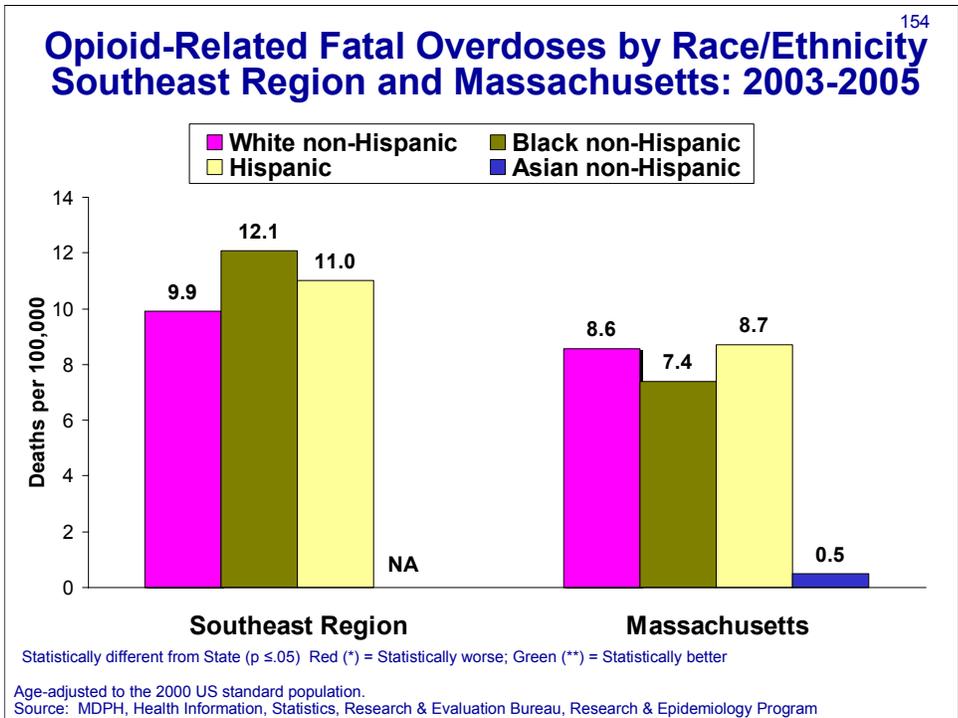
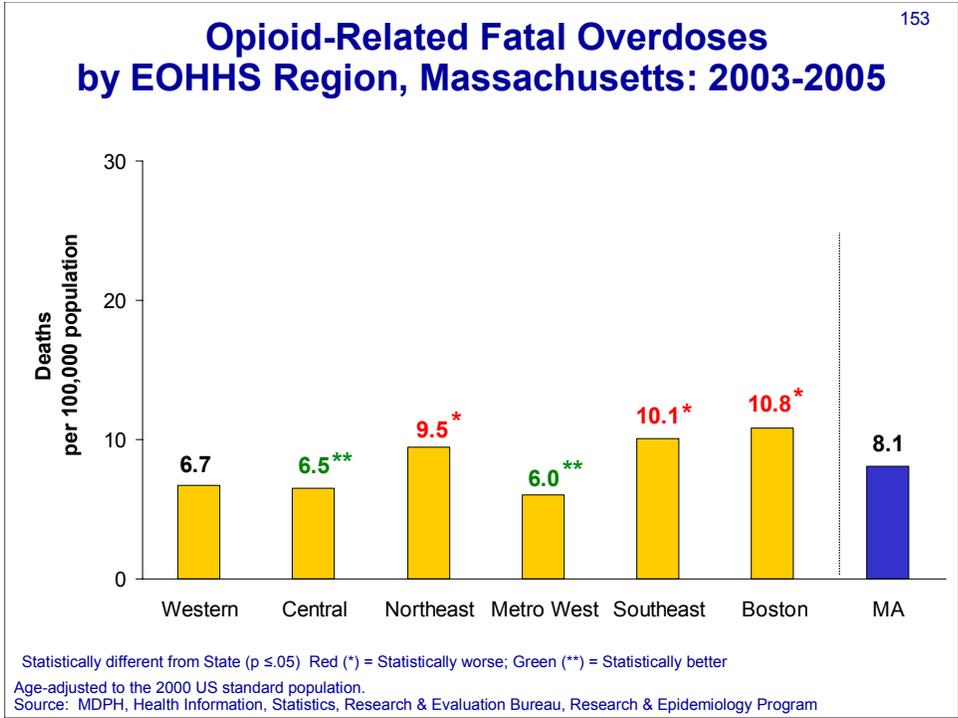


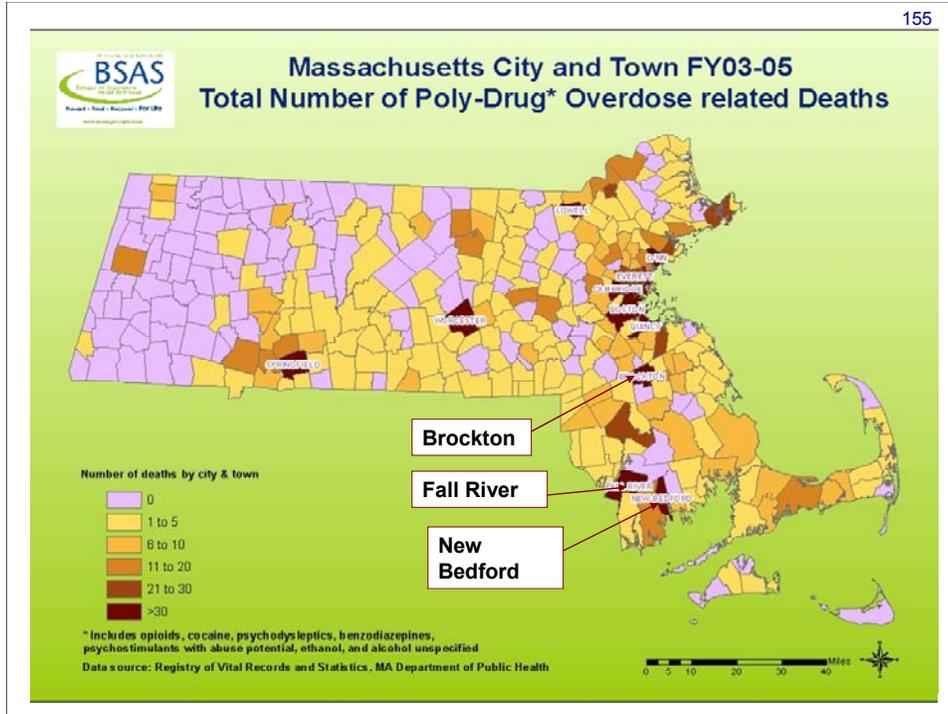
Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically higher; Green (\*\*) = Statistically lower

Source: Massachusetts Department of Public Health. BSAS Substance Abuse Treatment Programs 2005.









### Summary Substance Abuse Indicator Percentage by EOHHS Region

Indicator	MA Total	Western	Central	North East	Metro West	Southeast	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

157

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 Substance Abuse Indicators Largest Communities in the Southeast Region: 2005

158

Indicator (Crude Rates per 100,000)	MA Total	Brockton	Fall River	New Bedford	Southeast
Substance Abuse Treatment Program Admissions Rate	1,601	2,551.6	3,426.1	3,057.1	1,724
Substance Abuse Treatment Program Admissions Rate--Alcohol	661	1,142.8	1,239.7	1,071.9	821
Substance Abuse Treatment Program Admissions Rate—Cocaine	62	121.5	183.5	208.5	88
Substance Abuse Treatment Program Admissions Rate—Heroin	609	792.1	1,406.9	1,297.3	504

■ Statistically lower than state

■ Statistically higher than state

## Summary Substance Abuse Indicators Southeast Region, Cape & Islands, and Massachusetts: 2005

159

Indicator (crude rates per 100,000)	MA Total	Southeast	Cape & Islands
Substance Abuse Treatment Program Admissions Rate (crude rate)	1,601	1,724	2,015
Substance Abuse Treatment Program Admissions Rate—Alcohol (crude rate)	661	821	1,147
Substance Abuse Treatment Program Admissions Rate—Cocaine (crude rate)	62	88	92
Substance Abuse Treatment Program Admissions Rate—Heroin (crude rate)	609	504	389

■ Statistically lower than state

■ Statistically higher than state

Source: Massachusetts Department of Public Health. BSAS Substance Abuse Treatment Programs 2005.

## Summary Opioid Indicators by EOHHS Region Massachusetts: 2003-2005

160

Indicator (age-adjusted rate per 100,000)	MA Total	Western	Central	North East	Metro West	Southeast	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)

## Summary Opioid Indicators by EOHHS Region Massachusetts: 2003-2005

161

Indicator (age-adjusted rate per 100,000)	MA Total	Brockton	Fall River	New Bedford	Southeast
Opioid-related Emergency Department Visit Rate	181	272	450	283	196
Opioid-related fatal overdose rate	8.1	10.9	24.6	27.1	10.1

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

## Summary Opioid Indicators by EOHHS Region Southeast Region, Cape & Islands and Massachusetts: 2003-2005

162

Indicator	MA Total	Southeast	Southeast (not including Cape & Islands)	Cape & Islands
Opioid-related Emergency Department Visit Rate	181	196	186	236
Opioid-related fatal overdose rate	8.1	10.1	10.5	7.7

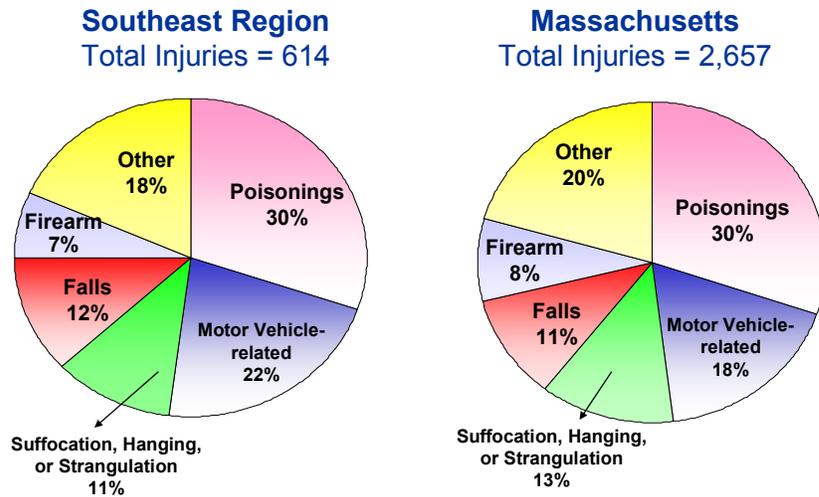
■ Better Outcome (significantly different from state)
 ■ Worse Outcome (significantly different from state)



# **INJURY AND VIOLENCE**

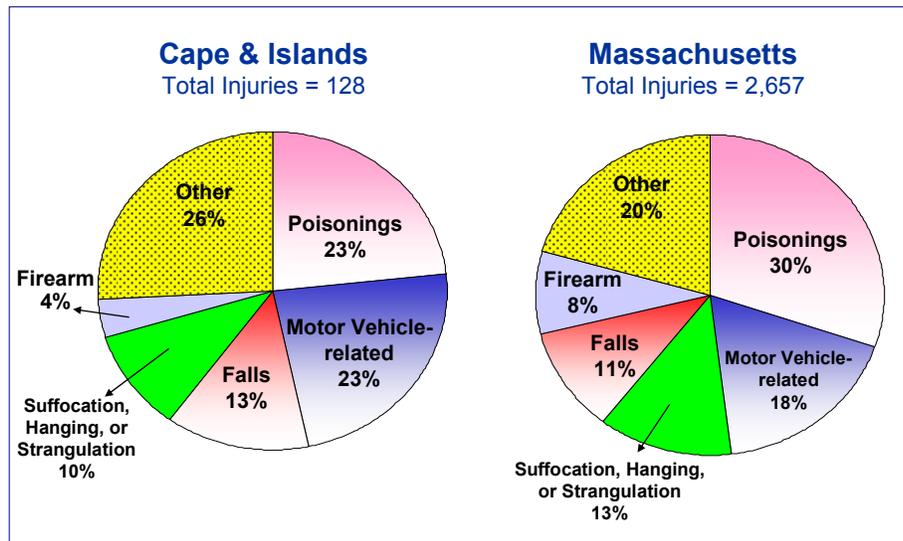


## Causes of Injury Deaths Southeast Region and Massachusetts: 2005

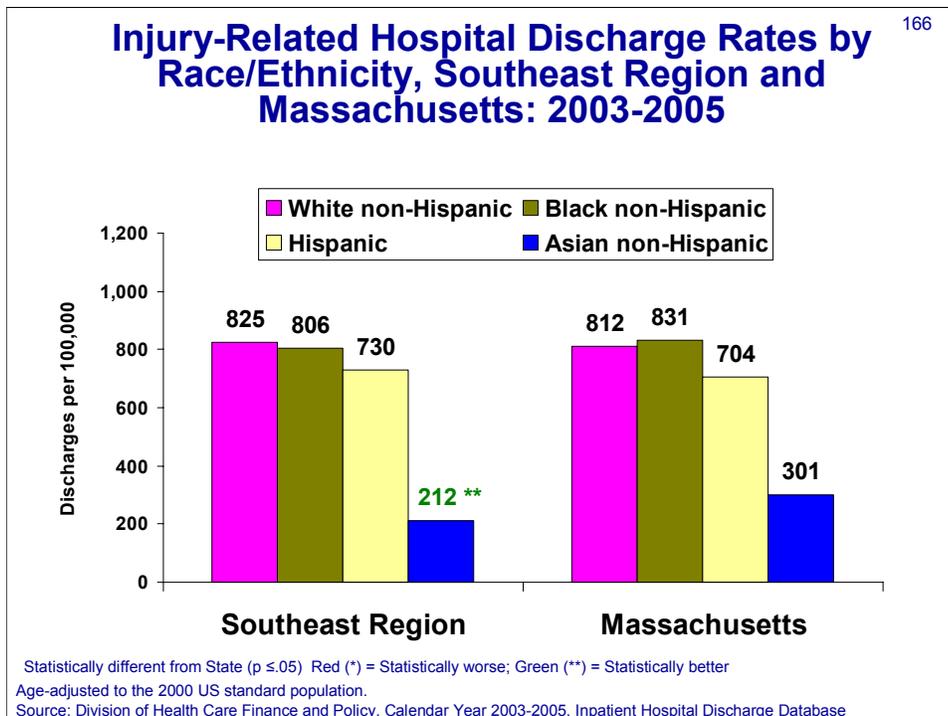
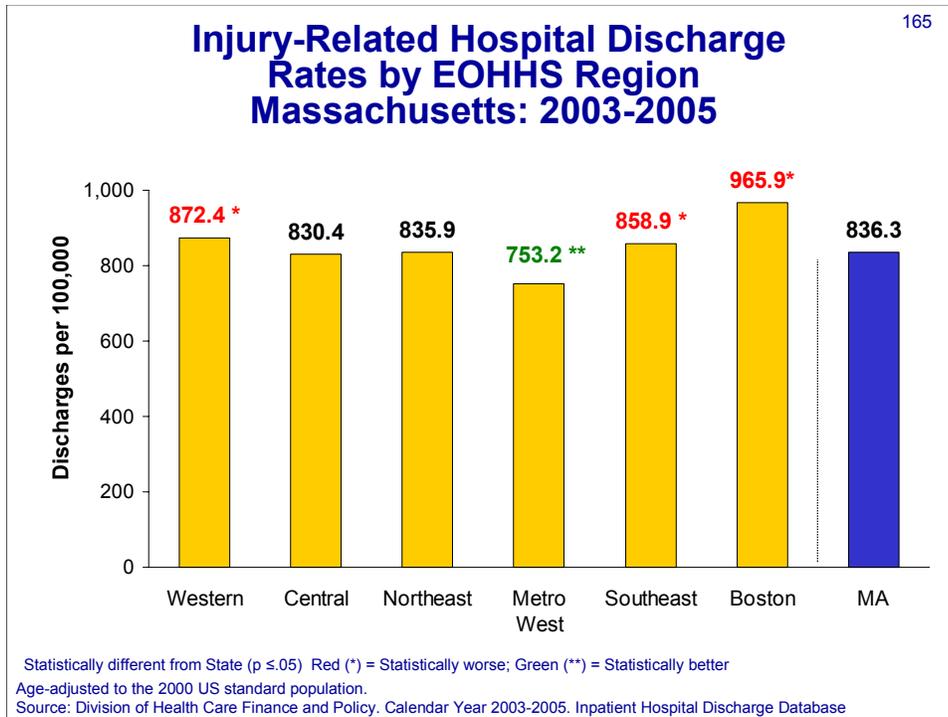


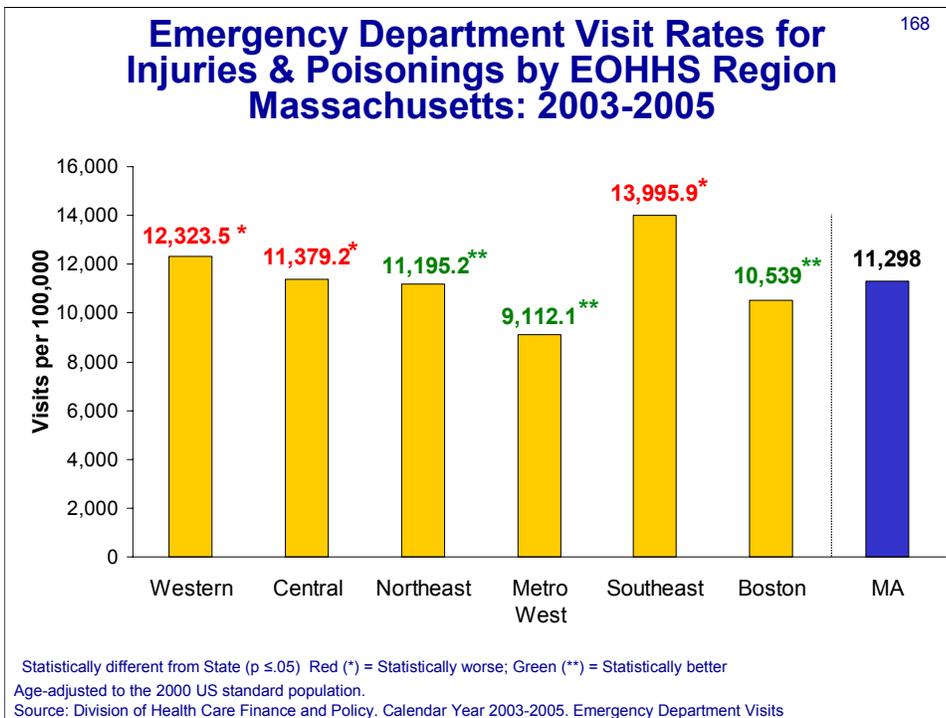
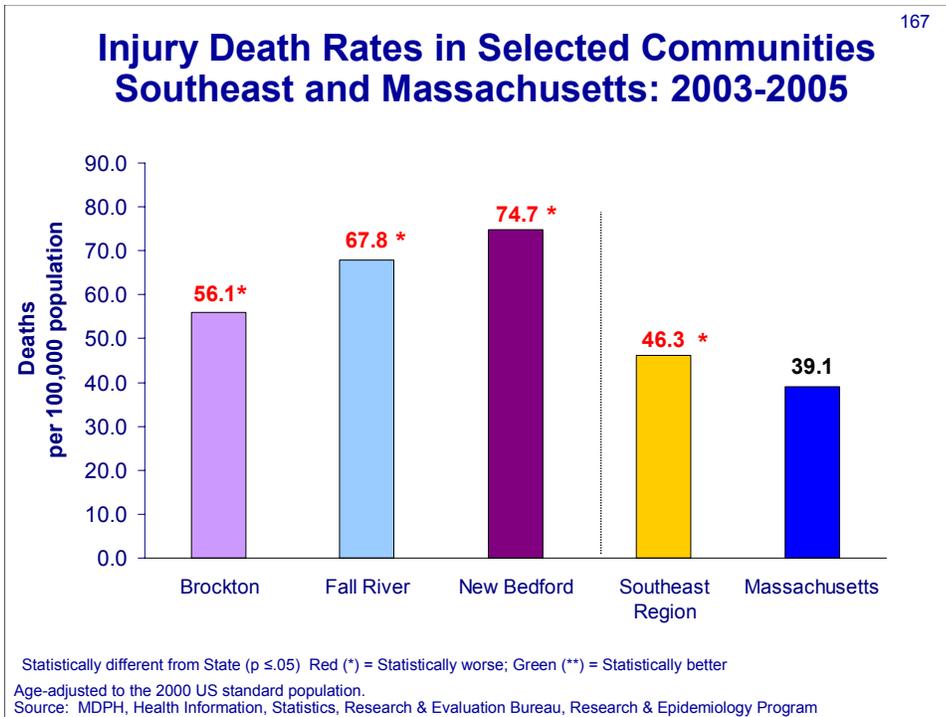
Source: Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation

## Causes of Injury Deaths Cape & Islands and Massachusetts: 2005



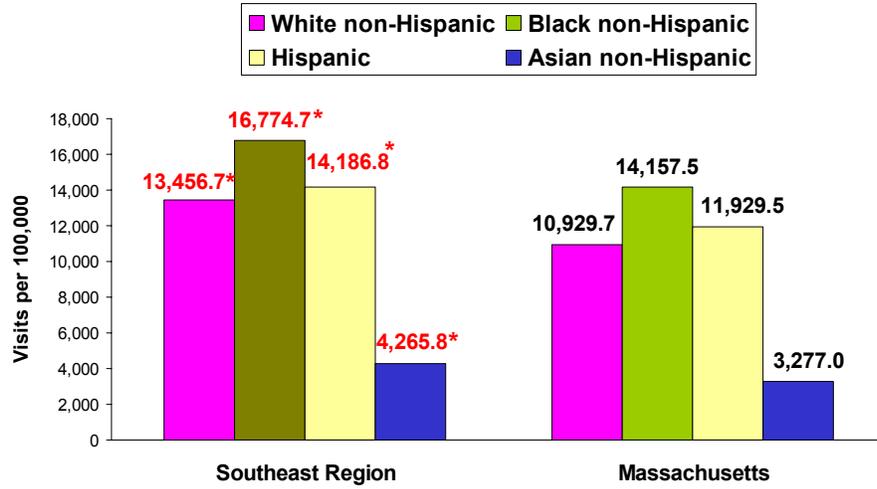
Source: Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation





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

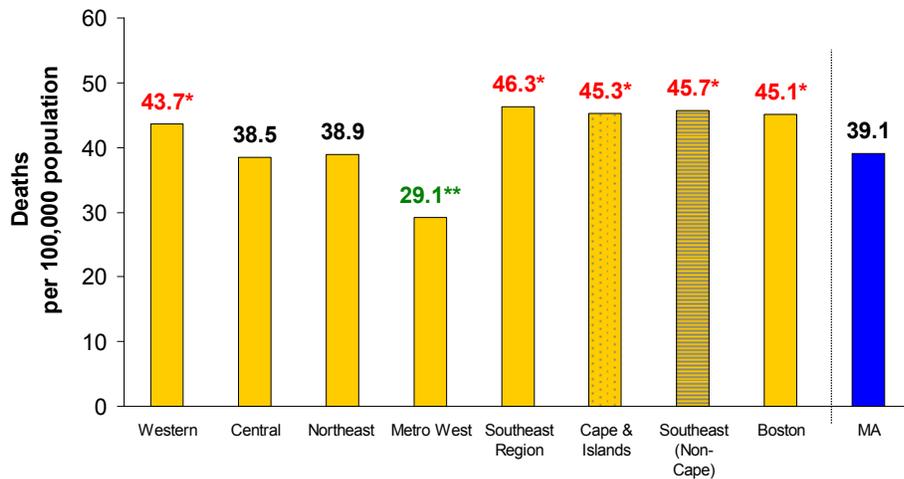
169



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

## Injury Death Rates Cape & Islands, Southeast Region and Massachusetts: 2003-2005

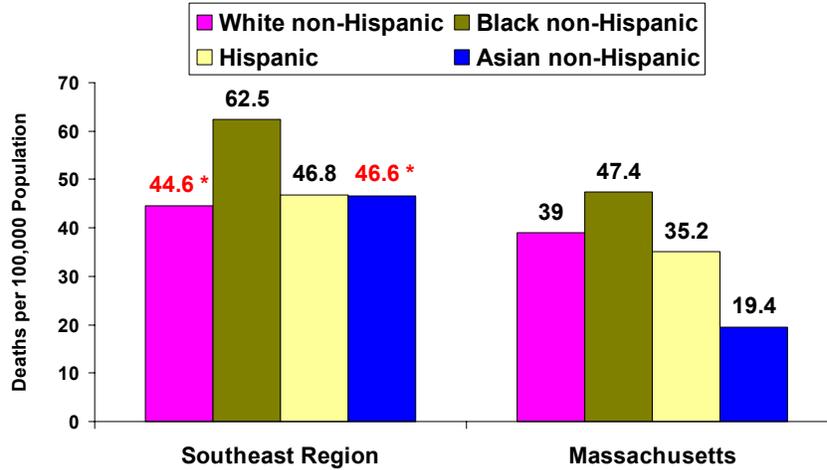
170



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

## Injury Death Rates by Race/Ethnicity Southeast Region and Massachusetts: 2003-2005

171



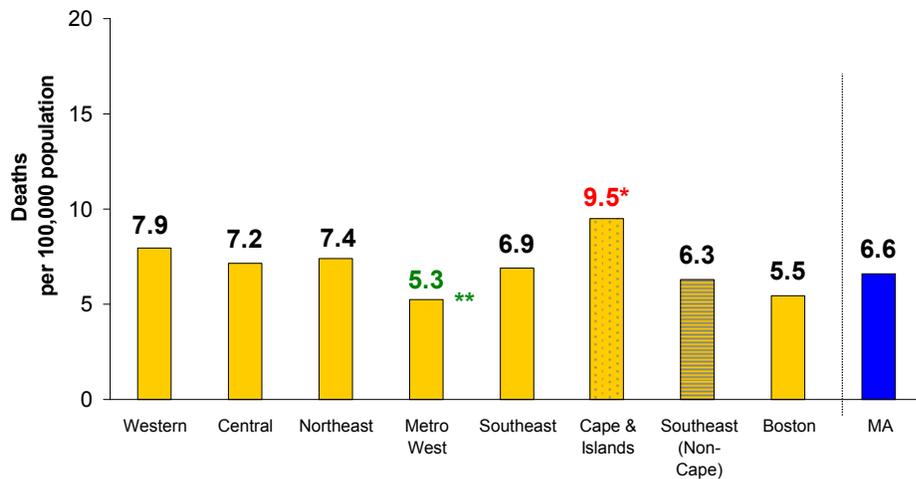
Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

Age-adjusted to the 2000 US standard population.

