

Table 22.1 Marijuana Use in the Past Year, Marijuana Use in the Past Month, and Average Annual Incidence Estimates (Expressed as Percentages of the At-Risk Population) of First Use of Marijuana in Massachusetts among Individuals Aged 12 or Older, by Substate Region: Percentages, Annual Averages Based on 2014, 2015, and 2016 NSDUHs

State/Substate Region	Marijuana Use in the Past Year		Marijuana Use in the Past Month		First Use of Marijuana ¹	
	Estimate	95% Confidence Interval	Estimate	95% Confidence Interval	Estimate	95% Confidence Interval
Massachusetts	18.57	(16.95 - 20.30)	12.24	(10.95 - 13.65)	2.72	(2.41 - 3.07)
Boston	23.03	(19.25 - 27.29)	15.34	(12.35 - 18.91)	3.02	(2.34 - 3.90)
Central	17.13	(14.11 - 20.64)	12.47	(9.83 - 15.69)	2.74	(2.14 - 3.49)
Metrowest	18.70	(16.01 - 21.73)	12.29	(10.13 - 14.84)	2.68	(2.16 - 3.33)
Northeast	16.67	(14.15 - 19.54)	10.53	(8.61 - 12.81)	2.50	(2.05 - 3.04)
Southeast	17.24	(14.30 - 20.63)	11.33	(9.06 - 14.09)	2.33	(1.85 - 2.92)
Western	20.35	(16.99 - 24.19)	12.86	(10.23 - 16.04)	3.46	(2.70 - 4.42)

NOTE: For substate region definitions, see the "2014-2016 National Survey on Drug Use and Health Substate Region Definitions" at <https://www.samhsa.gov/data/>.

NOTE: Estimates along with the 95 percent Bayesian confidence (credible) intervals are based on a survey-weighted hierarchical Bayes estimation approach and generated by Markov Chain Monte Carlo techniques.

¹ Average annual initiation of marijuana (%) = $100 * \{ [X_1 \div (0.5 * X_1 + X_2)] \div 2 \}$, where X_1 is the number of marijuana initiates in the past 24 months and X_2 is the number of individuals who never used marijuana (with the at-risk population defined as $0.5 * X_1 + X_2$). Both of the computation components, X_1 and X_2 , are based on a survey-weighted hierarchical Bayes estimation approach. The age group is based on a respondent's age at the time of the interview, not his or her age at first use. The Bayesian confidence (credible) intervals presented for Average Annual Estimates of First Use of Marijuana use a simultaneous solution for First Use of Marijuana and Never Used Marijuana outcomes, which had age group-specific random effects that were allowed to be correlated across the two outcomes. The associated Markov Chain Monte Carlo chains were used to calculate the posterior variance. For details, see Section B of the "2015-2016 NSDUH: Guide to State Tables and Summary of Small Area Estimation Methodology" at <https://www.samhsa.gov/data/>.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2014, 2015, and 2016.

Table 22.2 Cocaine Use in the Past Year and Heroin Use in the Past Year in Massachusetts among Individuals Aged 12 or Older, by Substate Region: Percentages, Annual Averages Based on 2014, 2015, and 2016 NSDUHs

State/Substate Region	Cocaine Use in the Past Year		Heroin Use in the Past Year	
	Estimate	95% Confidence Interval	Estimate	95% Confidence Interval
Massachusetts	2.65	(2.11 - 3.31)	0.32	(0.18 - 0.59)
Boston	3.98	(2.62 - 6.00)	0.51	(0.23 - 1.10)
Central	2.35	(1.50 - 3.65)	0.35	(0.18 - 0.71)
Metrowest	2.61	(1.76 - 3.85)	0.22	(0.11 - 0.44)
Northeast	2.22	(1.50 - 3.27)	0.26	(0.13 - 0.54)
Southeast	2.53	(1.66 - 3.82)	0.33	(0.16 - 0.67)
Western	2.54	(1.59 - 4.04)	0.39	(0.19 - 0.80)

NOTE: For substate region definitions, see the "2014-2016 National Survey on Drug Use and Health Substate Region Definitions" at <https://www.samhsa.gov/data/>.

NOTE: Estimates along with the 95 percent Bayesian confidence (credible) intervals are based on a survey-weighted hierarchical Bayes estimation approach and generated by Markov Chain Monte Carlo techniques.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2014, 2015, and 2016.