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

## Suicide Rates by EOHHS Region Massachusetts: 2003-2005

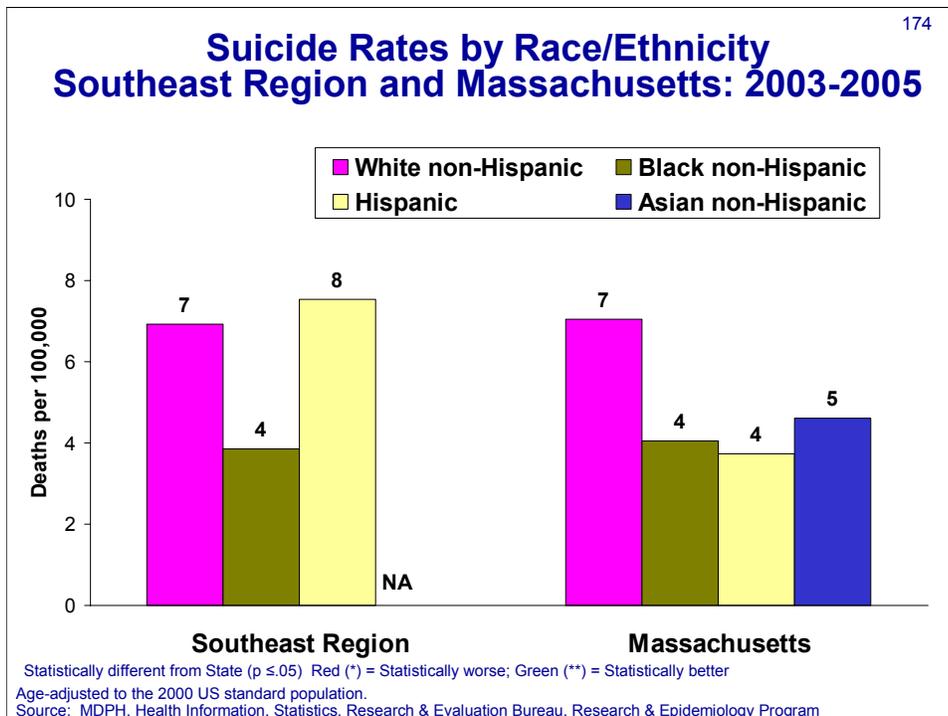
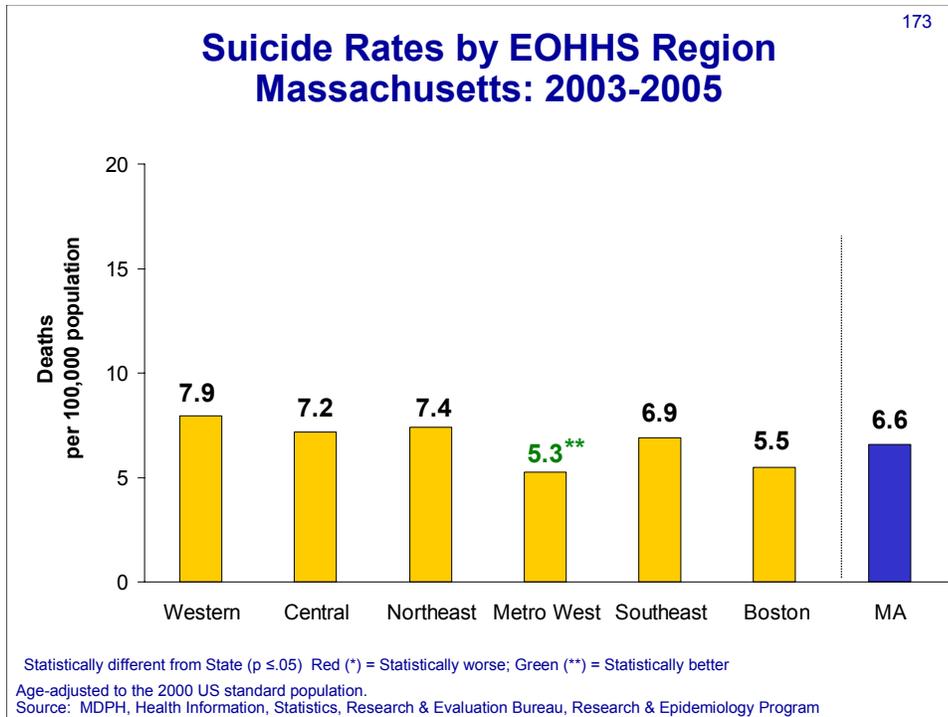
172



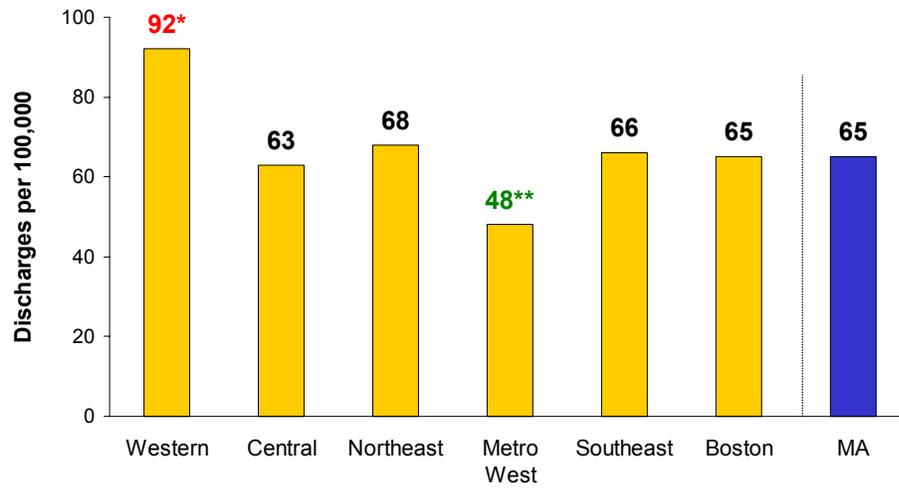
Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

Age-adjusted to the 2000 US standard population.

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

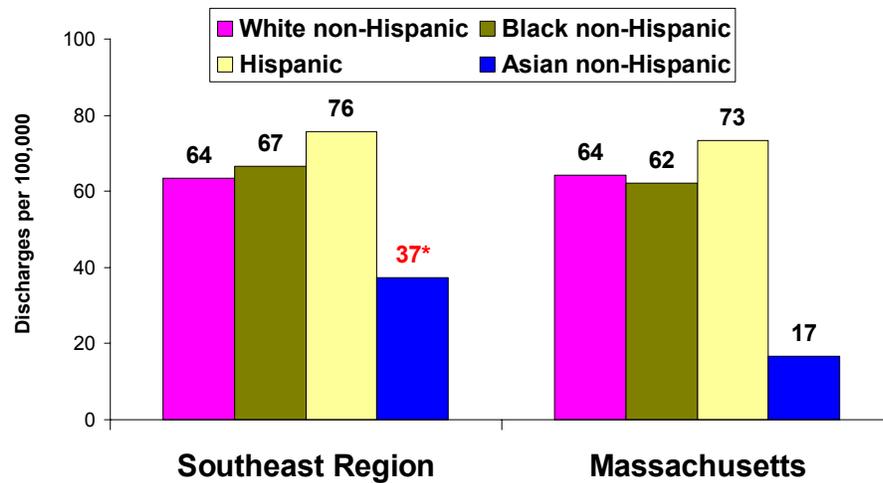


### Hospital Discharge Rates for Self-Inflicted Injury by EOHHS Region, Massachusetts: 2003-2005



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

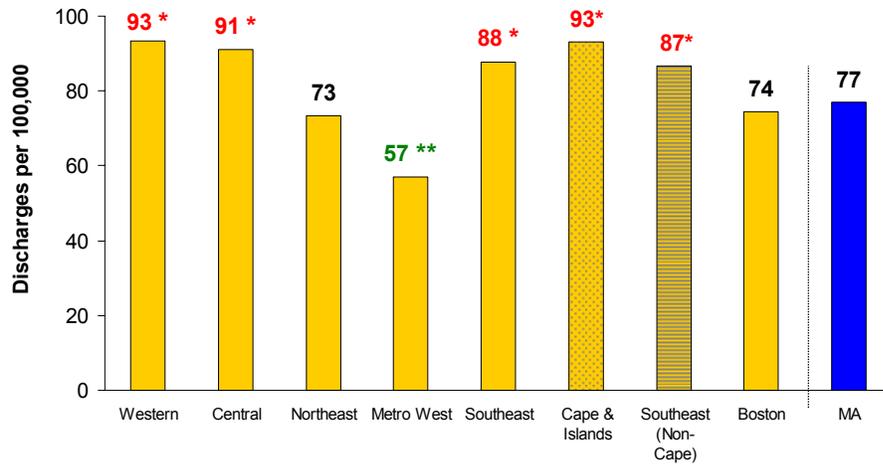
### Hospital Discharge Rates for Self-Inflicted Injuries by Race/Ethnicity Southeast Region and Massachusetts: 2003-2005



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

## 177

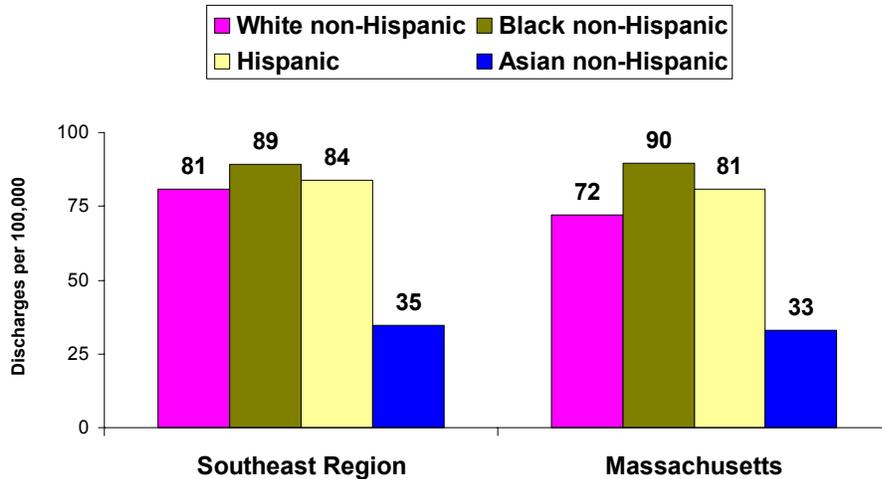
### Hospital Discharge Rates for Motor Vehicle-related Injuries by EOHHS Region Massachusetts: 2003-2005



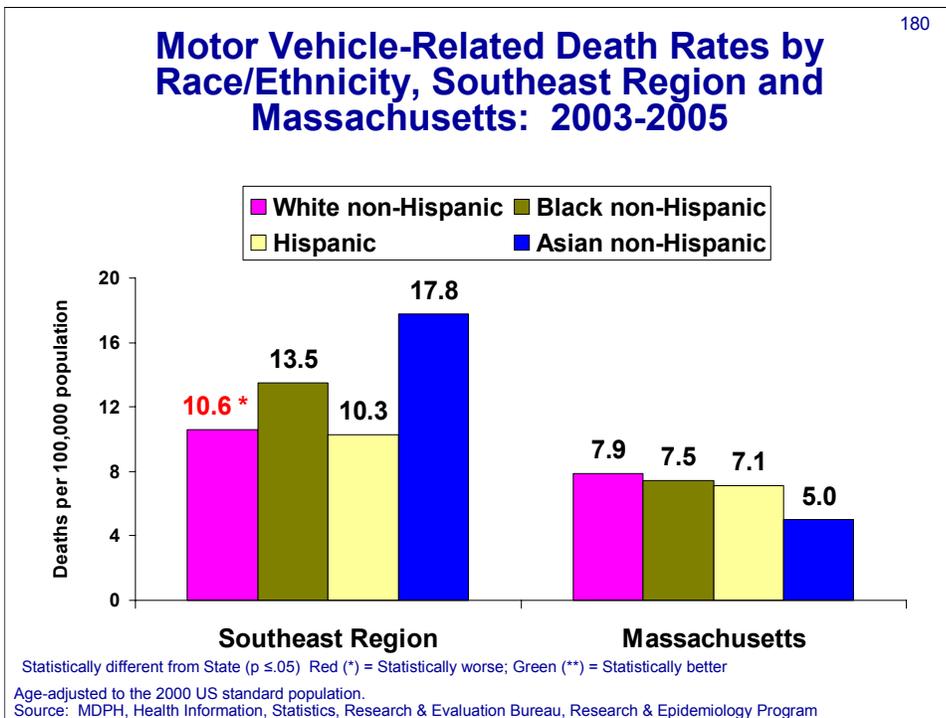
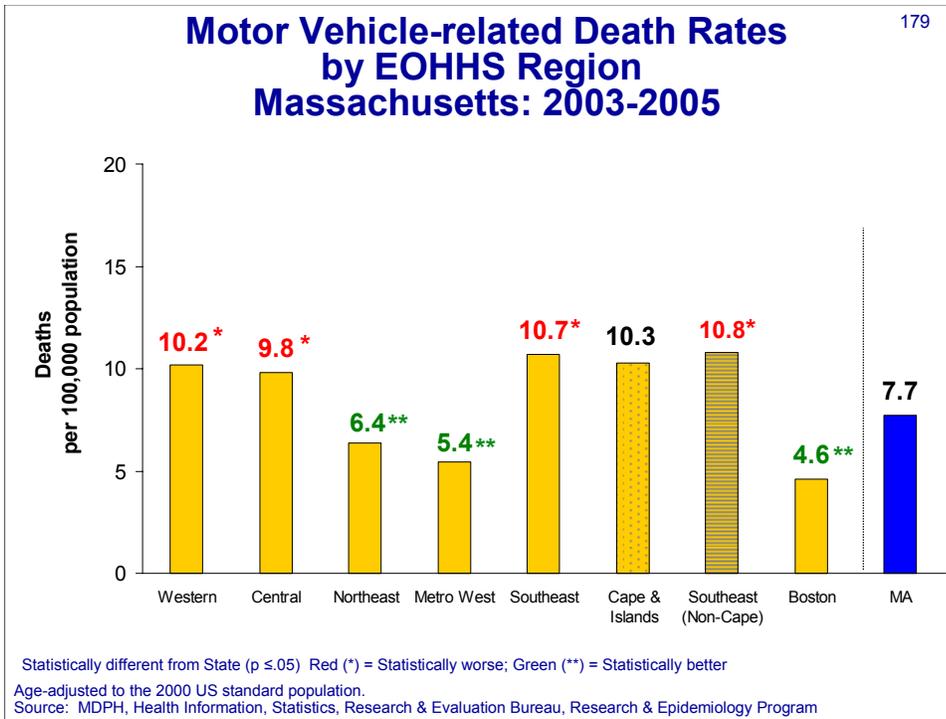
Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
 Age-adjusted to the 2000 US standard population.  
 Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Inpatient Hospital Discharge Database

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### Hospital Discharge Rates for Motor Vehicle-Related Injuries by Race/Ethnicity, Southeast Region and Massachusetts: 2003-2005

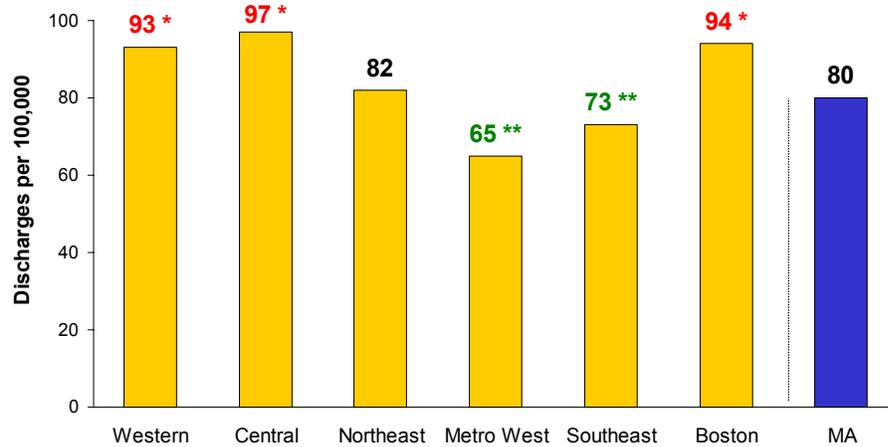


Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
 Age-adjusted to the 2000 US standard population.  
 Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Inpatient Hospital Discharge Database



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

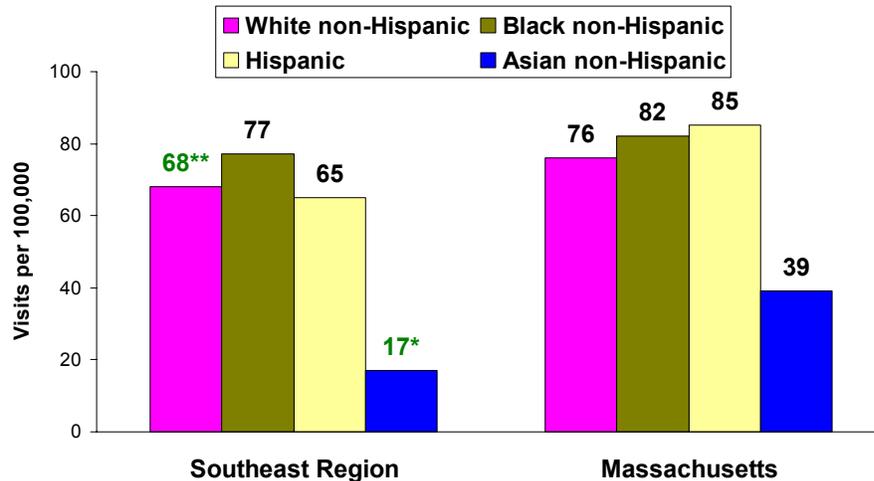
181



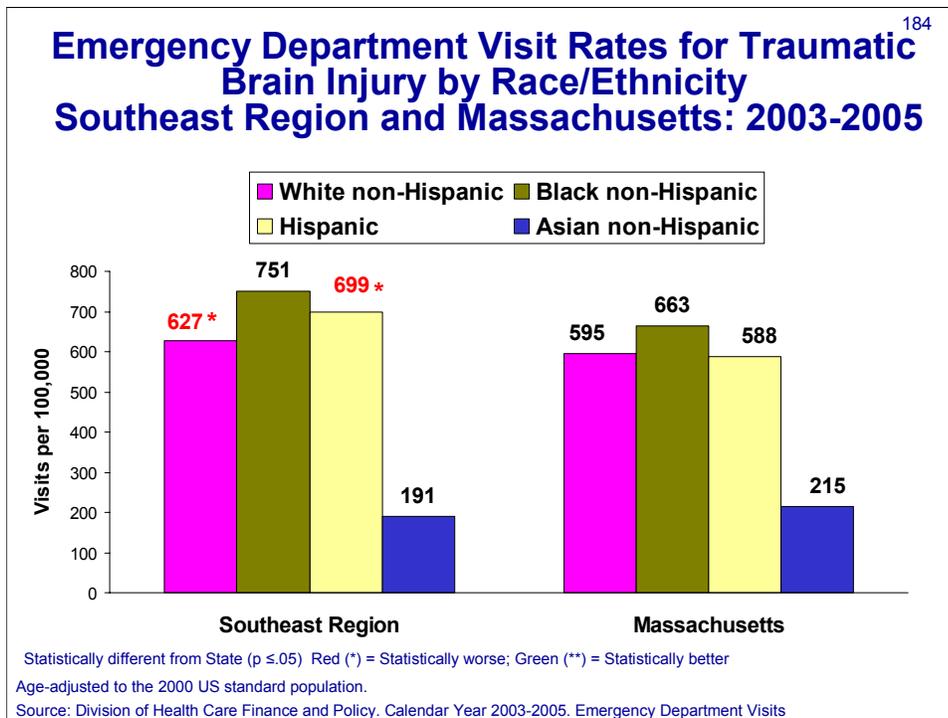
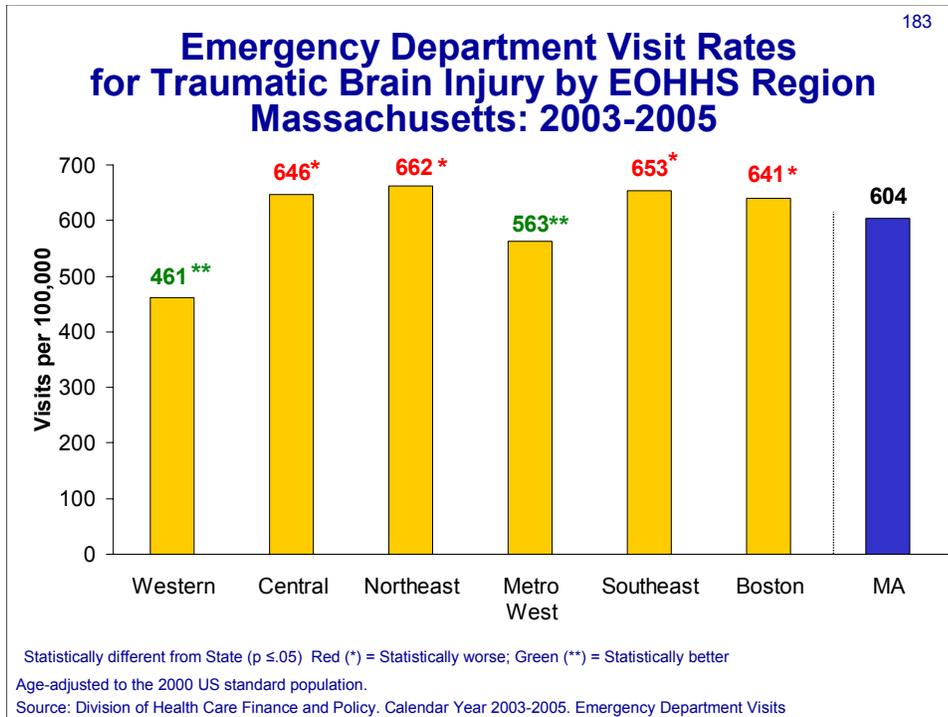
Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
 Age-adjusted to the 2000 US standard population.  
 Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Inpatient Hospital Discharge Database

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

182

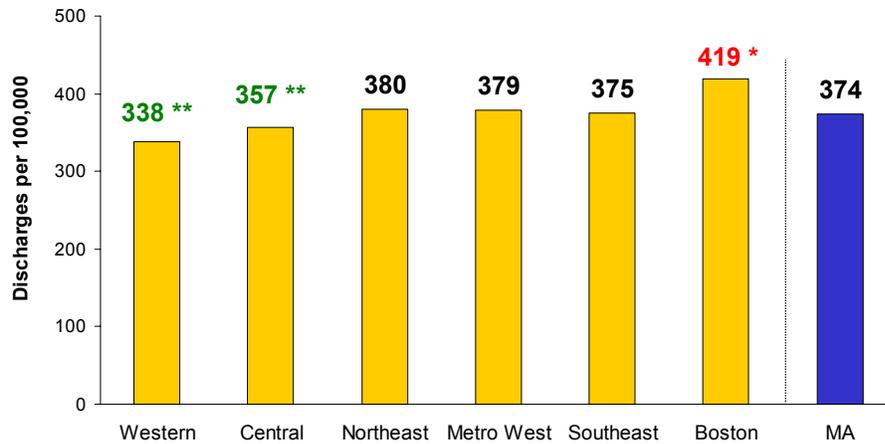


Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
 Age-adjusted to the 2000 US standard population.  
 Source: Division of Health Care Finance and Policy. Calendar Year 2003-2005. Emergency Department Visits



## Hospital Discharge Rates for Fall-Related Injuries by EOHHS Region Massachusetts: 2003-2005

185



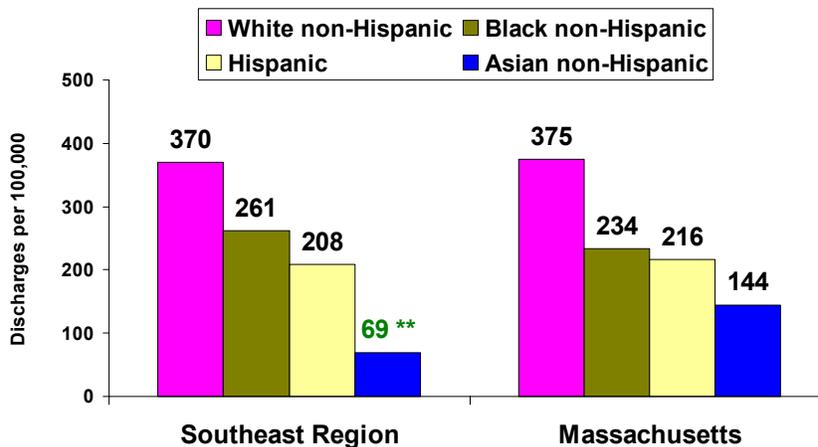
Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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 Fall-Related Injuries by Race/Ethnicity Southeast Region and Massachusetts: 2003-2005

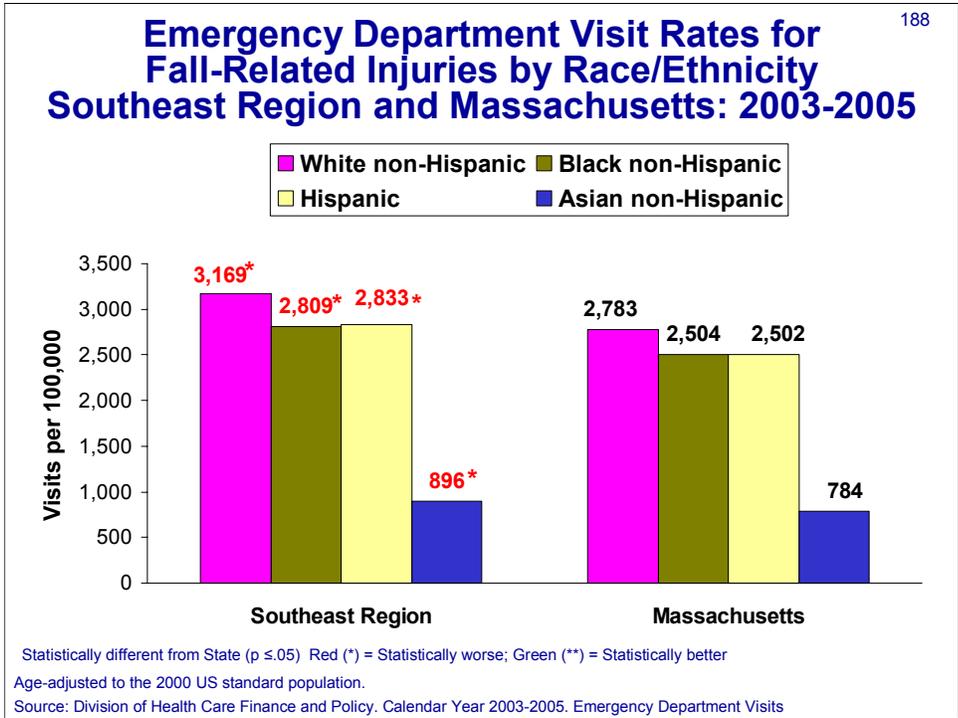
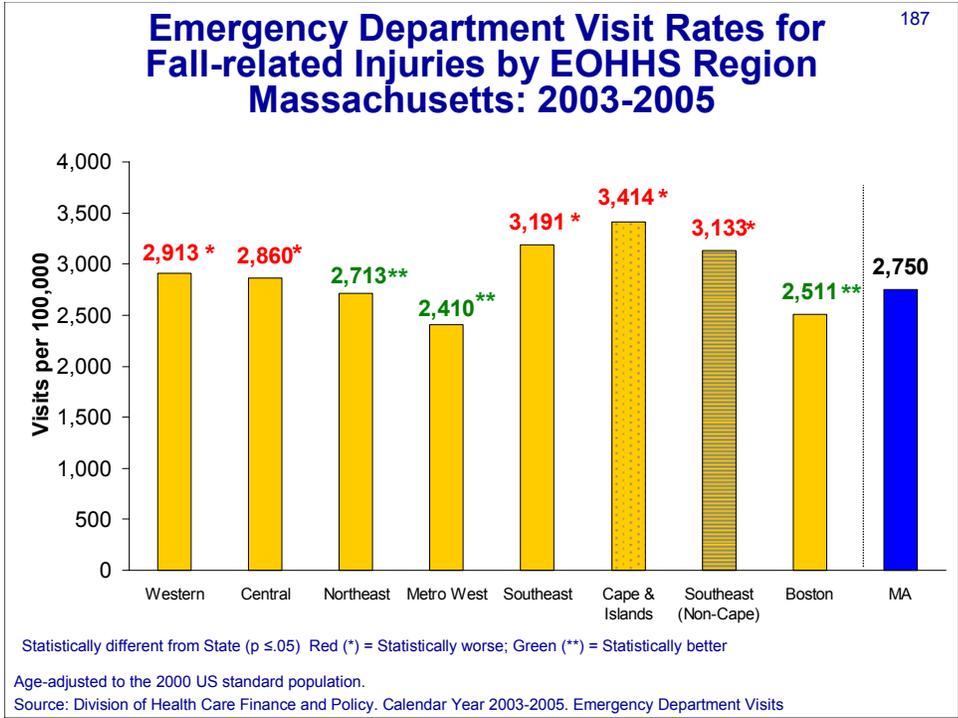
186



Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

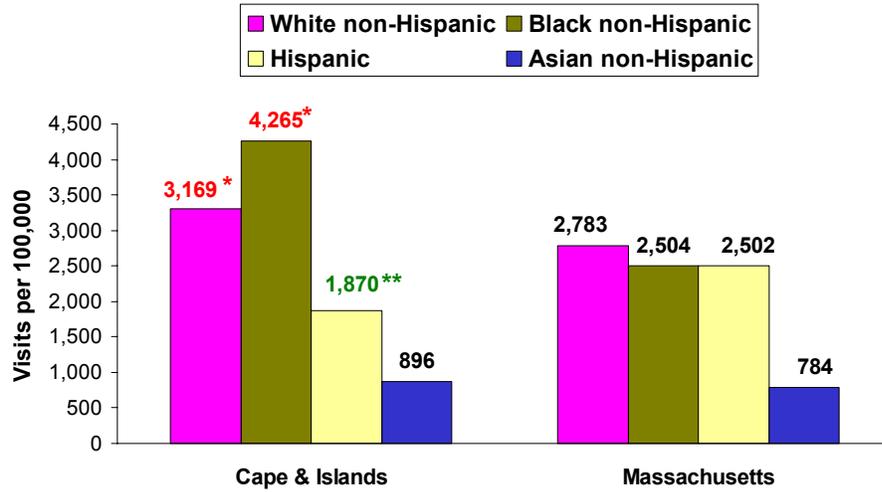
Age-adjusted to the 2000 US standard population.

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 Race/Ethnicity Cape & Islands and Massachusetts: 2003-2005

189



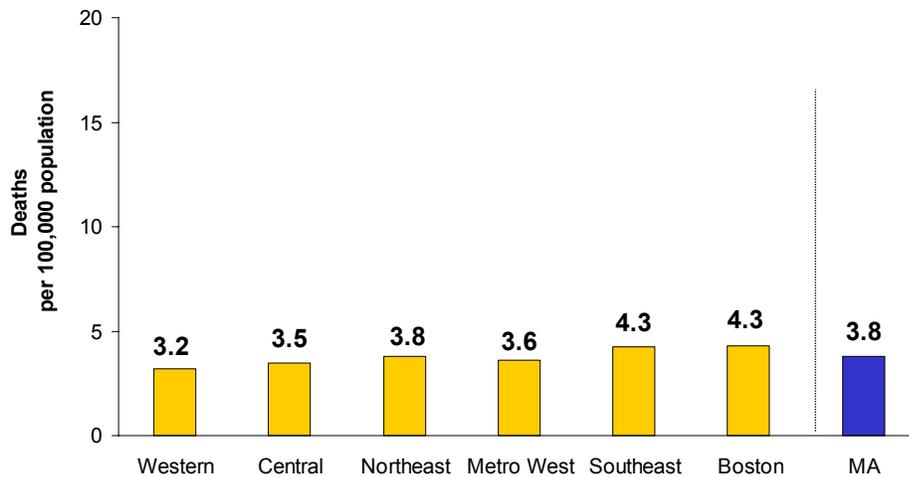
Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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 Death Rates by EOHHS Region Massachusetts: 2003-2005

190



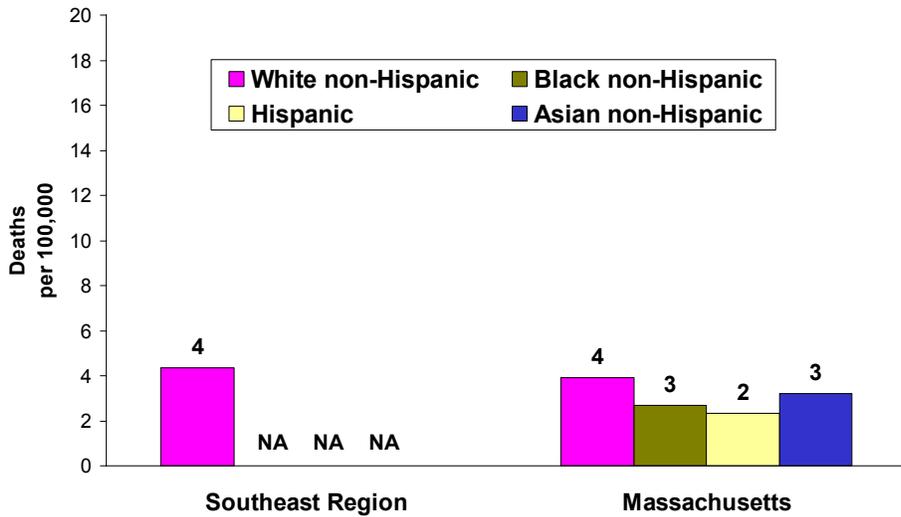
Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

Age-adjusted to the 2000 US standard population.

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

## 191

### Fall-Related Injury Death Rates by Race/Ethnicity Southeast Region and Massachusetts: 2003-2005



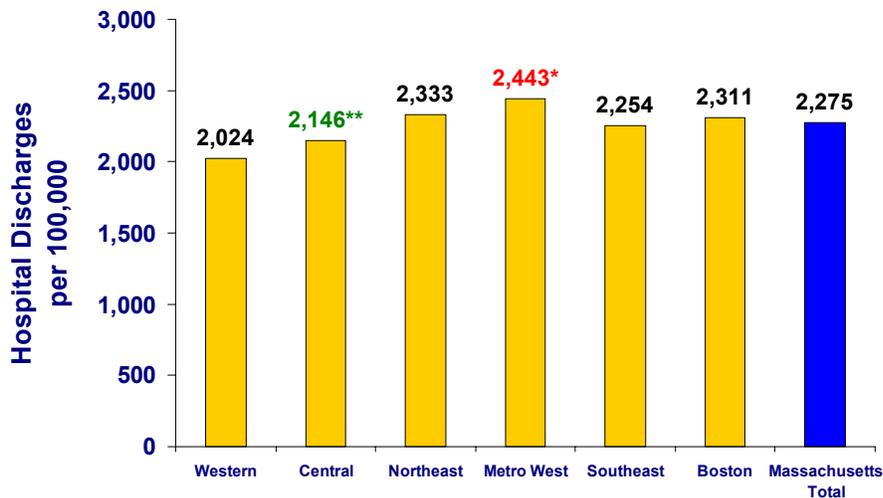
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Age-adjusted to the 2000 US standard population.

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

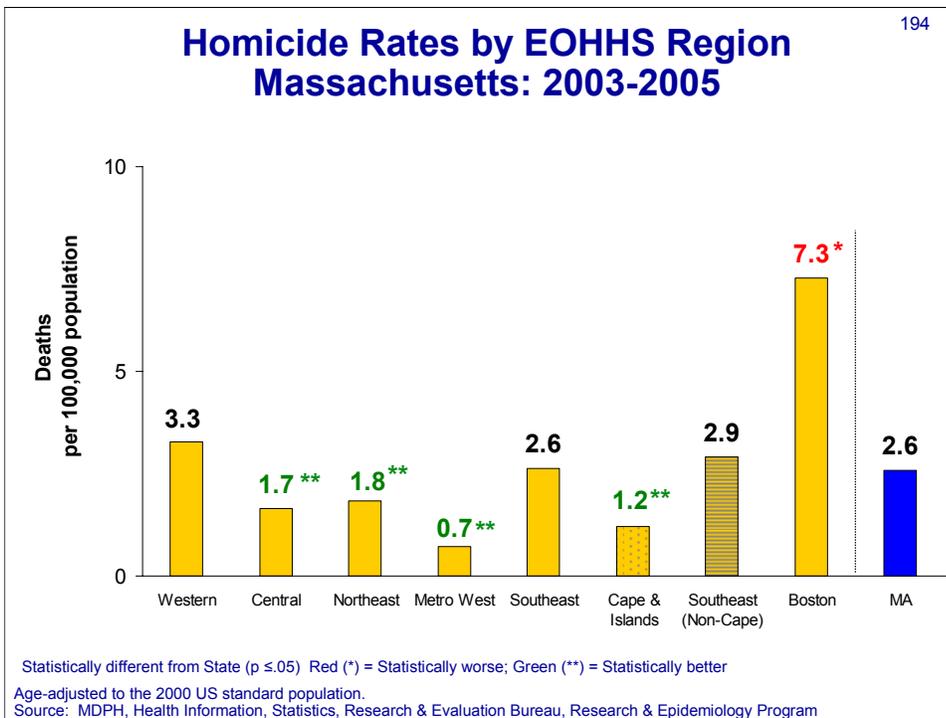
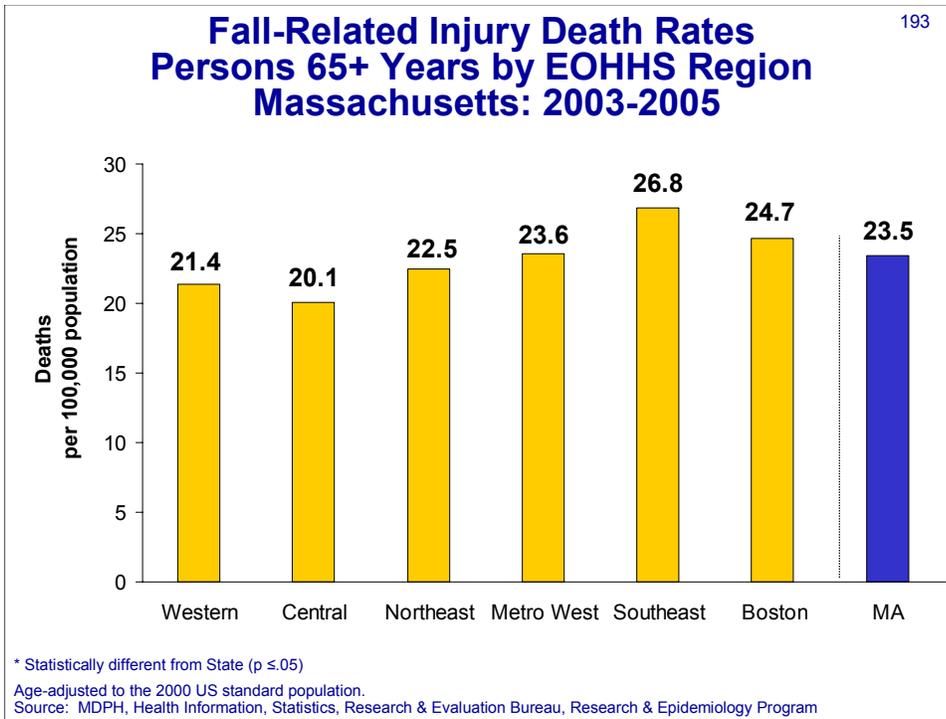
## 192

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



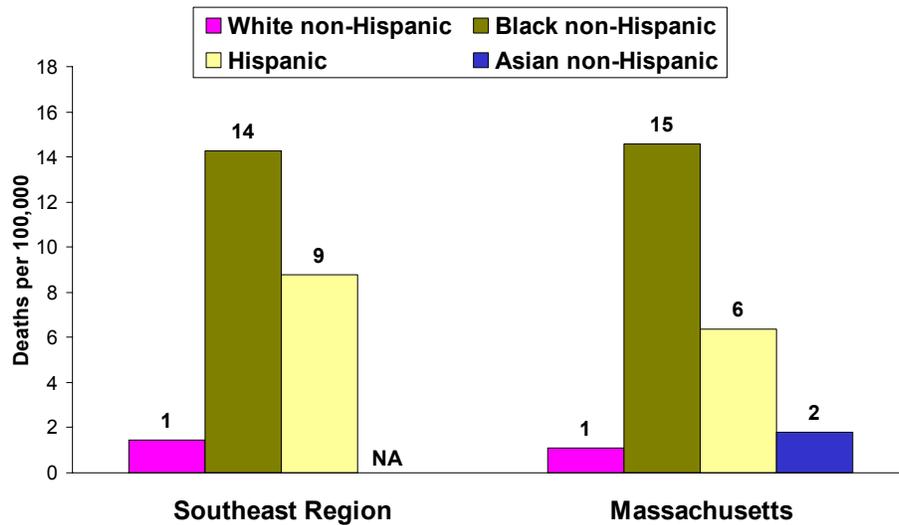
Statistically different from state ( $p \leq .05$ )— Red (\*) Statistically worse than state- Green (\*\*) statistically better than state

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



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

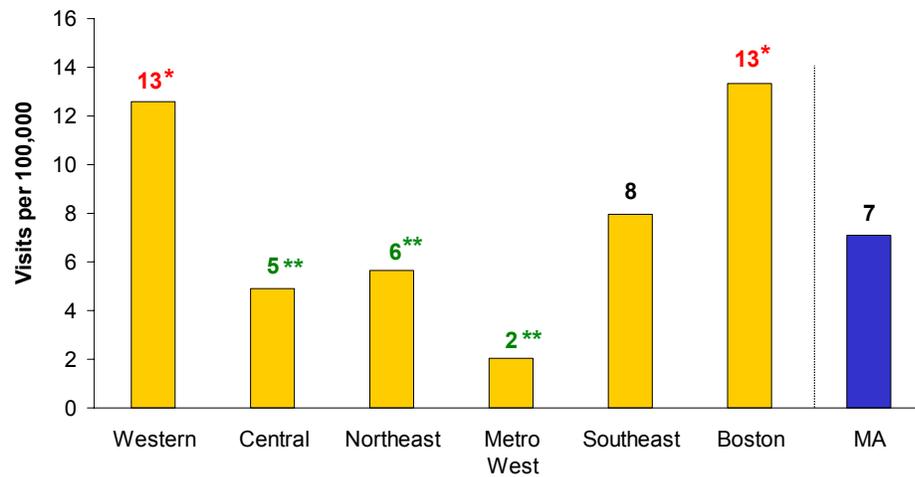
195



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

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

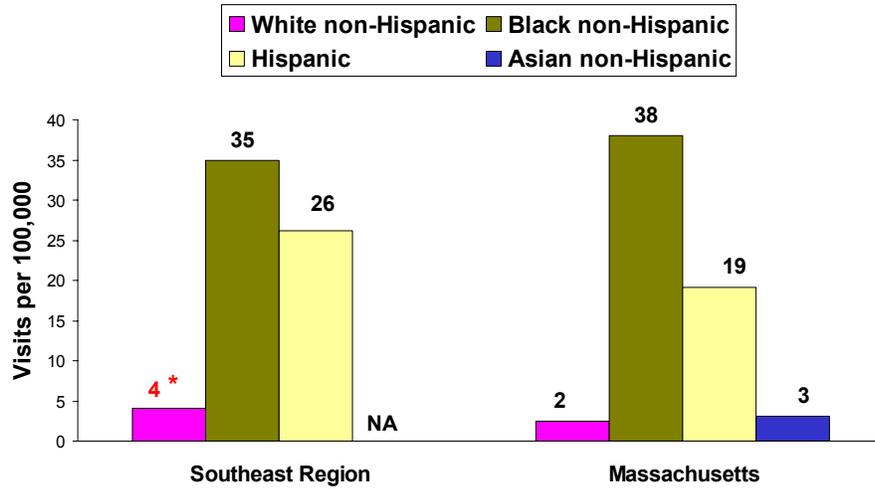
196



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

## Emergency Department Visit Rates for Firearm Injuries by Race/Ethnicity Southeast Region and Massachusetts: 2003-2005

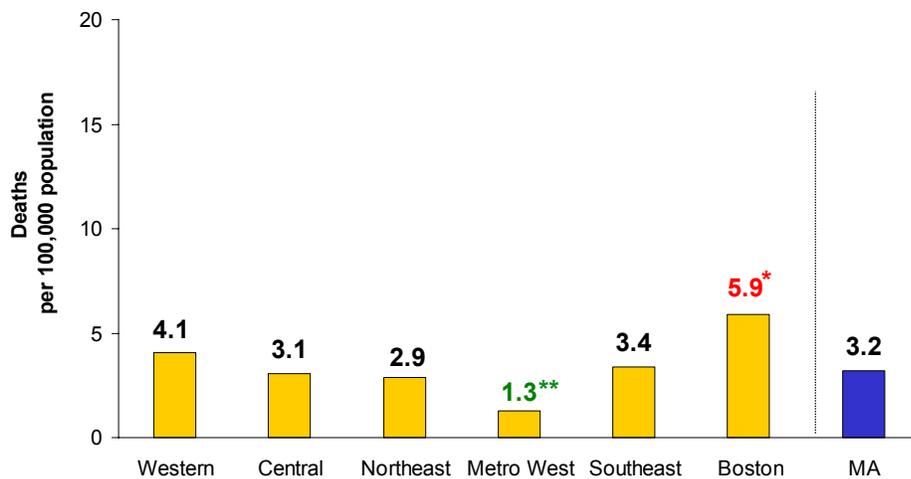
197



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

## Firearm Death Rates by EOHHS Region Massachusetts: 2003-2005

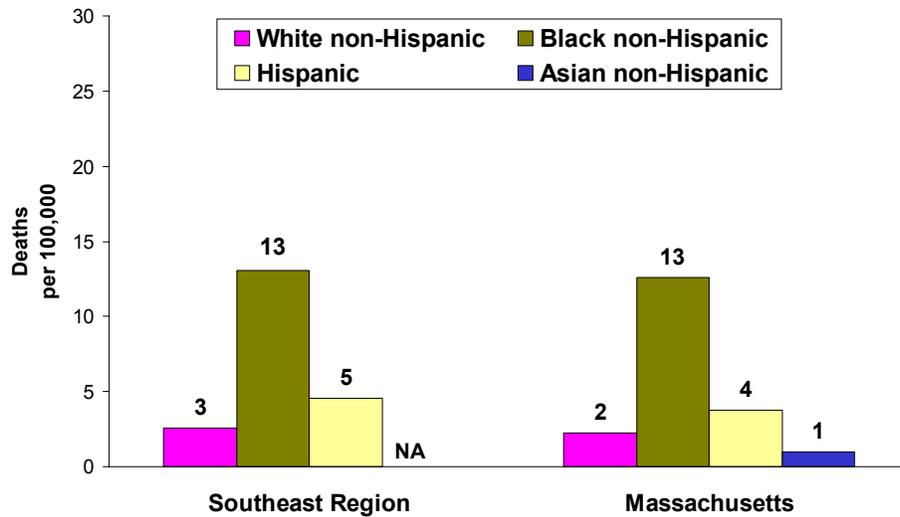
198



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

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

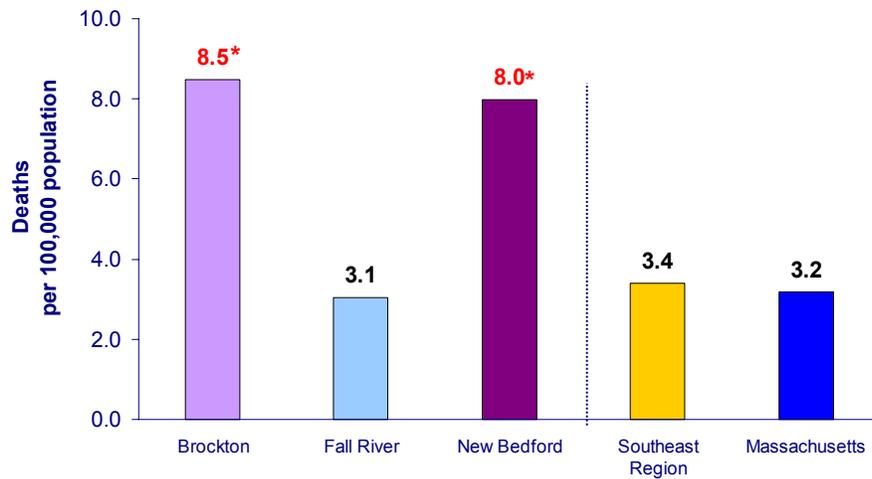
199



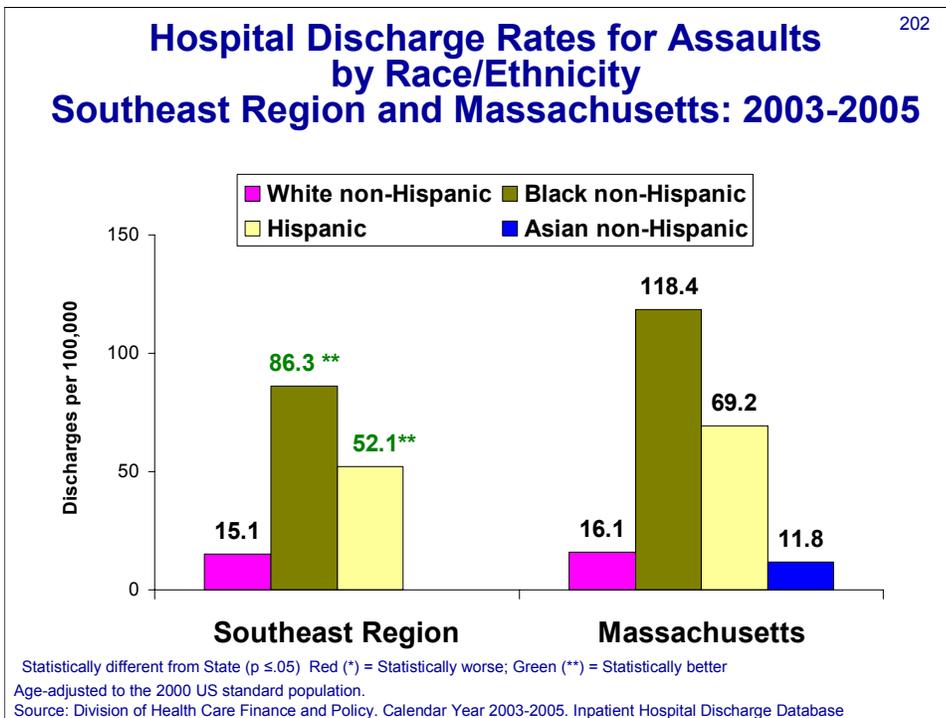
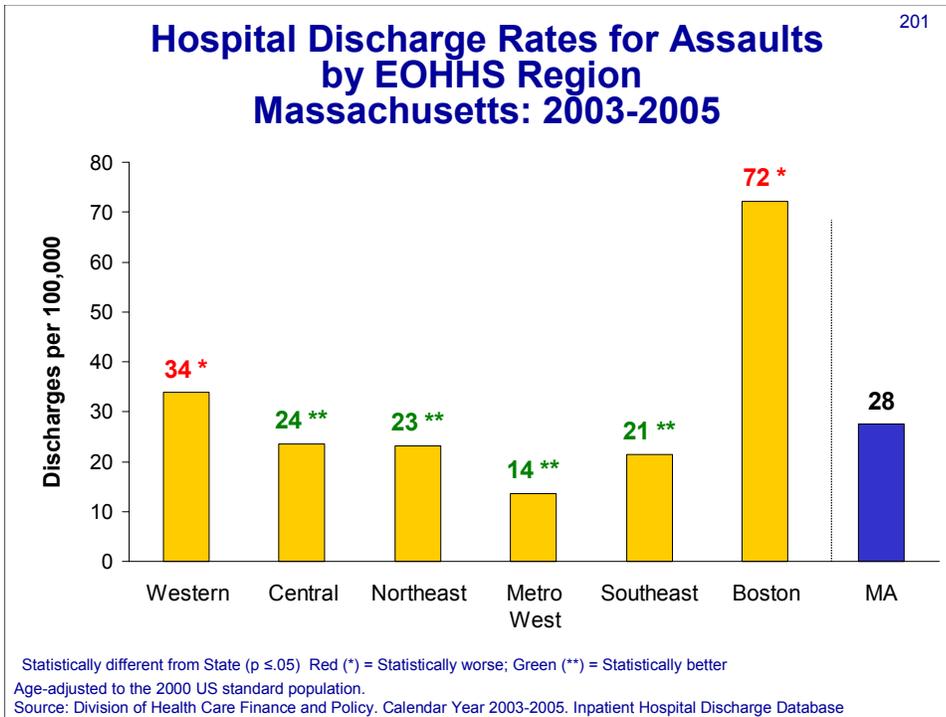
Age-adjusted to the 2000 US standard population. \* Statistically different from State ( $p \leq 0.05$ )  
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

## Firearm Death Rates in Selected Communities Southeast and Massachusetts: 2003-2005

200

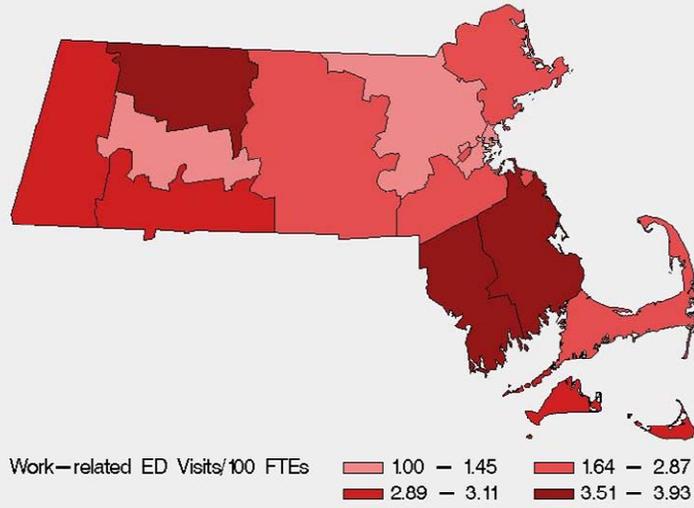


Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
 Age-adjusted to the 2000 US standard population.  
 Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program



### Work—related Injuries

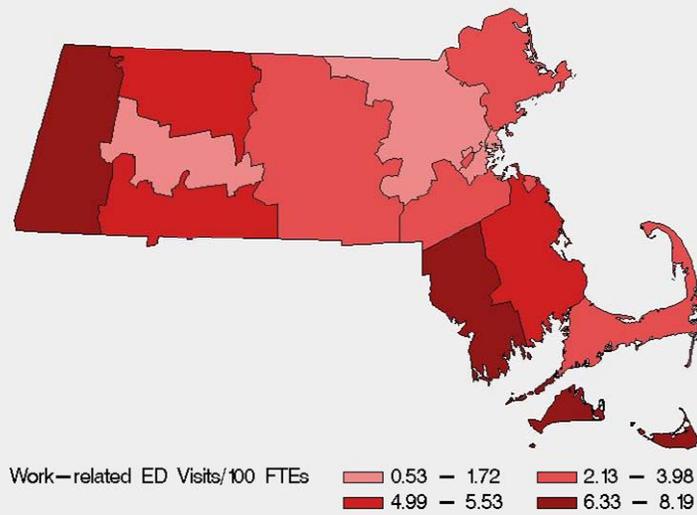
Emergency Department Visits per 100 Full Time Equivalents.  
Massachusetts Counties, 2004—2005



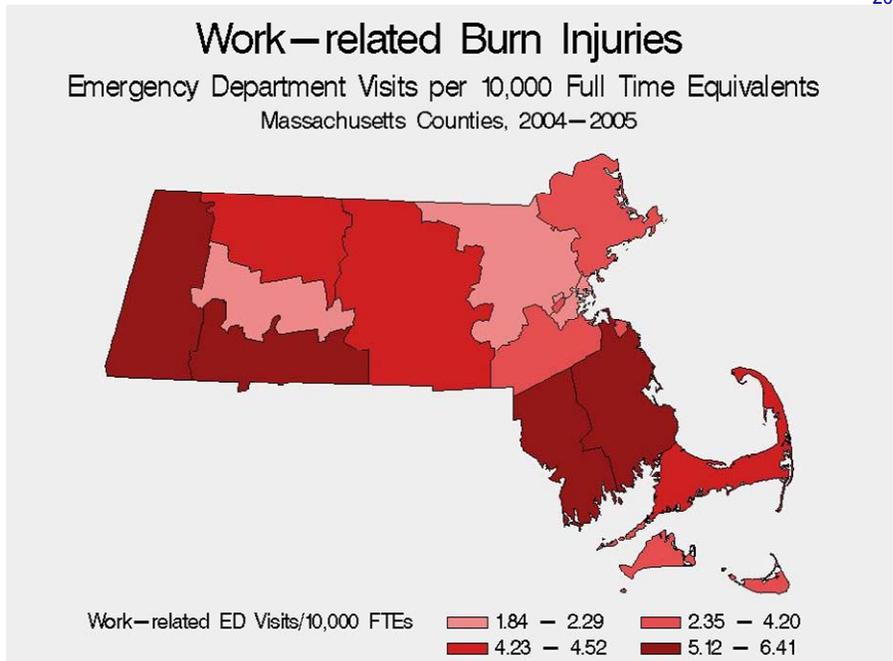
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Occupational Health Surveillance Program

### Work—related Injuries among Teens

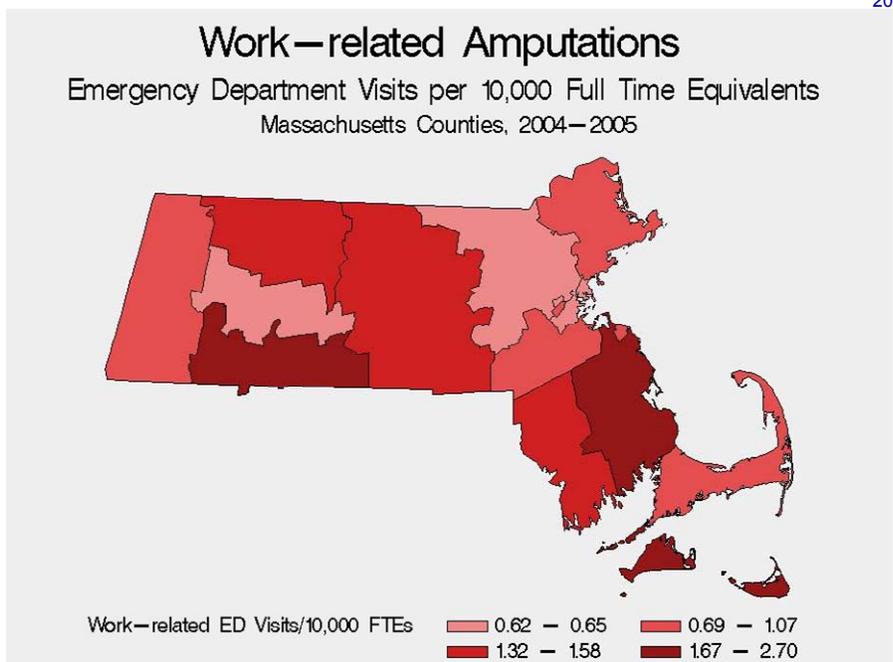
Emergency Department Visits per 100 Full Time Equivalents  
Massachusetts Counties, 2004—2005



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



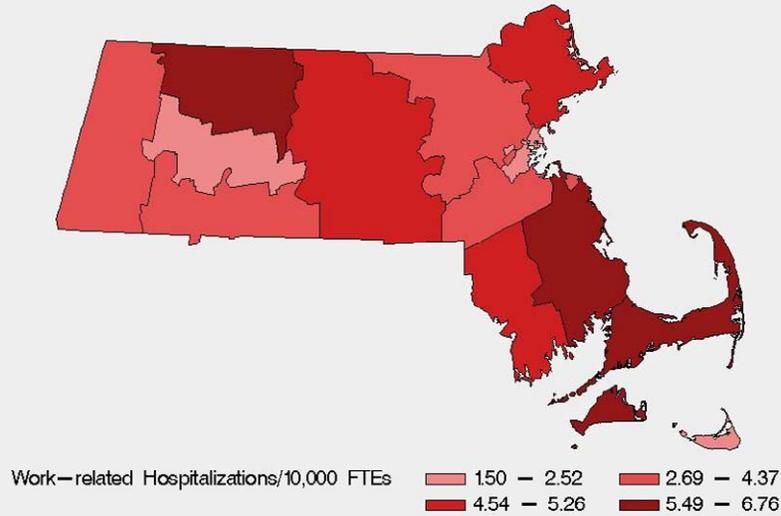
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Occupational Health Surveillance Program



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

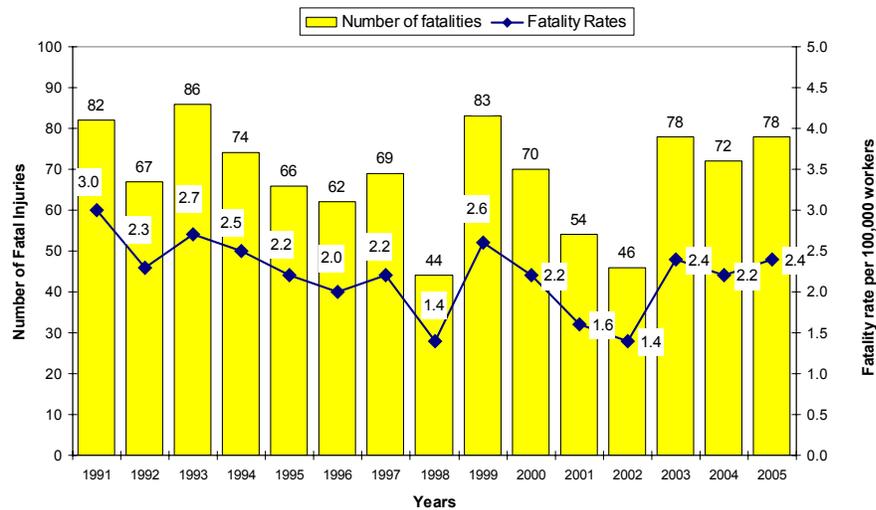
## Work-related Injuries

Hospitalizations per 10,000 Full Time Equivalents.  
Massachusetts Counties, 2004-2005



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<sup>209</sup> by EOHHS Region, Massachusetts: 2003-2005

Hospital Discharge Indicator Rates (age-adjusted)	MA Total	Western	Central	North East	Metro West	Southeast	Boston
All Injuries	836	872	830	836	753	859	966
Fall-related injury hospitalizations	374	338	357	380	379	375	419
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. Inpatient Hospital Discharge Database

## Summary Injury/Violence Hospitalization Indicators<sup>210</sup> Southeast Region, Cape & Islands and Massachusetts: 2003-2005

Hospital Discharge Indicator Rates (age-adjusted, per 100,000)	MA Total	Southeast	Southeast (not including Cape & Islands)	Cape & Islands
All Injuries	836	859	876	812
Fall-related injury hospitalizations	374	375	378	371
Traumatic Brain Injuries	80	73	73	72
Motor vehicle-related	77	88	87	93
Self-Inflicted	65	66	NA	63
Assault	28	21	NA	18

■ 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. Inpatient Hospital Discharge Database

## Summary Injury/Violence Hospitalization Indicators Selected Communities, Southeast Region and Massachusetts: 2003-2005 211

Hospital Discharge Indicator Rates (age-adjusted, per 100,000)	MA Total	Brockton	Fall River	New Bedford	Southeast
All Injuries	836	1,186	1,092	1,013	859
Fall-related injury hospitalizations	374	457	424	375	375
Traumatic Brain Injuries	80	103	78	89	73
Motor vehicle-related	77	108	60	84	88
Self-Inflicted	65	123	101	113	66
Assault	28	57	41	51	21

■ 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. Inpatient Hospital Discharge Database

## Summary Injury/Violence Emergency Department Indicators by EOHHS Region, Massachusetts: 2003-2005 212

Indicator Age-adjusted Rate per 100,00	MA Total	Western	Central	North East	Metro West	Southeast	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

## Emergency Department Injury/Violence Indicators Southeast Region, Cape & Islands and Massachusetts: 2003- 2005

Indicator Age-adjusted Rate per 100,00	MA Total	Southeast	Southeast (not including Cape & Islands)	Cape & Islands
ER Visit Rate for all Injuries	11,298	13,996	13,721	14,972
ER Visit Rate for Traumatic Brain Injury	604	653	630	756
ER Visit Rate for Firearm	7	8	9	3
ER Visit Rate for Fall-related injuries	2,750	3,191	3,133	3,414

■ 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 Emergency Department Indicators Selected Communities, Southeast Region and Massachusetts: 2003-2005

Indicator Age-adjusted Rate per 100,00	MA Total	Brockton	Fall River	New Bedford	Southeast
ER Visit Rate for all Injuries	11,298	16,739	21,614	16,258	13,996
ER Visit Rate for Traumatic Brain Injury	604	1,061	351	731	653
ER Visit Rate for Firearm	7	26	11	18	8
ER Visit Rate for Fall-related injuries	2,750	3,102	4,923	3,763	3,191

■ 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 Emergency Department Indicators Southeast Region, Cape & Islands and Massachusetts: 2003- 2005

215

Indicator Age-adjusted Rate per 100,00	MA Total	Southeast	Cape & Islands
ER Visit Rate for all Injuries	11,298	13,996	14,972
ER Visit Rate for Traumatic Brain Injury	604	653	756
ER Visit Rate for Firearm Injuries	7	8	3
ER Visit Rate for Fall-related injuries	2,750	3,191	3,414

■ 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 Rates by EOHHS Region, Massachusetts: 2003-2005

216

Mortality Indicator Age-adjusted Rate per 100,000	MA Total	Western	Central	North East	Metro West	Southeast	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 & Evaluation Bureau, Research & Epidemiology Program

## Summary Injury/Violence Mortality Indicators 217 Southeast Region, Cape & Islands and Massachusetts: 2003-2005

Mortality Indicator Age-adjusted Rate per 100,000	MA Total	Southeast	Southeast (not including Cape & Islands)	Cape & Islands
Homicide Death Rate	2.6	2.6	2.9	1.2
Suicide Death Rate	6.6	6.9	6.3	9.5
Motor Vehicle-related Death Rate	7.7	10.7	10.8	10.3
Firearm Death Rate	3.2	3.4	3.6	2.5
Fall-related Injury Death Rate	3.8	4.3	4.3	3.9

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

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

## Summary Injury/Violence Mortality Indicators 218 Selected Communities, Southeast Region and Massachusetts: 2003-2005

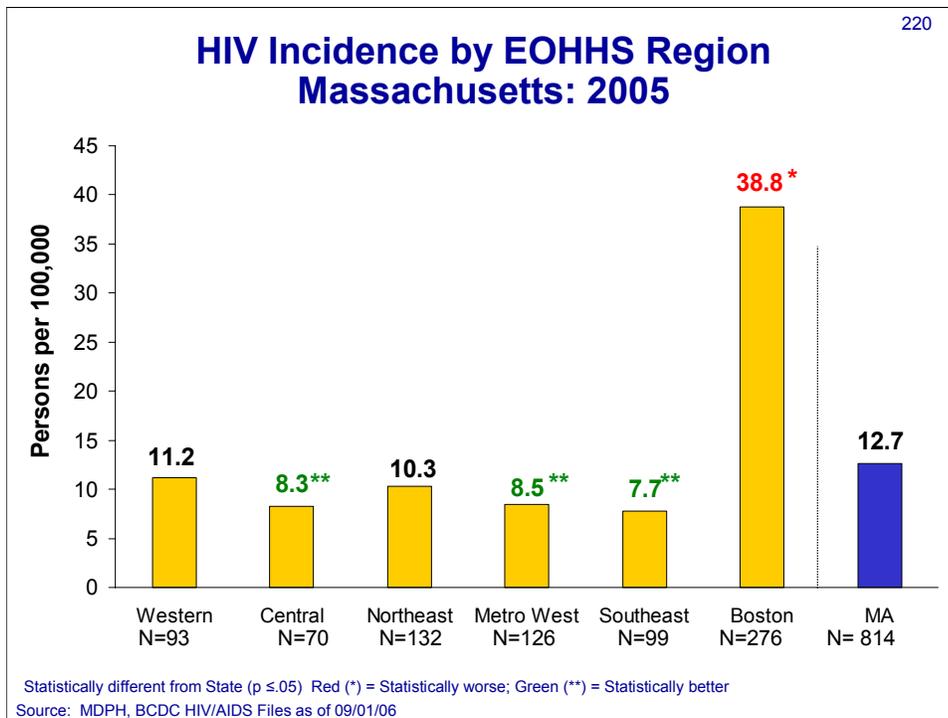
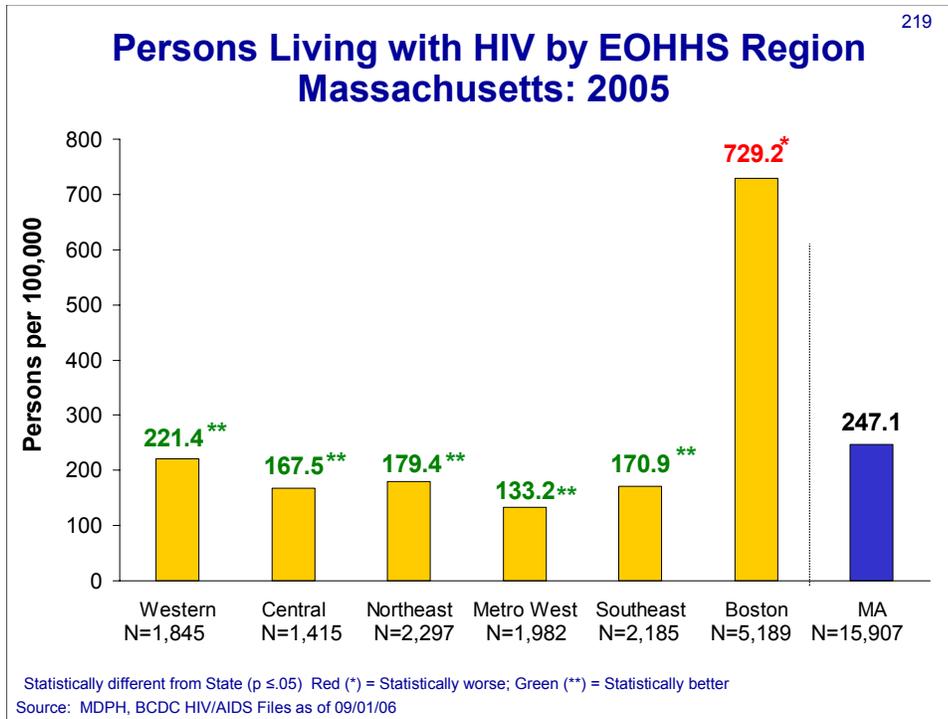
Mortality Indicator Age-adjusted Rate per 100,000	MA Total	Brockton	Fall River	New Bedford	Southeast
Homicide Death Rate	2.6	7.7	3.7	8.5	2.6
Suicide Death Rate	6.6	8.1	7.6	6.8	6.9
Motor Vehicle-related Death Rate	7.7	10.8	11.7	12.0	10.7
Firearm Death Rate	3.2	8.5	3.1	8.0	3.4
Fall-related Injury Death Rate	3.8	3.7	4.7	4.5	4.3

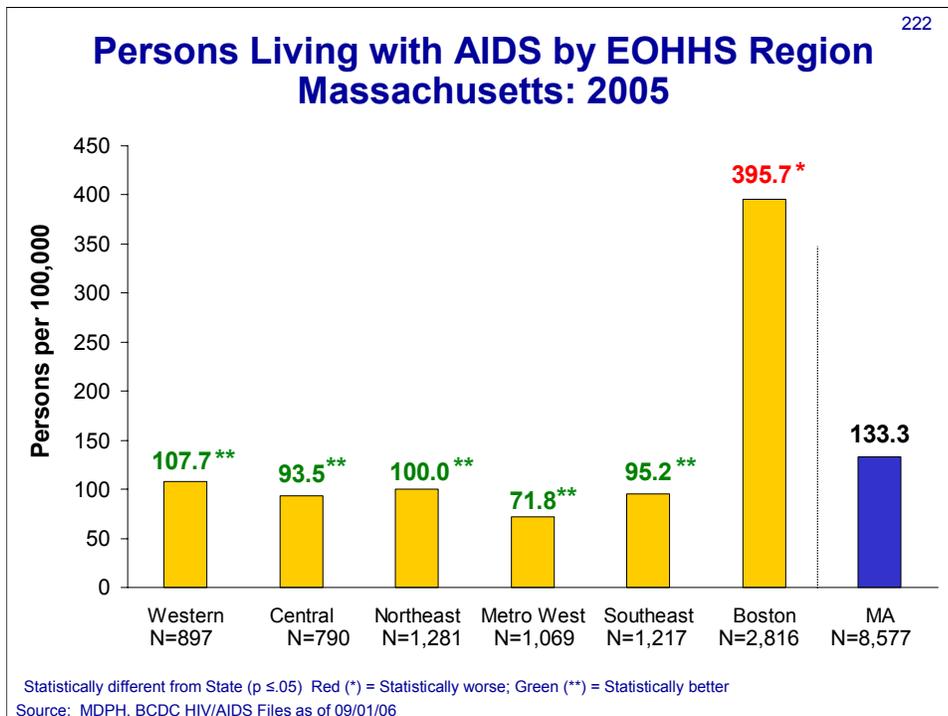
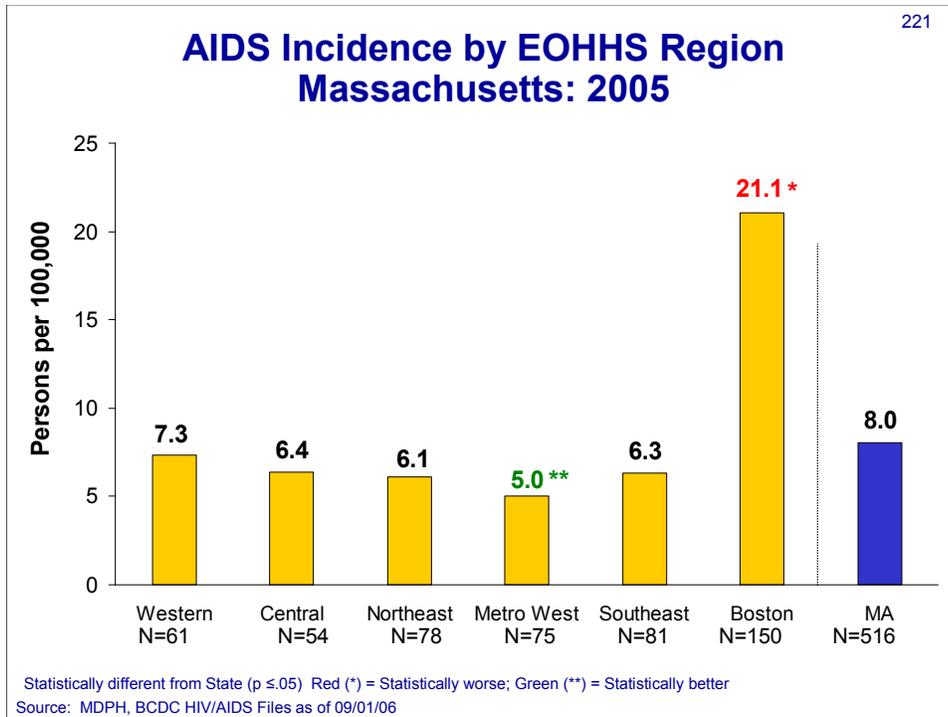
Better Outcome (significantly different from state)
  Worse Outcome (significantly different from state)

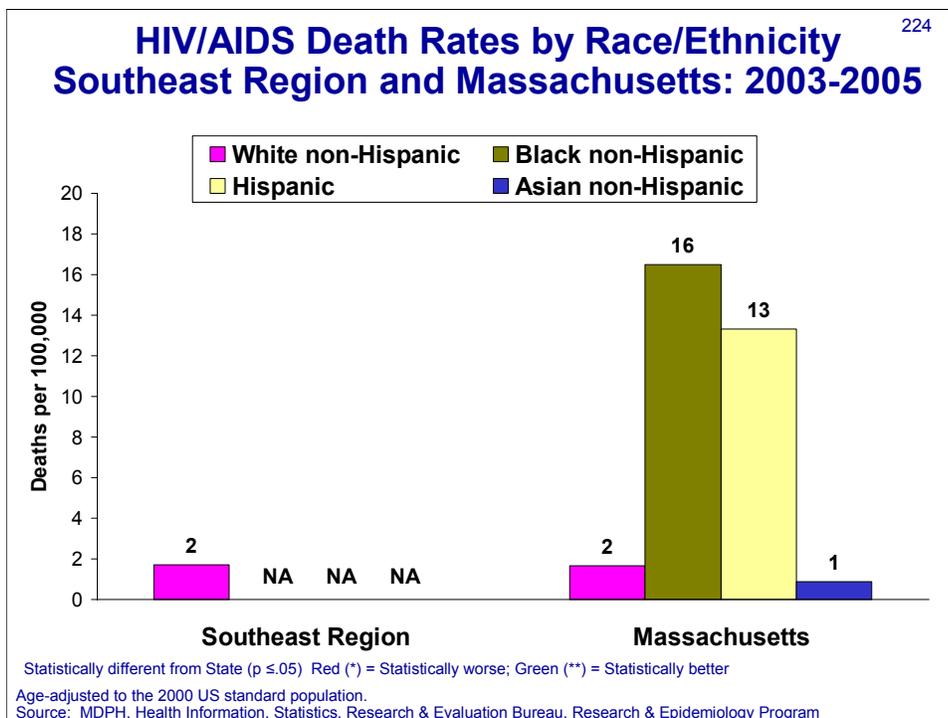
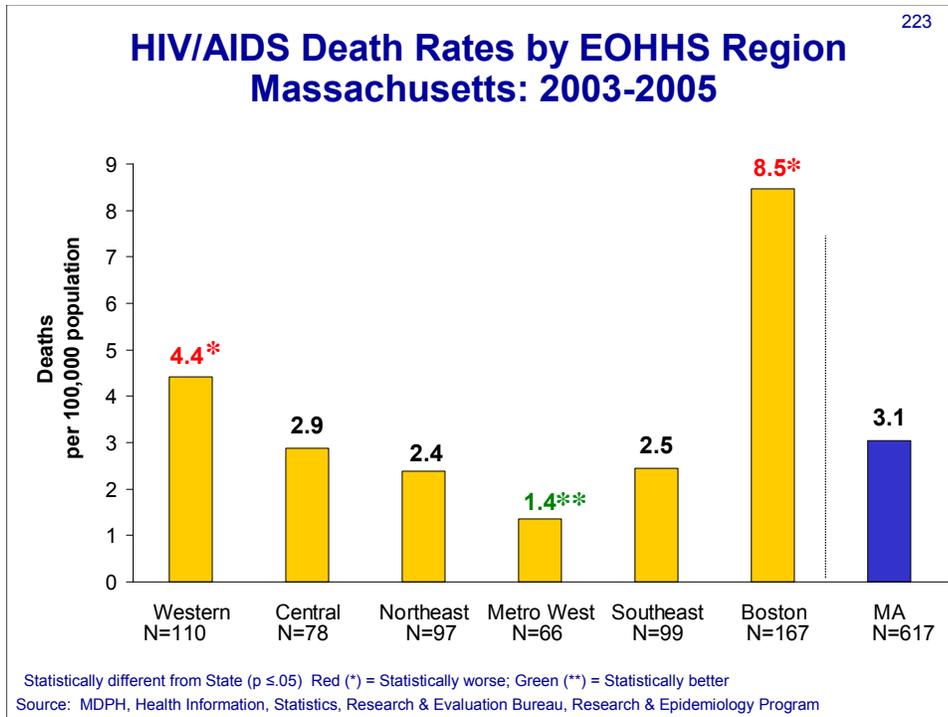
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

# **HIV/AIDS**









## Summary HIV/AIDS Indicators by EOHHS Region

225

Indicator Crude rate, per 100,000	MA Total	Western	Central	North East	Metro West	Southeast	Boston
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)

## Summary HIV/AIDS Indicators Selected Communities, Southeast Region and Massachusetts

226

Indicator Crude rate, per 100,000	MA Total	Brockton	Fall River	New Bedford	Southeast
Persons living with HIV (2005)	247.1	336.8	226.9	483.6	170.9
HIV Incidence(2005)	12.6	20.9	5.4	15.9	7.7
Persons living with AIDS (2005)	133.2	194.3	123.8	285.7	95.2
AIDS Incidence (2005)	8.0	12.9	5.4	21.2	6.3
HIV/AIDS Mortality (2003-2005)	3.1	6.7	5.5	10.7	2.5

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

## Summary HIV/AIDS Indicators Southeast Region, Cape & Islands and Massachusetts

227

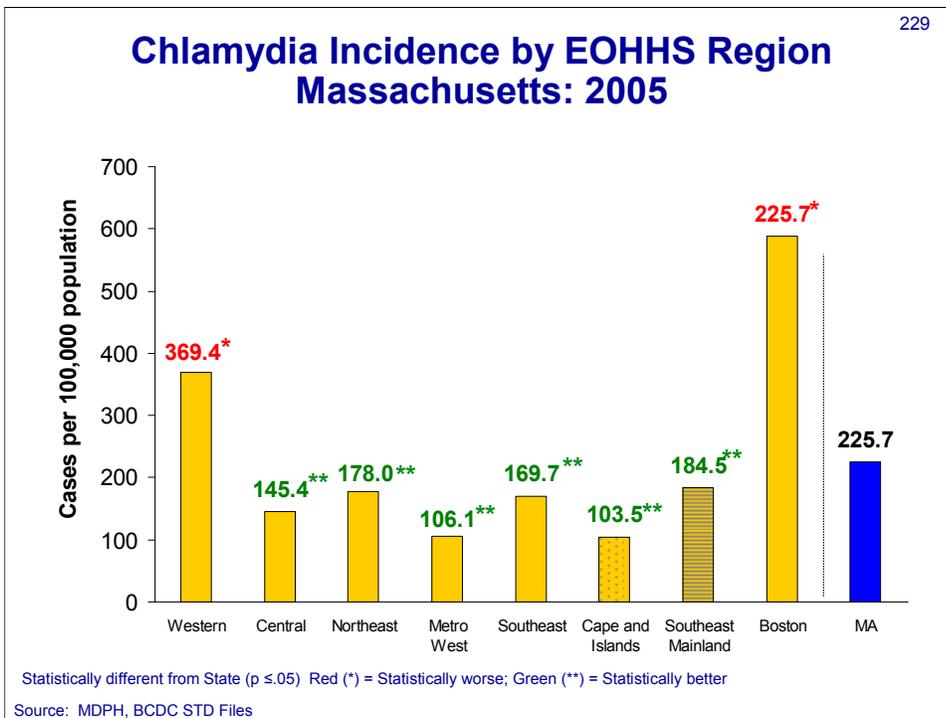
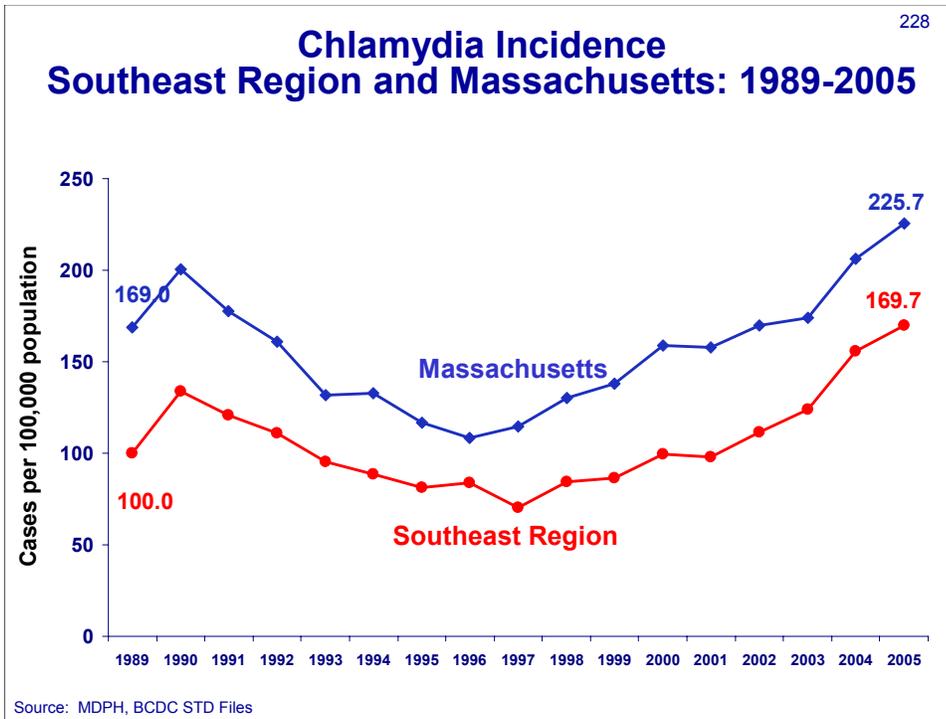
Indicator Crude rate, per 100,000	MA Total	Southeast	Cape & Islands
<b>Persons living with HIV (2005)</b>	<b>247.1</b>	<b>170.9</b>	235.9
<b>HIV Incidence(2005)</b>	<b>12.6</b>	<b>7.7</b>	10.3
<b>Persons living with AIDS (2005)</b>	<b>133.2</b>	<b>95.2</b>	124.9
<b>AIDS Incidence (2005)</b>	<b>8.0</b>	6.3	7.1
<b>HIV/AIDS Mortality (2003-2005)</b>	<b>3.1</b>	2.5	2.4

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

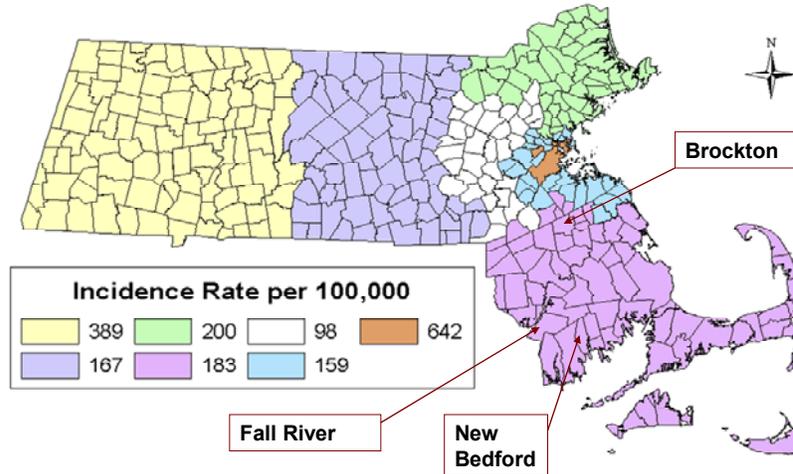


# **INFECTIOUS DISEASES**



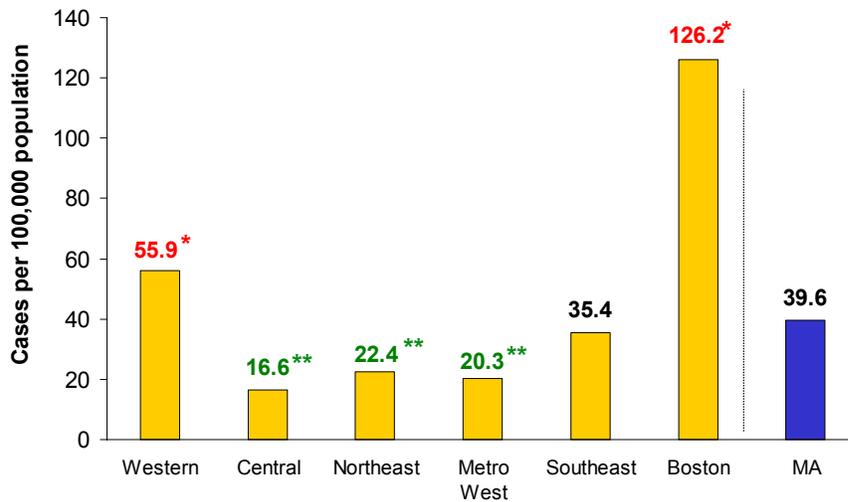


### Chlamydia Incidence Rate by Emergency Preparation Region, Massachusetts: 2006



Source: MDPH, BCDC STD Files

### Gonorrhea Incidence by EOHHS Region Massachusetts: 2005

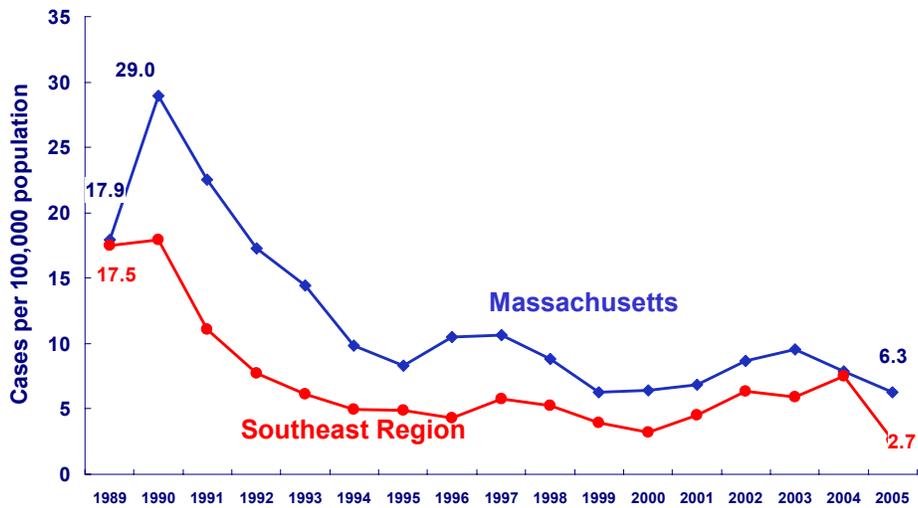


Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

Source: MDPH, BCDC STD Files

## Syphilis Incidence Southeast Region and Massachusetts: 1989-2005

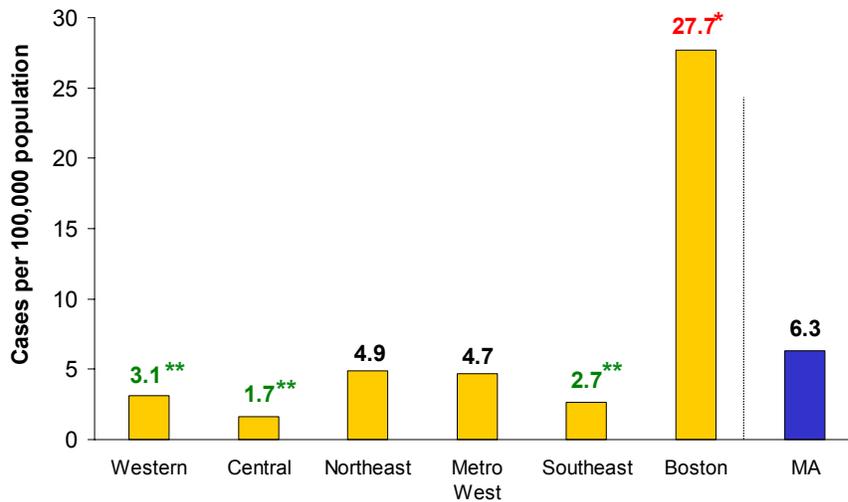
232



Source: MDPH, BCDC STD Files

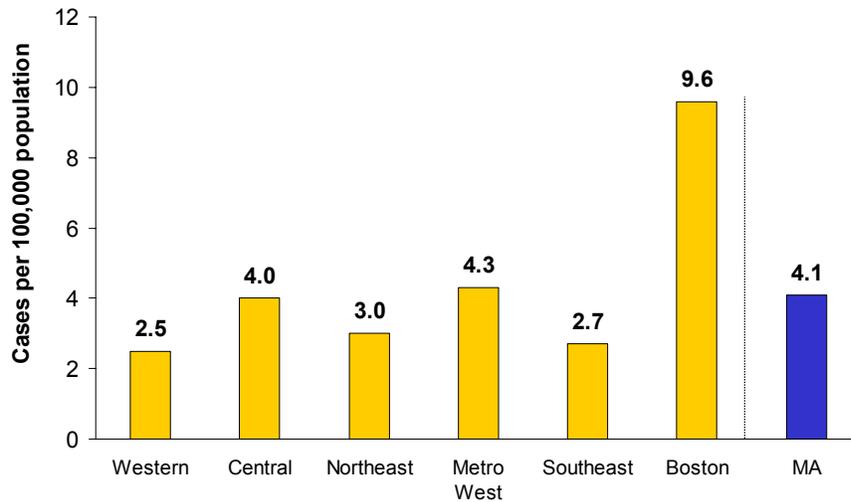
## Syphilis Incidence by EOHHS Region Massachusetts: 2005

233



Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
Source: MDPH, BCDC STD Files

### Tuberculosis Incidence by EOHHS Region Massachusetts: 2006



Statistically different from State (p ≤.05) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

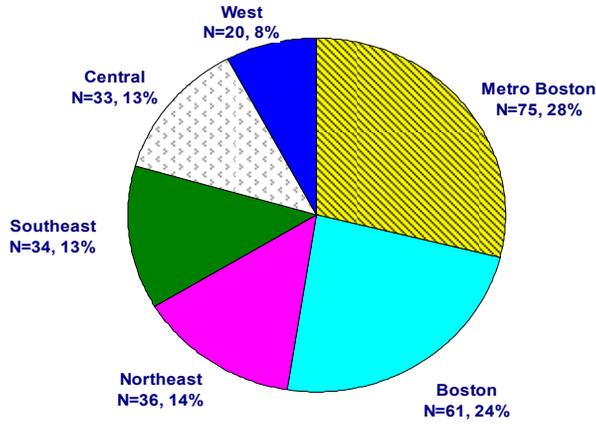
Source: MDPH Bureau of Communicable Disease Control, ISIS

### 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

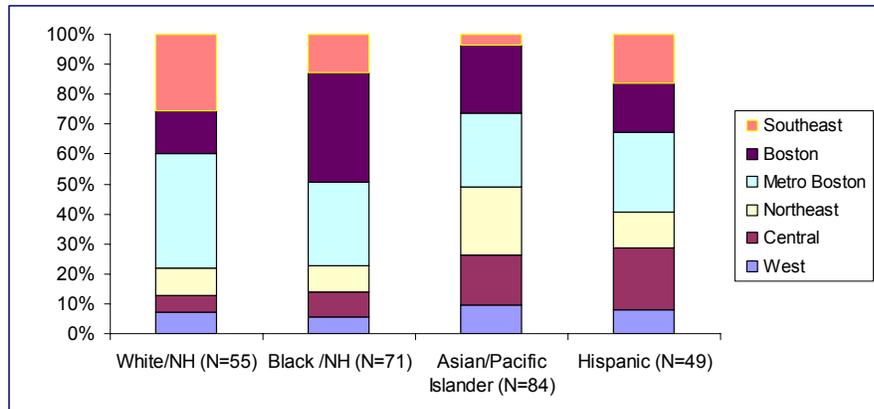
Source: MDPH Bureau of Communicable Disease Control, ISIS

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



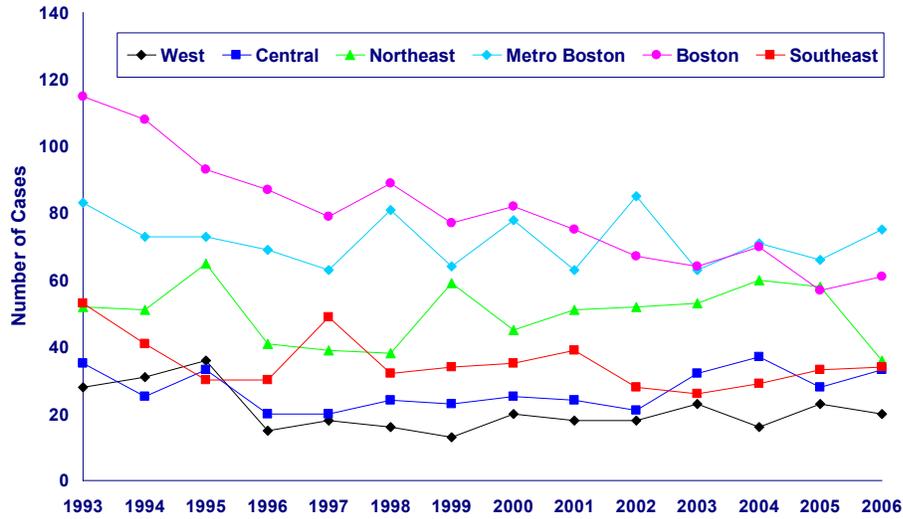
Source: MDPH Bureau of Communicable Disease Control, ISIS

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



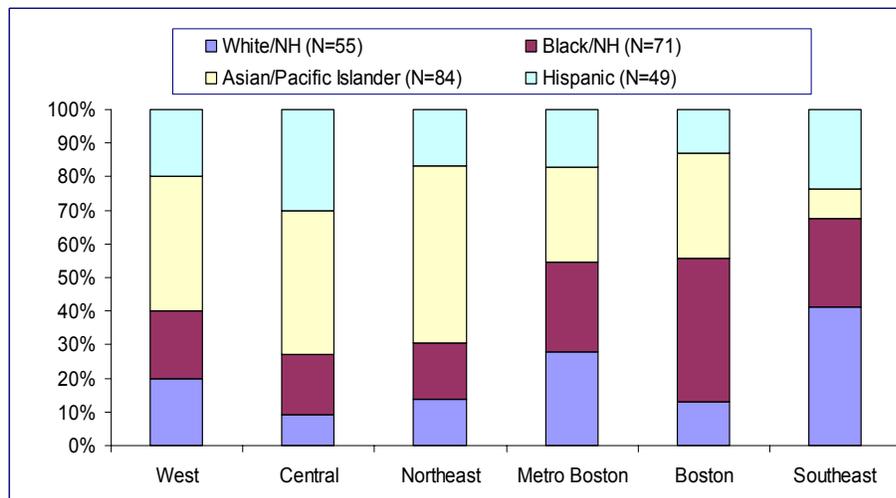
Source: MDPH Bureau of Communicable Disease Control, ISIS

### Tuberculosis Cases by EOHHS Region Massachusetts: 1993-2006



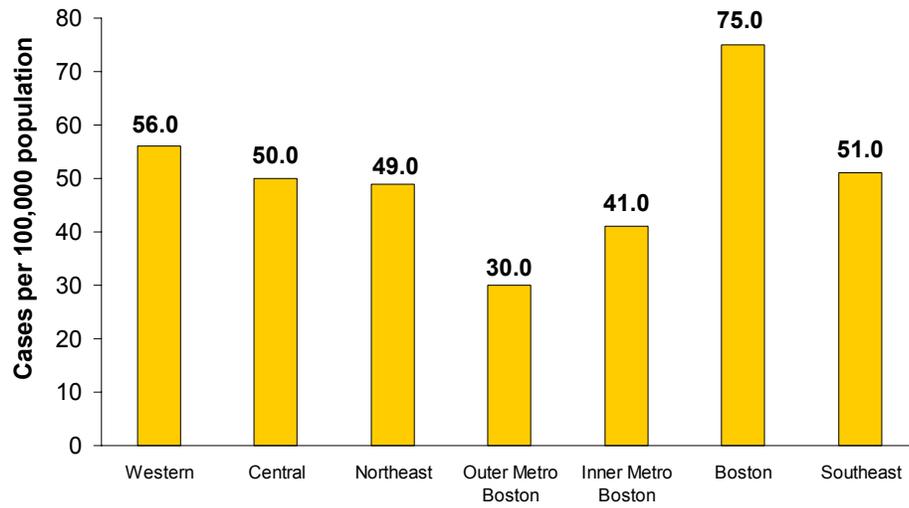
Source: MDPH Bureau of Communicable Disease Control, ISIS

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



Source: MDPH Bureau of Communicable Disease Control, ISIS

### Hepatitis C Average Incidence Rates by EOHHS Region, Massachusetts: 1992-2006<sup>1</sup>

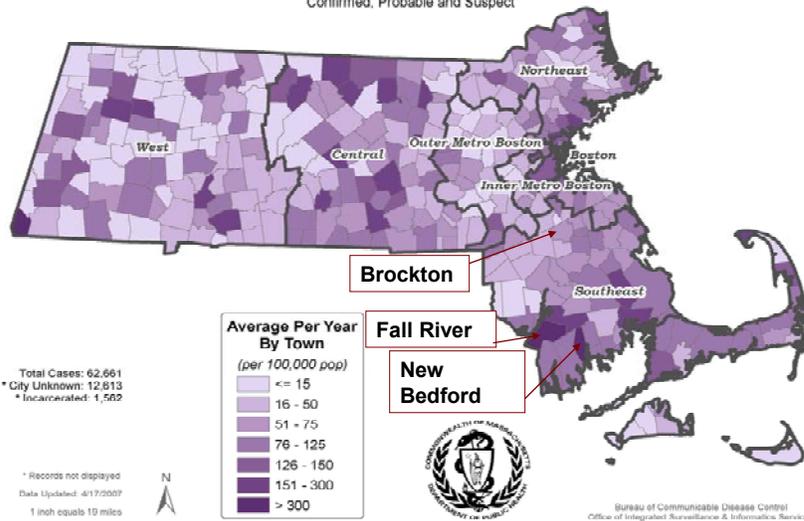


<sup>1</sup> Data as of March 17, 2007

Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

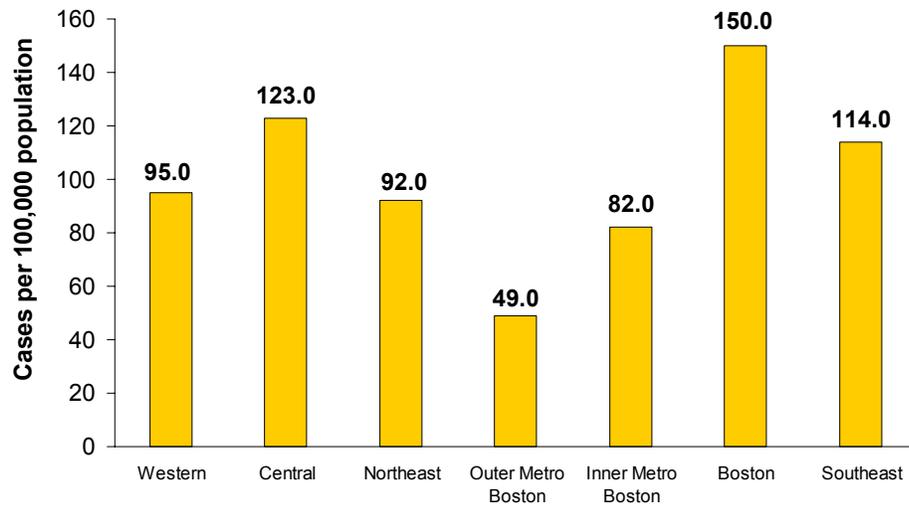
Source: MDPH Bureau of Communicable Disease Control, ISIS

### Massachusetts Hepatitis C Infection Average per Year (per 100,000 pop) By Town (1992-2006) Confirmed, Probable and Suspect



Source: MDPH Bureau of Communicable Disease Control, ISIS

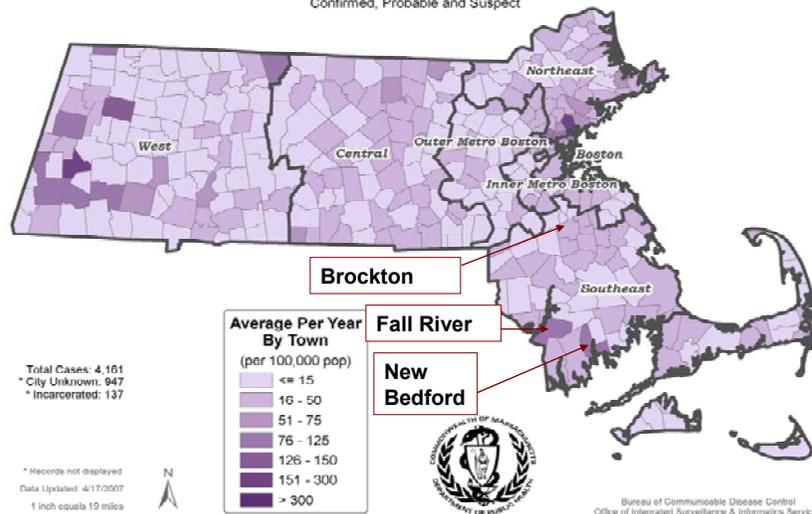
### Hepatitis C Incidence Infection Rates by EOHHS Region, Massachusetts: 2006



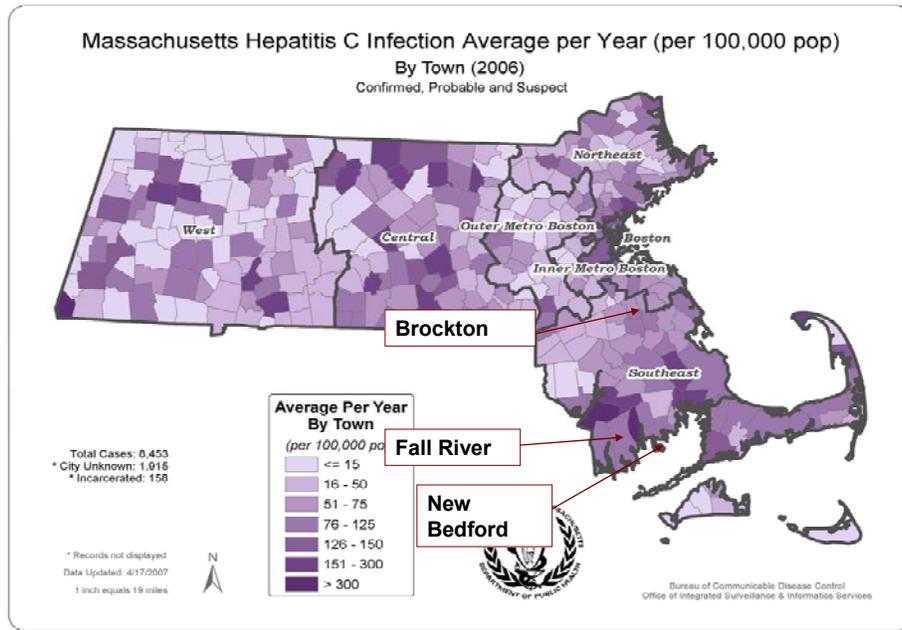
\* Statistically different from State ( $p \leq .05$ )  
 Source: MDPH Bureau of Communicable Disease Control, ISIS

### Massachusetts Hepatitis C Infection Average per Year (per 100,000 pop) By Town (Youth < 26, 2002-2006)

Confirmed, Probable and Suspect

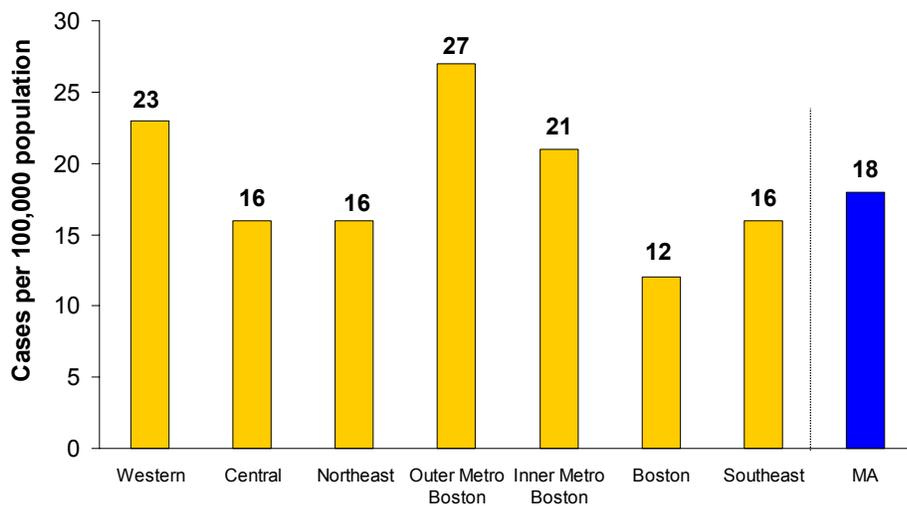


Source: MDPH Bureau of Communicable Disease Control, ISIS



Source: MDPH Bureau of Communicable Disease Control, ISIS

### Laboratory Confirmed Incidence Rates for Pertussis<sup>1</sup> by EOHHHS Region, Massachusetts: 2000-2005



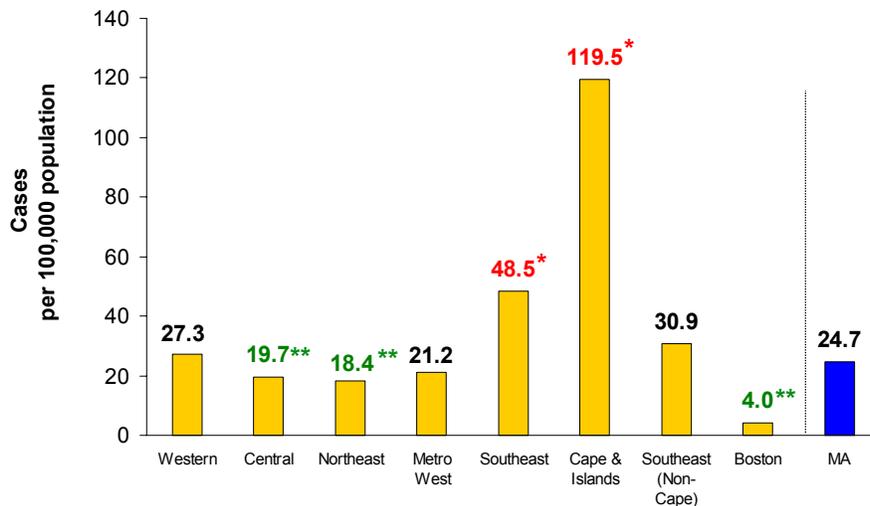
<sup>1</sup> Data as of May 7, 2007

Statistically different from State (p ≤ 0.05) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

Source: MDPH Bureau of Communicable Disease Control, ISIS

## Lyme Disease Incidence Cape & Islands, Southeast Region, and Massachusetts: 2004

246

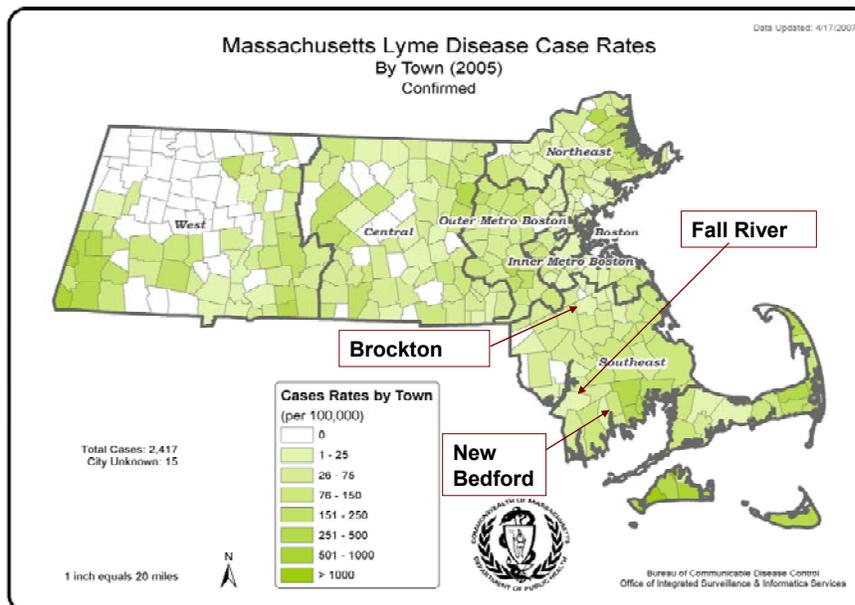


Statistically different from State ( $p \leq 0.05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

Source: MDPH Bureau of Communicable Disease Control, ISIS

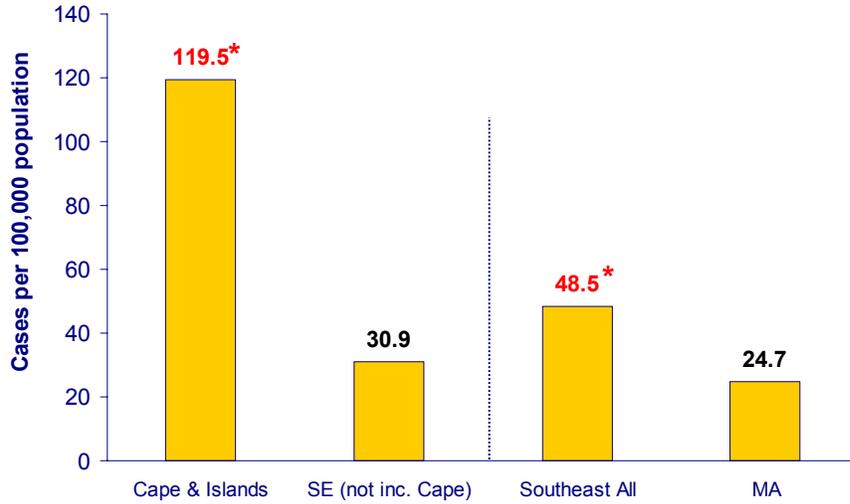
### Massachusetts Lyme Disease Case Rates By Town (2005) Confirmed

Data Updated: 4/17/2007



Source: MDPH Bureau of Communicable Disease Control, ISIS

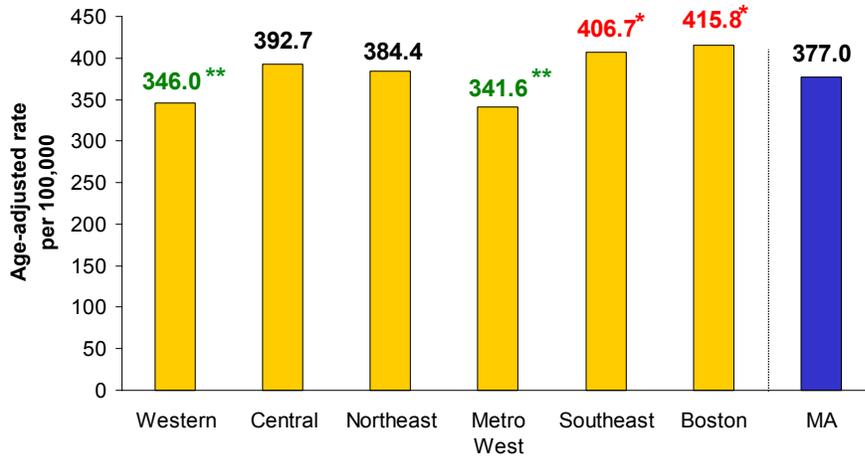
### Lyme Disease Incidence Southeast, Cape & Islands, and Massachusetts: 2004



Statistically different from State (p ≤.05) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

Source: MDPH Bureau of Communicable Disease Control, ISIS

### Pneumonia/Influenza Hospital Discharge Rates by EOHHS Region, Massachusetts: 2005



Statistically different from State (p ≤.05) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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

## Summary Infectious Disease Indicators by EOHHS Region

250

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

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

## Summary Infectious Disease Indicators Southeast Region, Cape & Islands and Massachusetts

251

Indicator	MA Total	Southeast	Southeast (not including Cape & Islands)	Cape & Islands
<b>Chlamydia Incidence</b> (crude rates, 2005)	<b>225.7</b>	169.7	184.5	103.5
<b>Gonorrhea Incidence</b> (crude rates, 2005)	<b>39.6</b>	35.4	36.2	30.9
<b>Syphilis Incidence</b> (crude rates, 2005)	<b>6.3</b>	2.7	2.1	4.8
<b>Tuberculosis Incidence</b> (crude rates, 2006)	<b>4.1</b>	2.7	NA	NA
<b>Lyme Disease Incidence</b> (crude rates, 2004)	<b>24.7</b>	48.4	30.9	119.5
<b>Average Hep C Incidence Infection</b> (crude rates, 2006)	<b>114.0</b>	82.0	NA	NA
<b>Pneumonia/ Influenza Hospital Discharges</b> (age-adjusted, 2005)	<b>377.0</b>	406.7	488.8	285.2

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

## Summary Infectious Disease Indicators Selected Communities, Southeast Region and Massachusetts

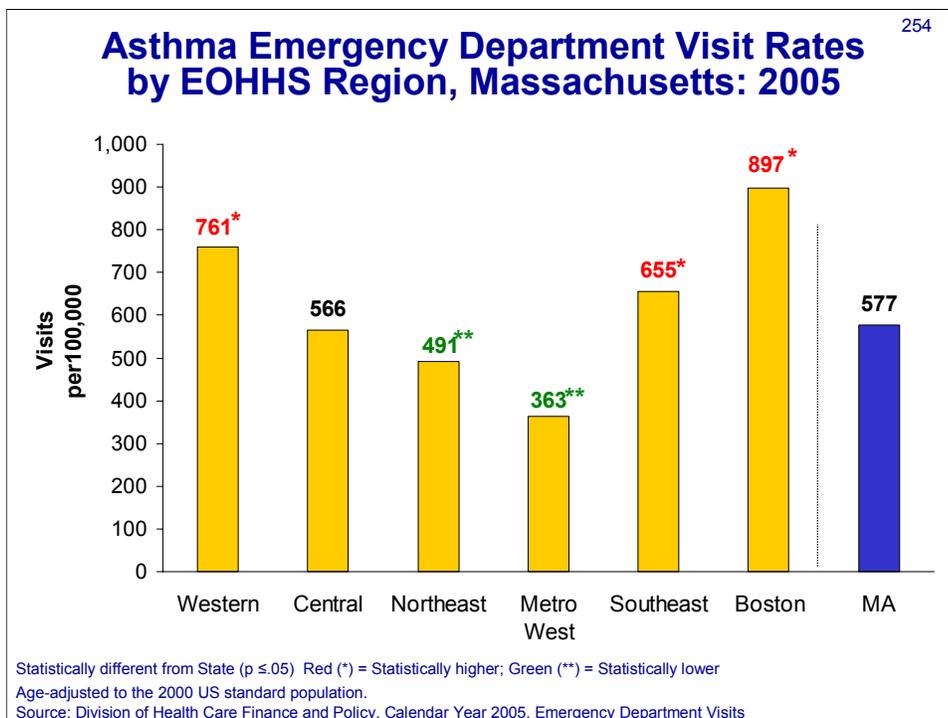
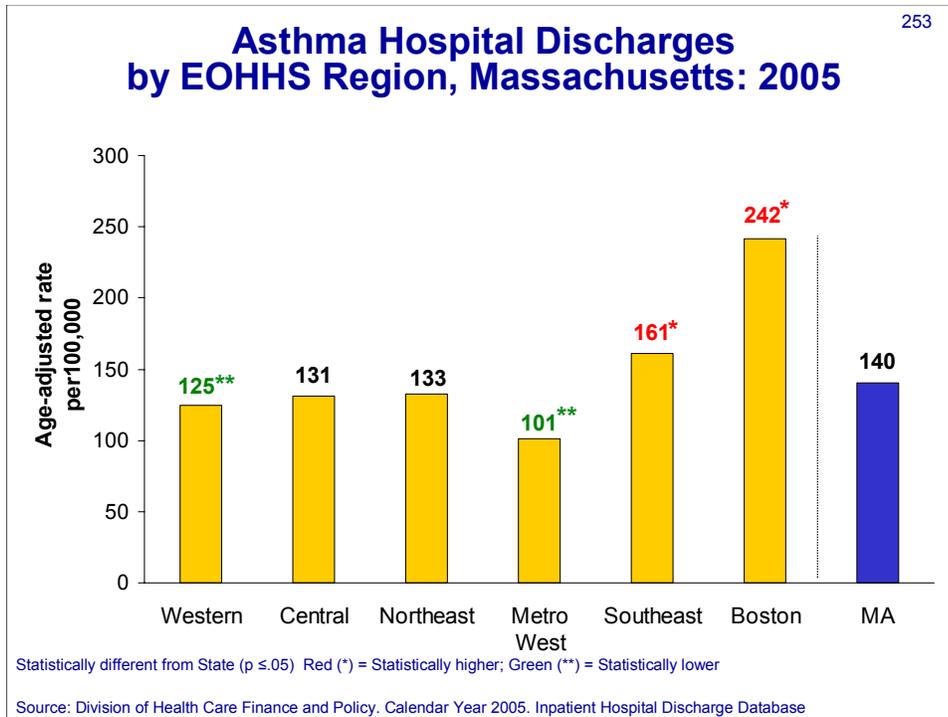
Indicator	MA Total	Brockton	Fall River	New Bedford	Southeast
<b>Chlamydia Incidence</b> (crude rates, 2005)	<b>225.7</b>	448.4	304.1	315.3	169.7
<b>Gonorrhea Incidence</b> (crude rates, 2005)	<b>39.6</b>	70.7	86.8	46.6	35.4
<b>Pneumonia/ Influenza Hospital Discharges</b> (age-adjusted, 2005)	<b>377.0</b>	654.1	574.7	549.5	406.7

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

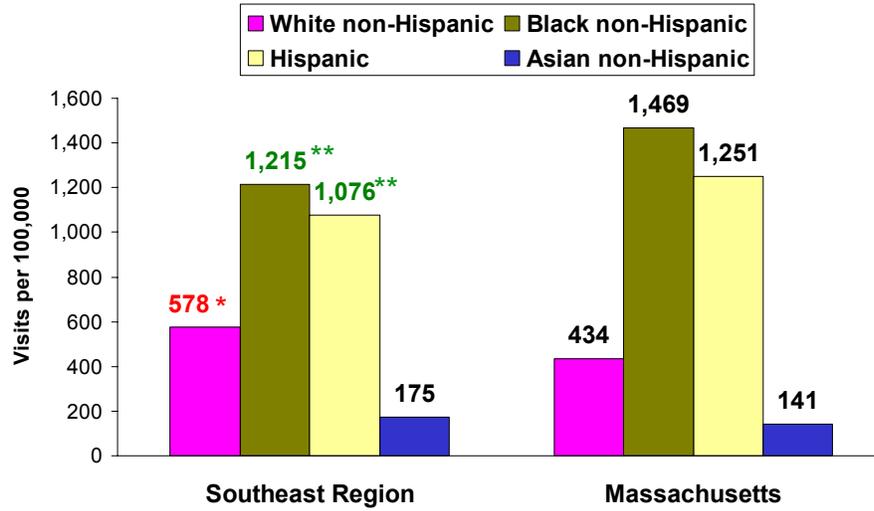


# ASTHMA



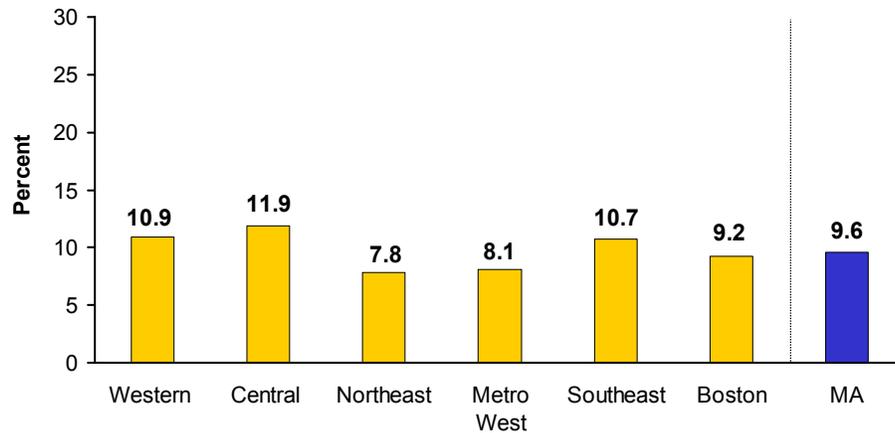


### Emergency Department Visits Rates for Asthma by Race/Ethnicity Southeast Region and Massachusetts: 2005

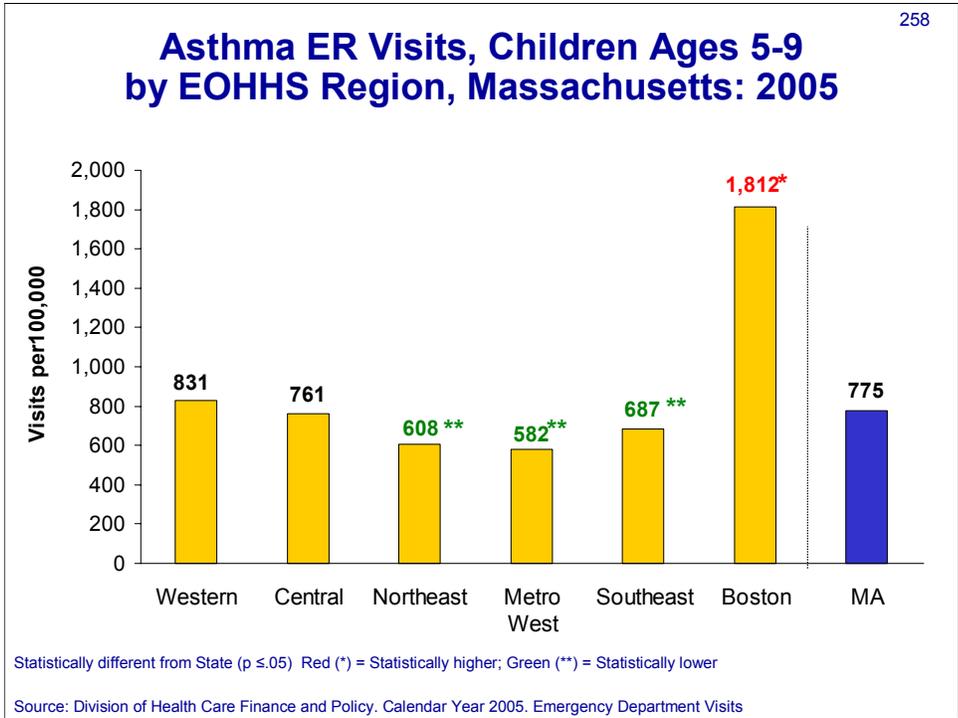
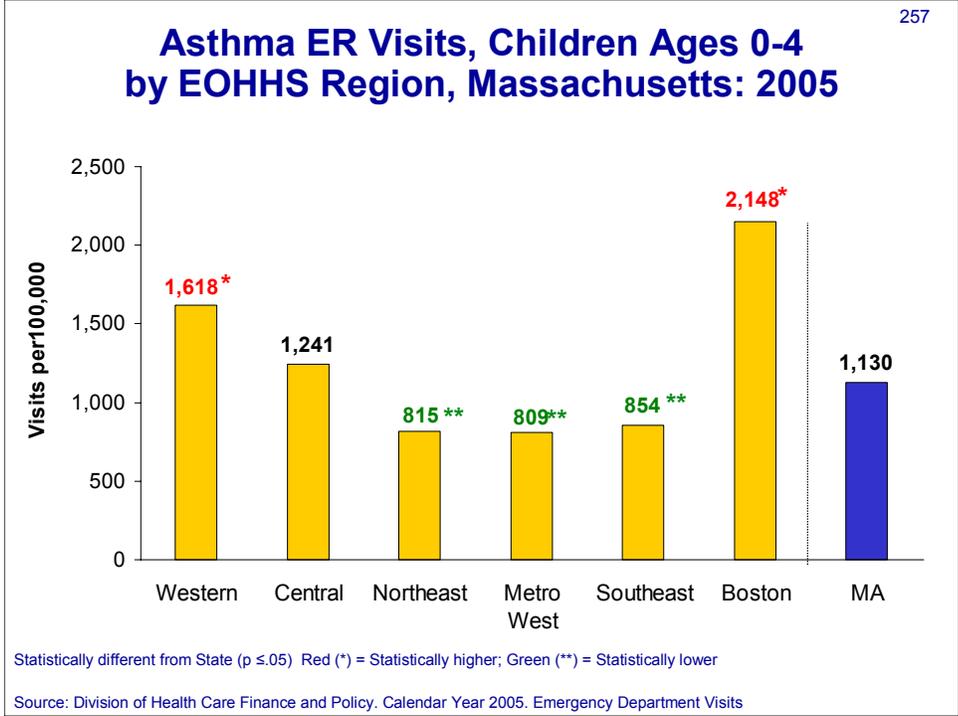


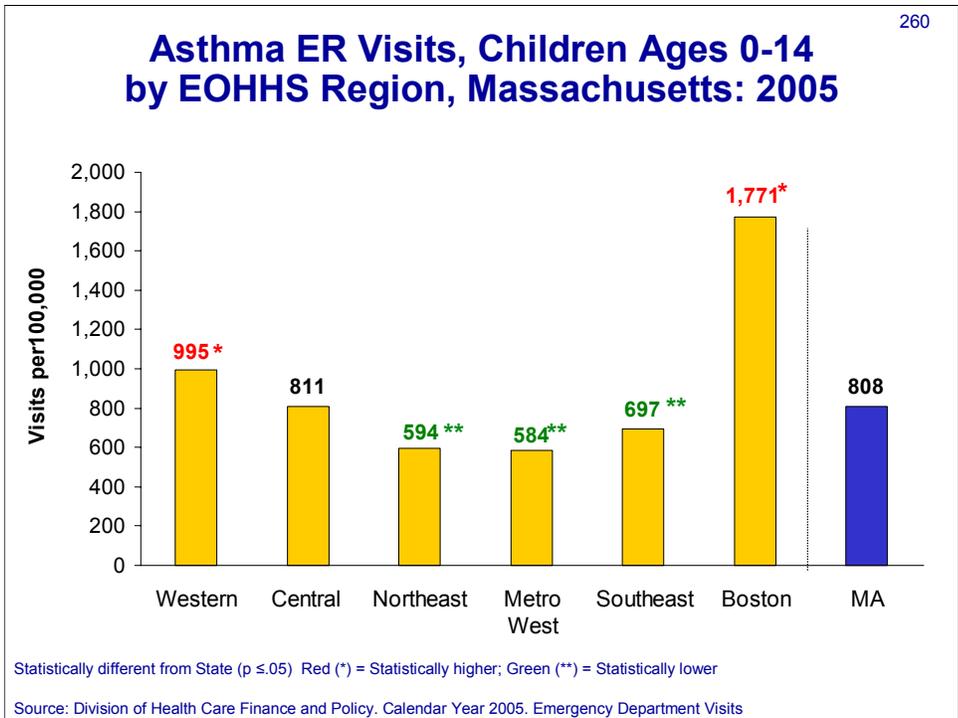
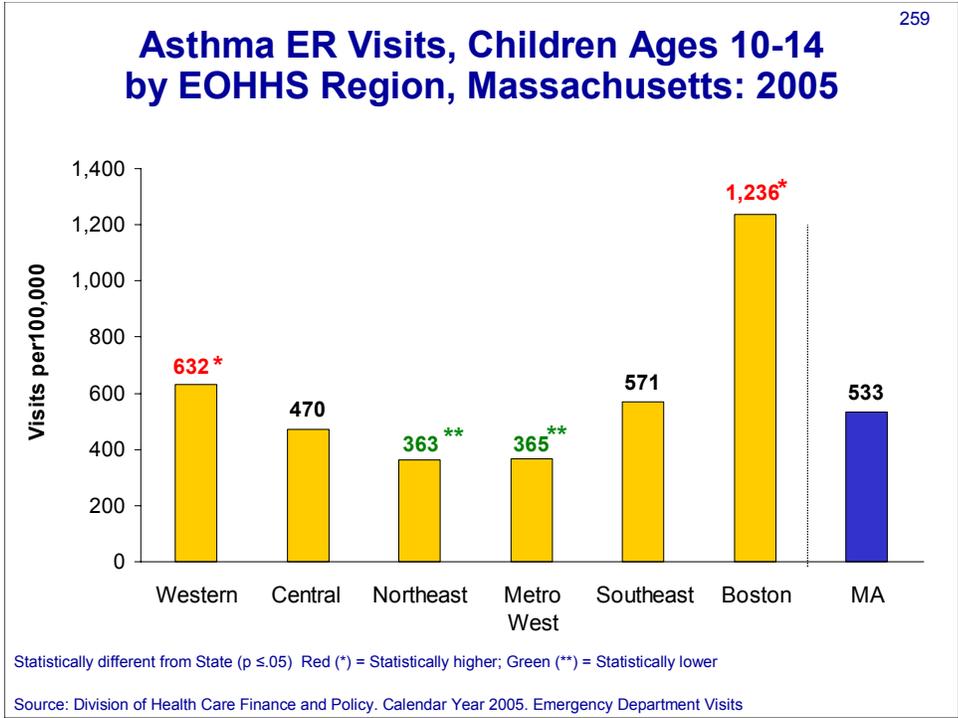
Statistically different from State (p ≤.05) Red (\*) = Statistically higher; Green (\*\*) = Statistically lower  
 Age-adjusted to the 2000 US standard population.  
 Source: Division of Health Care Finance and Policy. Calendar Year 2005. Emergency Department Visits

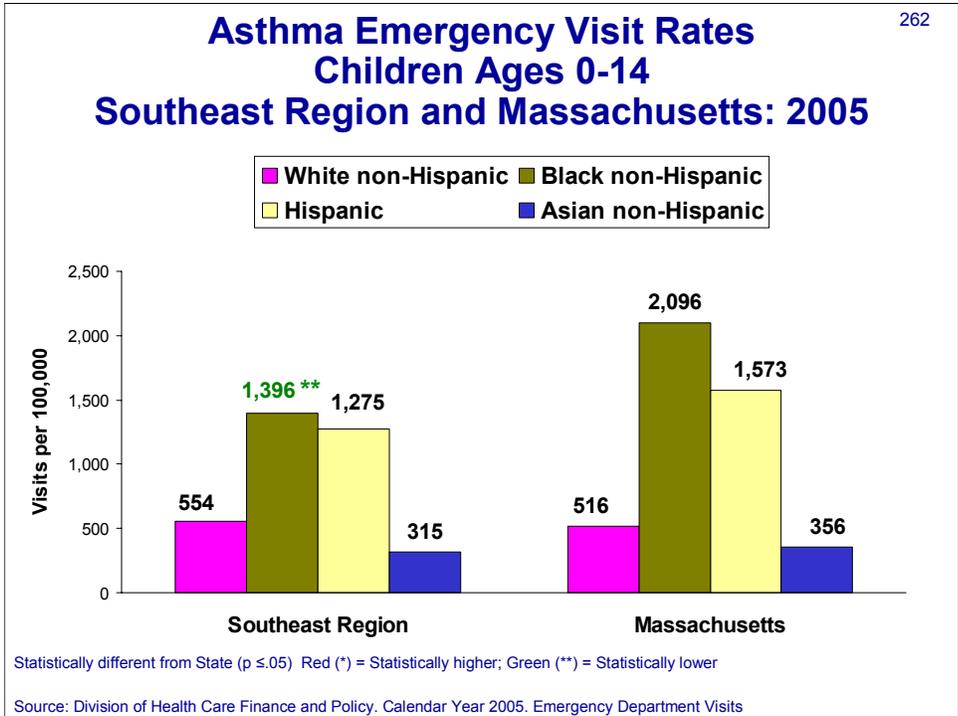
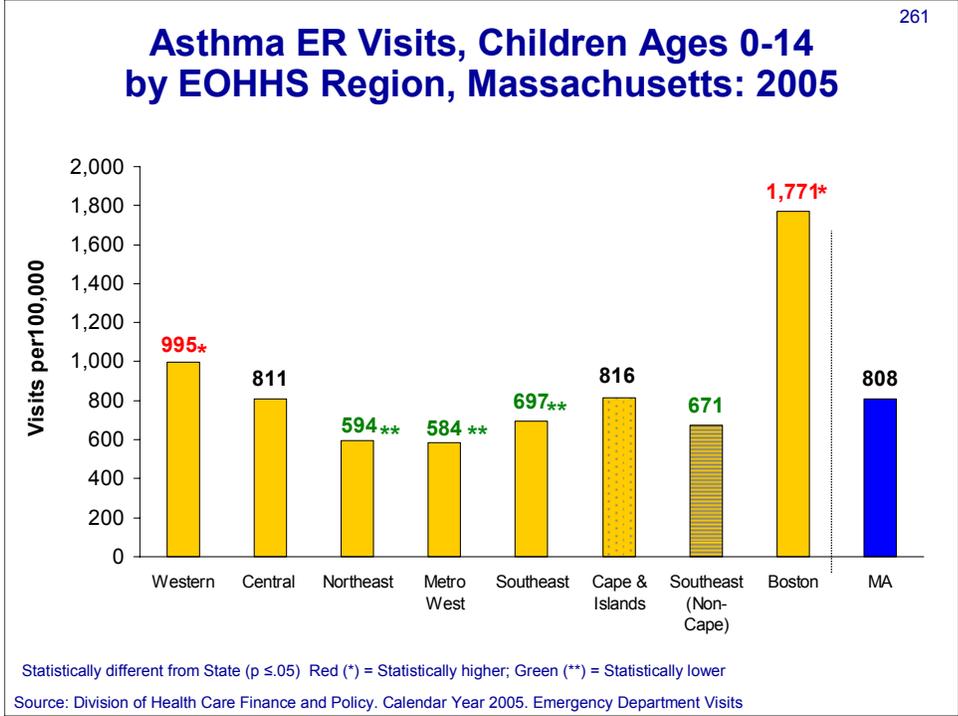
### Adults who Currently have Asthma by EOHS Region, Massachusetts: 2005

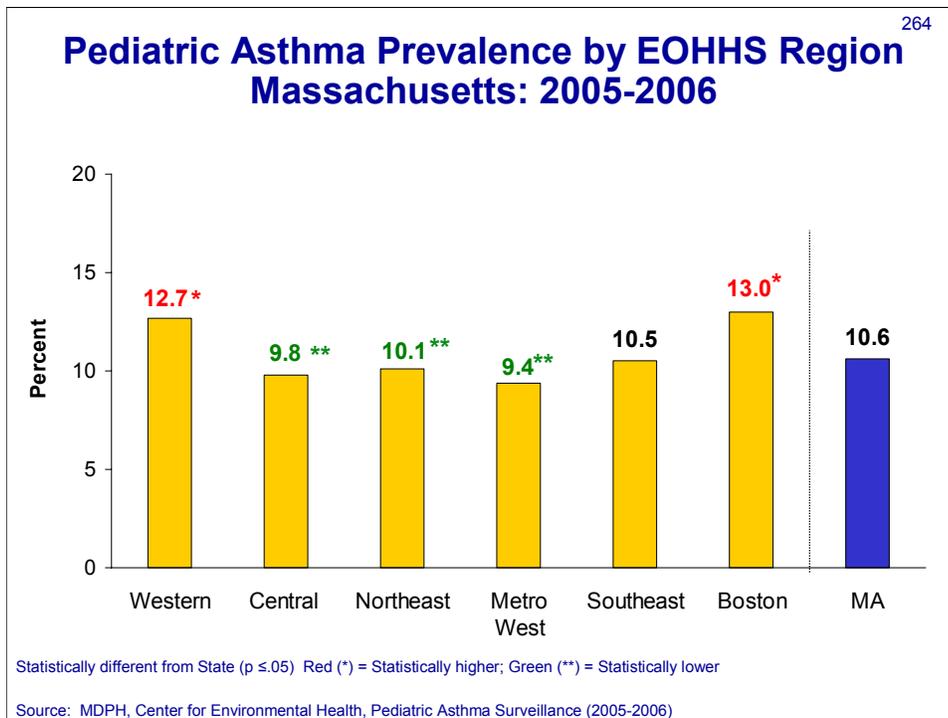
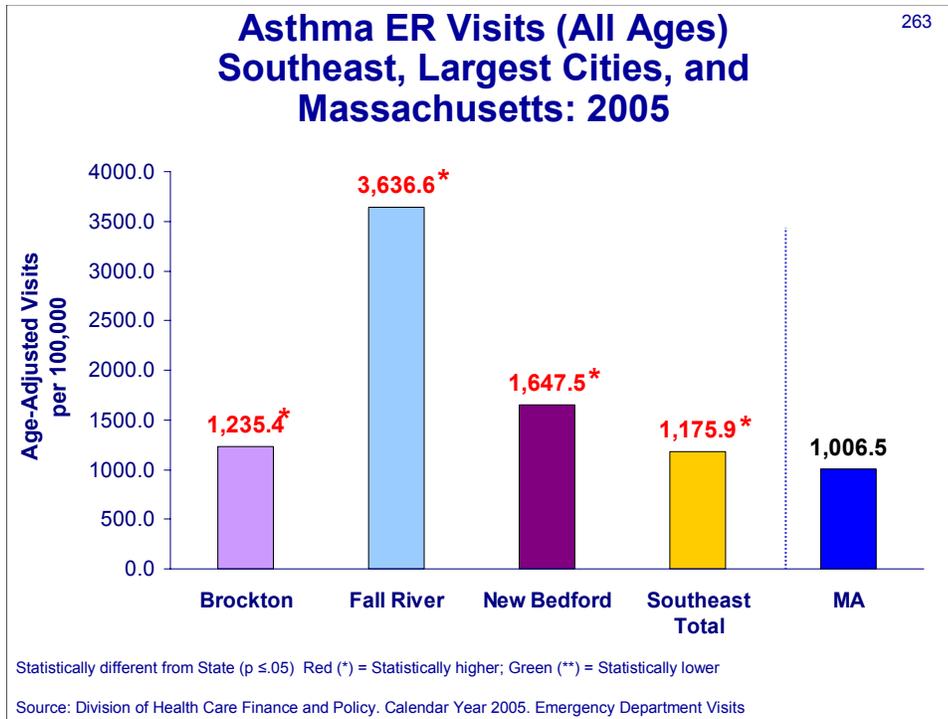


Statistically different from State (p ≤.05) Red (\*) = Statistically higher; Green (\*\*) = Statistically lower  
 Source: MDPH, Health Information, Statistics, Research and Evaluation Bureau, Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), Health Survey Program



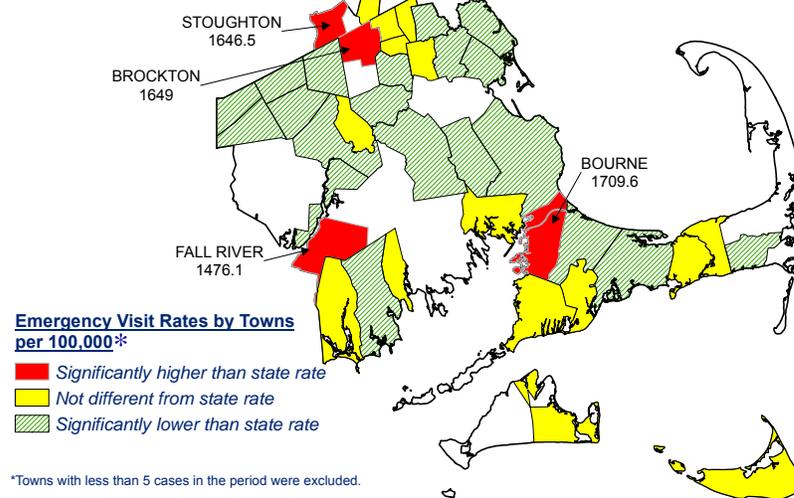






## Pediatric (Ages < 5) Asthma ER Visit Rates by Community, Southeast Region: 2004-2005

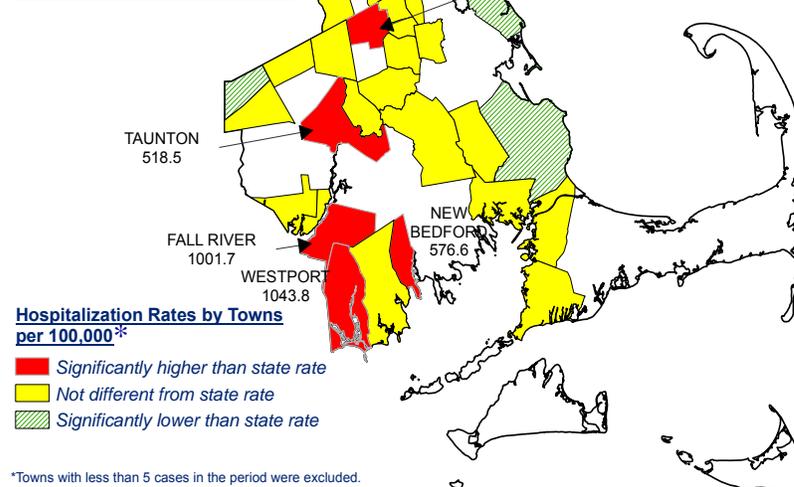
**Massachusetts State Total Rate: 1,136.2**



Source: Division of Health Care Finance and Policy. Calendar Year 2004-2005. Emergency Department Visits

## Pediatric (Ages < 5) Asthma Hospitalization Rates by Community Southeast Region: 2004-2005

**Massachusetts State Total: 337.5**



Source: Division of Health Care Finance and Policy. Calendar Year 2004-2005. Inpatient Hospital Discharge Database

## Summary Asthma Indicators by EOHHS Region, Massachusetts: 2005

267

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

Statistically lower than state
  Statistically higher than state

## Summary Asthma Indicators by EOHHS Region, Massachusetts: 2005

268

Indicator	MA Total	Brockton	Fall River	New Bedford	Southeast
<b>Asthma Hospital Discharges</b> (age-adjusted per100,000)	<b>140.1</b>	276.4	350.7	315.1	160.9
<b>Asthma ER Visits</b> (age-adjusted per100,000)	<b>576.9</b>	870.3	1,456.0	787.6	654.5
<b>% Adults who currently have asthma</b> (2005)	<b>9.6</b>	NA	NA	NA	10.7

Statistically lower than state
  Statistically higher than state

## Summary Asthma Indicators Southeast Region, Cape & Islands and Massachusetts: 2005

269

Indicator	MA Total	Southeast	Southeast (not including Cape & Islands)	Cape & Islands
<b>Asthma Hospital Discharges</b> (age-adjusted per100,000)	<b>140.1</b>	160.9	180.6	91.6
<b>Asthma ER Visits</b> (age-adjusted per100,000)	<b>576.9</b>	654.5	613.9	825.2
<b>% Adults who currently have asthma</b>	<b>9.6</b>	10.7	NA	NA

■ Statistically lower than state

■ Statistically higher than state

## Summary Asthma Indicators by EOHHS Region, Massachusetts: 2005

270

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

■ Statistically lower than state

■ Statistically higher than state

## Summary Asthma Indicators Southeast Region, Cape & Islands and Massachusetts: 2005

271

Indicator	MA Total	Southeast	Southeast (not including Cape & Islands)	Cape & Islands
<b>Asthma ER Visits Ages 0-4</b> (age adjusted per100,000)	<b>1,130</b>	854	846	884
<b>Asthma ER Visits Ages 5-9</b> (age adjusted per100,000)	<b>775</b>	687	656	825
<b>Asthma ER Visits Ages 10-14</b> (age adjusted per100,000)	<b>533</b>	571	533	755
<b>Asthma ER Visits Ages 0-14</b> (age adjusted per100,000)	<b>808</b>	697	671	816



Statistically lower than state



Statistically higher than state

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

## Summary Asthma Indicators Selected Communities, Southeast Region and Massachusetts: 2005

272

Indicator	MA Total	Brockton	Fall River	New Bedford	Southeast
<b>Asthma ER Visits Ages 0-4</b> (age adjusted per100,000)	<b>1,130</b>	1,782	1,300	1,008	854
<b>Asthma ER Visits Ages 5-9</b> (age adjusted per100,000)	<b>775</b>	1,077	1,147	839	687
<b>Asthma ER Visits Ages 10-14</b> (age adjusted per100,000)	<b>533</b>	808	1,012	649	571
<b>Asthma ER Visits Ages 0-14</b> (age adjusted per100,000)	<b>808</b>	1,220	1,149	825	697



Statistically lower than state



Statistically higher than state

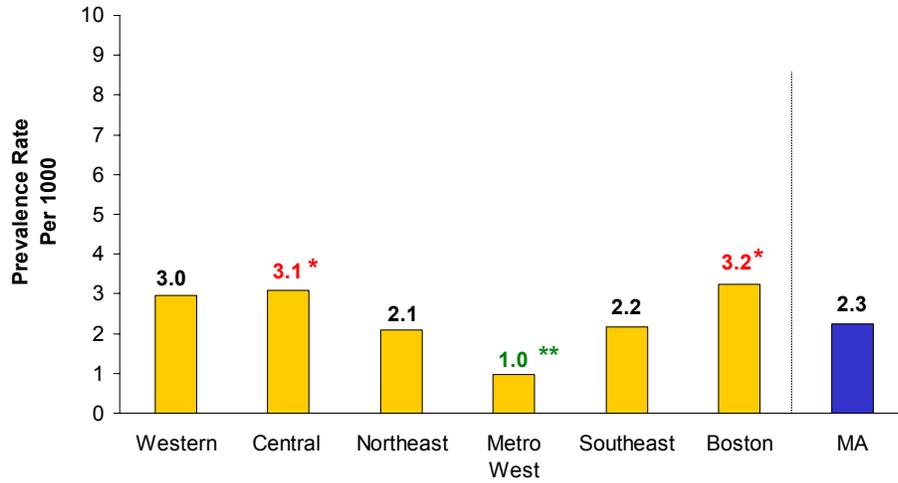
Source: Division of Health Care Finance and Policy. Calendar Year 2005. Emergency Department Visits

# **OTHER HEALTH INDICATORS**



273

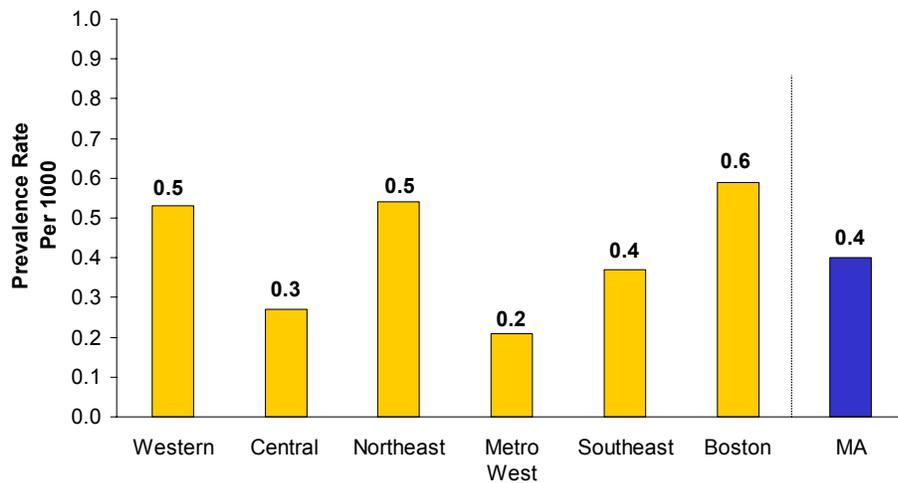
### Total Cases of Elevated Blood Lead Levels ( $\geq 15 \mu\text{g/dL}$ ) by EOHHS Region Massachusetts: 2005



Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
Source: MDPH, Childhood Lead Poisoning Prevention Program (CLPPP)

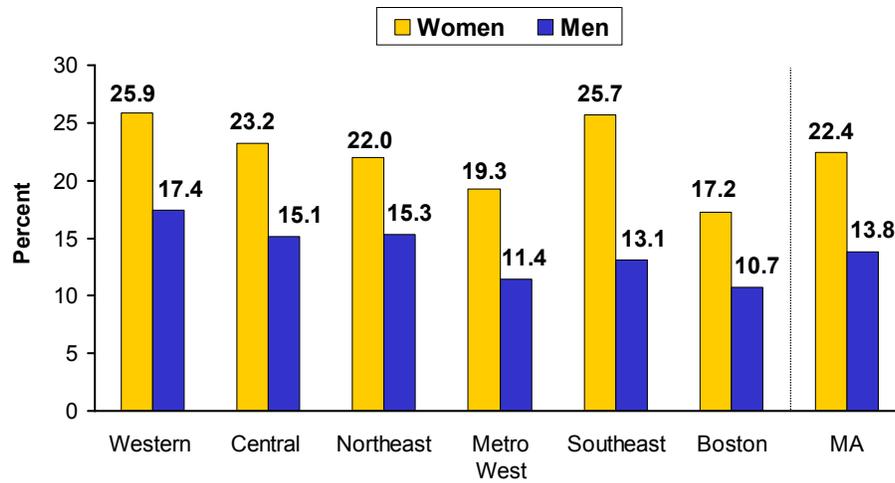
274

### Lead Poisoning Prevalence Rates ( $\text{ BLL } \geq 25 \mu\text{g/dL}$ ) Children 9-48 Months by EOHHS Region, Massachusetts: 2006



Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better  
Source: MDPH, Childhood Lead Poisoning Prevention Program (CLPPP)

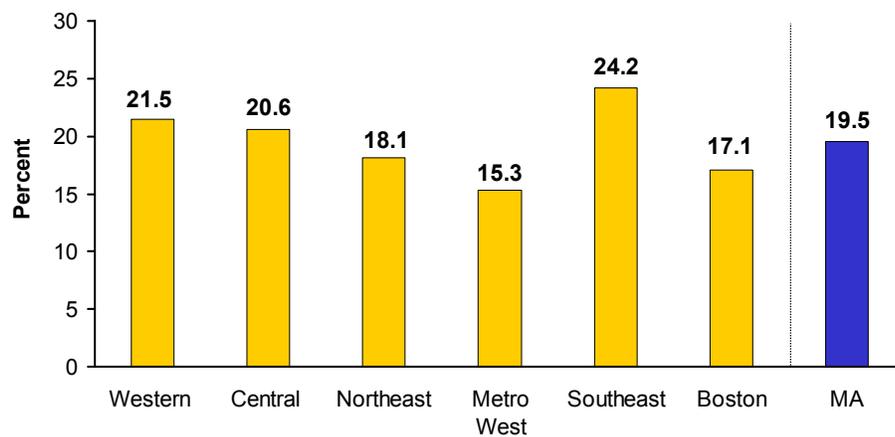
## Adults who Report Experiencing Intimate Partner Violence by EOHHS Region and Gender Massachusetts: 2005 275



\* 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, Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), Health Survey Program

## Adults who Report Having a Disability by EOHHS Region, Massachusetts: 2005 276

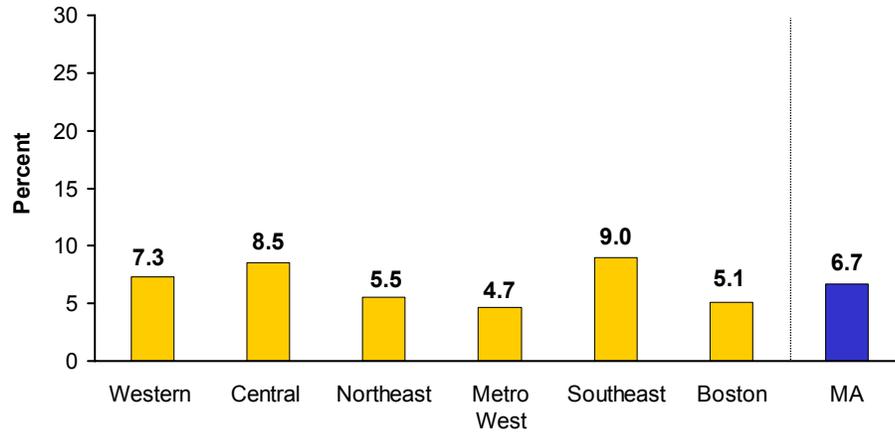


\* Statistically Significant different from state ( $p \leq .05$ )— Red: Statistically worse than state- green: statistically better than state

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

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

277

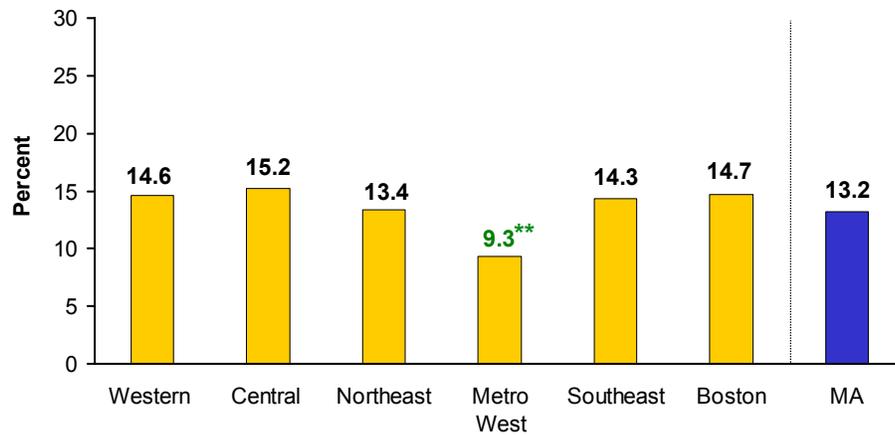


\* Statistically Significant different from state ( $p \leq .05$ )– Red: Statistically worse than state- green: statistically better than state

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

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

278

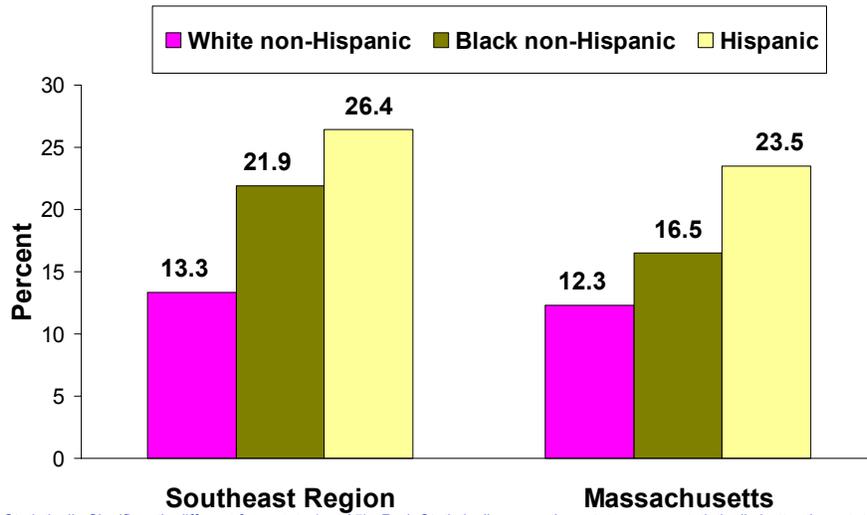


Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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

## Adults who Reported Fair or Poor Health by Race and Ethnicity Southeast Region and Massachusetts: 2005

279

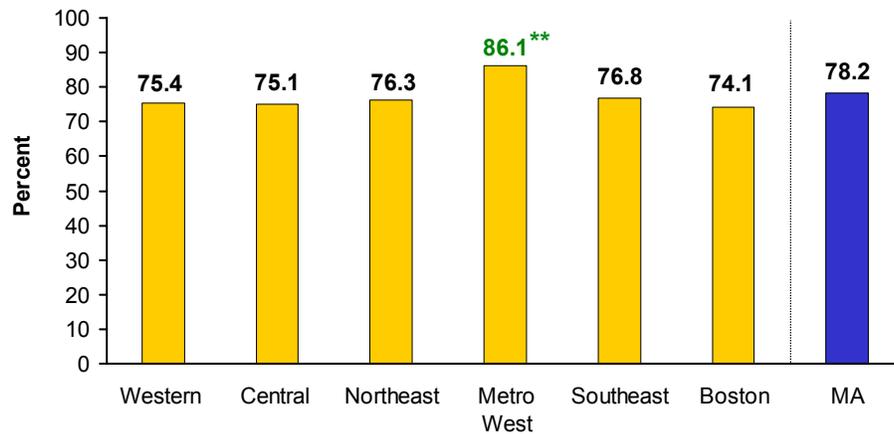


\* Statistically Significant different from state ( $p \leq .05$ )— Red: Statistically worse than state- green: statistically better than state

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

## Adults who Visited a Dentist in Past Year by EOHS Region, Massachusetts: 2004

280

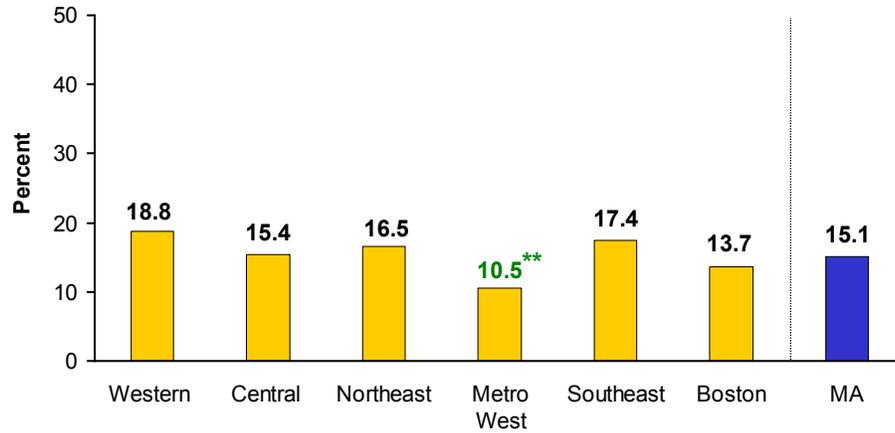


\* Statistically Significant different from state ( $p \leq .05$ )— Red: Statistically worse than state- green: statistically better than state

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

281

### Adults Who Have Lost 6 or More Teeth to Decay or Disease by EOHHs Region, Massachusetts: 2004

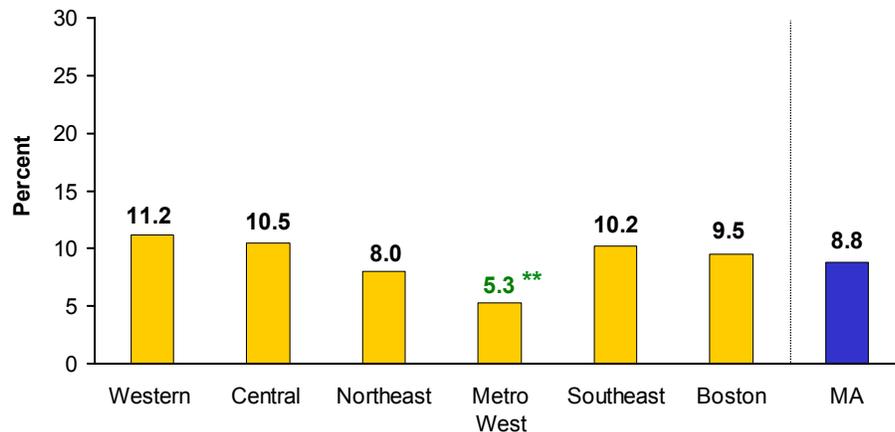


Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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

282

### Adults with Poor Mental Health for 15 or More Days in Past Month by EOHHs Region Massachusetts: 2005



Statistically different from State ( $p \leq .05$ ) Red (\*) = Statistically worse; Green (\*\*) = Statistically better

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

### Summary Other Health Indicators by EOHHS Region

283

Indicator	MA Total	Western	Central	North East	Metro West	Southeast	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

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

### Summary Other Health Indicators by EOHHS Region

284

Indicator	MA Total	Western	Central	North East	Metro West	Southeast	Boston
% Adults reporting having a disability (2005)	19.5	21.5	20.6	18.1	15.3	24.2	17.1
% Adults reporting having a disability and needing help with activities (2005)	6.7	7.3	8.5	5.5	4.7	9.0	5.1

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

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

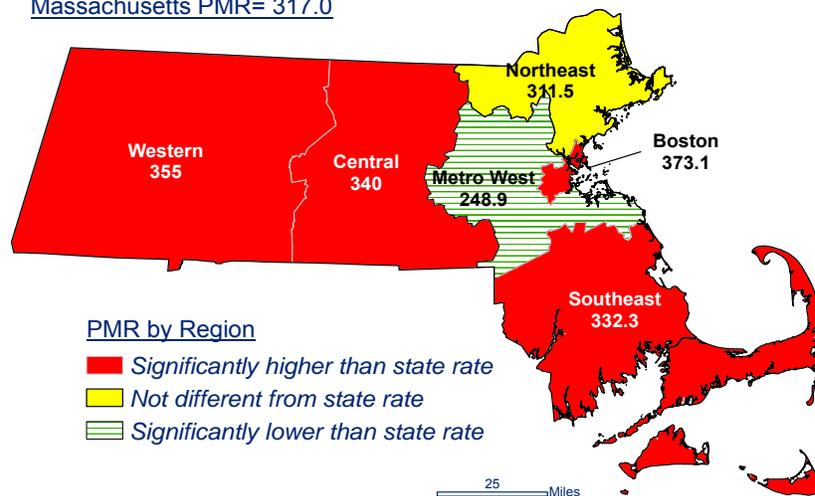
## Premature Mortality Rate (PMR)<sup>1</sup>

- **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
  - focusing 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

<sup>1</sup> Rates are per 100,000 population. Age-adjusted to the 2000 US standard population under 75 years of age.  
Source: MDPH, Health Information, Statistics, Research & Evaluation Bureau, Research & Epidemiology Program

## Premature Mortality Rates (PMR) by EOHHS Region Massachusetts: 2005

Massachusetts PMR= 317.0

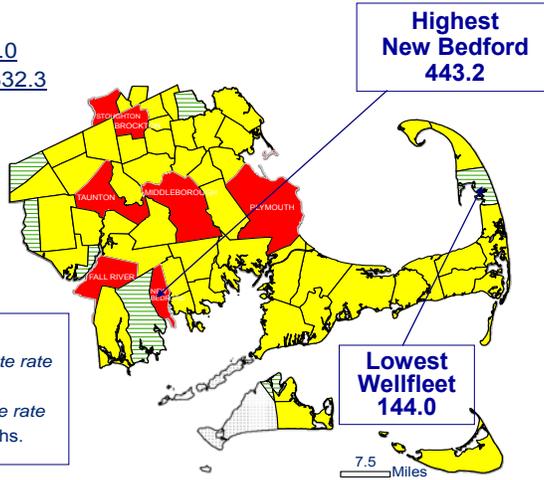
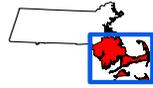


Rates are per 100,000 persons under 75 years of age, age-adjusted to the 2000 US standard population under 75 years of age.

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

### PMR- Southeast Region by City/Town Massachusetts: 2005

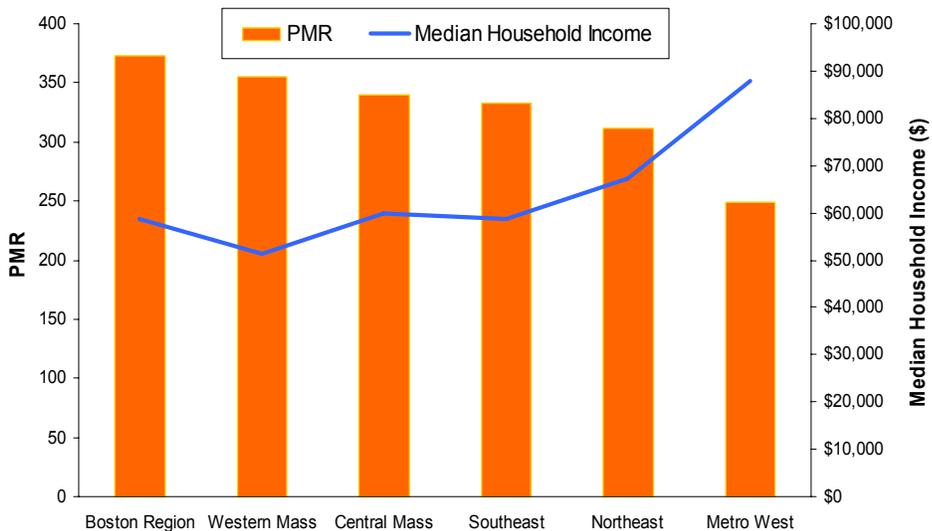
Massachusetts PMR= 317.0  
Southeast Region PMR= 332.3



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

### Median Household Income and PMR by EOHHS Region, Massachusetts: 2005



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

## Premature Mortality Rate (PMR) by EOHHS Region and Cape & Islands: 2005

	<b>PMR</b>
<b>Massachusetts</b>	<b>317.0</b>
Western Region	355.0
Central Region	340.0
North East Region	311.5
Metro West Region	248.9
Southeast Region	332.3
Brockton	413.7
Fall River	441.3
New Bedford	443.2
Cape & Islands	300.6
Boston Region	373.1

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

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



# **SUMMARY**



## Summary

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- The Southeast has a larger proportion of white non-Hispanics than the state; however, Brockton has a much larger black non-Hispanic population than the state
- The Southeast has a large concentration of Portuguese speakers, especially in the largest cities
- In general, Brockton, Fall River, and New Bedford have poorer socio-economic and health outcomes than the state does, for example:
  - In general, Brockton, Fall River, and New Bedford have poorer birth outcomes than those of the state, and especially, much higher teen birth rates.
  - Fall River has a higher obesity percentage than that of the state
  - Heart disease and diabetes mortality rates are higher for Brockton, Fall River, and New Bedford than the state mortality rates
  - Admission rates to substance abuse treatment rates are higher for Brockton, Fall River, and New Bedford than those of the state
  - Firearm death rates and HIV mortality are higher than the state rates for Brockton and New Bedford
  - Asthma ER rates and high STD incidences in the Southeast and the top three cities are higher than those of the state
  - Smoking during pregnancy is higher in Fall River, New Bedford, and Taunton

## Summary

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- White and Black Non-Hispanics in the Southeast have higher heart disease mortality rates than their counterparts in the state
- The Southeast has higher opioid-related ER visits and mortality than does the state
- The Southeast has higher mortality rates due to motor vehicle and falls than does the state
- The extremely high Lyme disease incidence, which is highest in the Southeast of all regions is driven mostly by the Cape and Islands

## Summary-Cape & Islands

- Socio-demographics difference impact health status
  - Older population
  - Socio-demographic indicators are better than the State
  - Mostly white non-Hispanics
  - Majority speak only English
- In general, the Cape & Islands is a relatively healthy place to live:
  - Birth indicators are better than the State
  - Heart disease and diabetes mortality are low
  - Homicides, firearm, STDs lower than the State
- Some indicators are worse than the State :
  - Cancer incidence is higher for breast and prostate cancer
  - Higher motor vehicle deaths and suicides than the State
  - Higher Lyme Disease incidence than the State
  - Higher Emergency Department Visit rates for opioid-related and for asthma for children ages 10-14 years
  - Higher Substance Abuse Treatment Program Admission rates than State
- We need to examine local variation and subgroups in the population to get a more complete picture of the health of the Cape & Islands region
- These are resident data and do not reflect the impact of visitors on the Cape & Islands

# 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	



	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 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	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 MIDDLESEX ESSEX MIDDLESEX ESSEX ESSEX ESSEX MIDDLESEX ESSEX MIDDLESEX MIDDLESEX MIDDLESEX MIDDLESEX ESSEX MIDDLESEX MIDDLESEX 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
<b>SOUTHEAST</b>	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