Table 22.3 Alcohol Use in the Past Month, Underage Alcohol Use in the Past Month, and Alcohol Use Disorder in the Past Year in Massachusetts among Individuals Aged 12 or Older or Aged 12 to 20, by Substate Region: Percentages, Annual Averages Based on 2014, 2015, and 2016 NSDUHs

State/Substate Region	Alcohol Use in the Past Month (12 or Older)		Underage Alcohol Use in the Past Month (12 to 20)		Alcohol Use Disorder in the Past Year ¹ (12 or Older)	
	Estimate	95% Confidence Interval	Estimate	95% Confidence Interval	Estimate	95% Confidence Interval
Massachusetts	59.01	(56.65 - 61.32)	30.29	(27.63 - 33.09)	7.23	(6.22 - 8.38)
Boston	58.22	(53.19 - 63.09)	34.39	(28.93 - 40.29)	9.32	(7.12 - 12.10)
Central	54.30	(49.35 - 59.15)	28.60	(24.44 - 33.16)	7.12	(5.49 - 9.18)
Metrowest	64.98	(61.17 - 68.61)	29.93	(26.15 - 34.02)	7.07	(5.50 - 9.05)
Northeast	57.97	(53.88 - 61.95)	27.42	(23.60 - 31.59)	6.39	(4.94 - 8.23)
Southeast	58.50	(53.87 - 62.98)	29.55	(25.61 - 33.83)	6.85	(5.26 - 8.89)
Western	55.96	(51.01 - 60.79)	33.72	(29.13 - 38.64)	7.43	(5.67 - 9.69)

NOTE: For substate region definitions, see the "2014-2016 National Survey on Drug Use and Health Substate Region Definitions" at <https://www.samhsa.gov/data/>.

NOTE: Estimates along with the 95 percent Bayesian confidence (credible) intervals are based on a survey-weighted hierarchical Bayes estimation approach and generated by Markov Chain Monte Carlo techniques.

¹ Alcohol Use Disorder is defined as meeting criteria for alcohol dependence or abuse. Dependence or abuse is based on definitions found in the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV).

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2014, 2015, and 2016.

Table 22.4 Cigarette Use in the Past Month and Tobacco Product Use in the Past Month in Massachusetts among Individuals Aged 12 or Older, by Substate Region: Percentages, Annual Averages Based on 2014, 2015, and 2016 NSDUHs

State/Substate Region	Cigarette Use in the Past Month		Tobacco Product Use in the Past Month ¹	
	Estimate	95% Confidence Interval	Estimate	95% Confidence Interval
Massachusetts	17.09	(15.48 - 18.83)	21.15	(19.39 - 23.02)
Boston	19.42	(16.15 - 23.16)	21.64	(18.31 - 25.40)
Central	18.21	(15.27 - 21.58)	22.70	(19.63 - 26.09)
Metrowest	13.84	(11.59 - 16.45)	17.48	(14.96 - 20.33)
Northeast	15.57	(13.10 - 18.40)	19.63	(16.96 - 22.62)
Southeast	19.00	(15.96 - 22.46)	23.95	(20.80 - 27.42)
Western	19.13	(15.90 - 22.84)	24.00	(20.57 - 27.80)

NOTE: For substate region definitions, see the "2014-2016 National Survey on Drug Use and Health Substate Region Definitions" at <https://www.samhsa.gov/data/>.

NOTE: Estimates along with the 95 percent Bayesian confidence (credible) intervals are based on a survey-weighted hierarchical Bayes estimation approach and generated by Markov Chain Monte Carlo techniques.

¹ Tobacco Products include cigarettes, smokeless tobacco (i.e., snuff, dip, chewing tobacco, or "snus"), cigars, or pipe tobacco.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2014, 2015, and 2016.

Table 22.5 Serious Mental Illness in the Past Year, Any Mental Illness in the Past Year, and Received Mental Health Services in the Past Year in Massachusetts among Adults Aged 18 or Older, by Substate Region: Percentages, Annual Averages Based on 2014, 2015, and 2016 NSDUHs

State/Substate Region	Serious Mental Illness in the Past Year ¹		Any Mental Illness in the Past Year ¹		Received Mental Health Services in the Past Year ²	
	Estimate	95% Confidence Interval	Estimate	95% Confidence Interval	Estimate	95% Confidence Interval
Massachusetts	4.21	(3.54 - 5.01)	19.31	(17.57 - 21.18)	18.80	(17.05 - 20.70)
Boston	4.76	(3.62 - 6.24)	22.93	(19.53 - 26.72)	18.45	(15.60 - 21.70)
Central	4.20	(3.13 - 5.61)	18.81	(15.86 - 22.17)	18.21	(15.39 - 21.42)
Metrowest	3.83	(2.91 - 5.03)	17.01	(14.39 - 20.00)	18.74	(16.03 - 21.78)
Northeast	4.19	(3.20 - 5.46)	19.74	(16.90 - 22.92)	19.54	(16.70 - 22.73)
Southeast	4.19	(3.13 - 5.58)	19.11	(16.18 - 22.42)	18.89	(16.00 - 22.16)
Western	4.43	(3.32 - 5.89)	19.99	(16.77 - 23.65)	18.62	(15.70 - 21.94)

NOTE: For substate region definitions, see the "2014-2016 National Survey on Drug Use and Health Substate Region Definitions" at <https://www.samhsa.gov/data/>.

NOTE: Estimates along with the 95 percent Bayesian confidence (credible) intervals are based on a survey-weighted hierarchical Bayes estimation approach and generated by Markov Chain Monte Carlo techniques.

¹ Mental illness is defined as having a diagnosable mental, behavioral, or emotional disorder, other than a developmental or substance use disorder, assessed by the Mental Health Surveillance Study (MHSS) *Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders—Fourth Edition—Research Version—Axis I Disorders* (MHSS-SCID), which is based on the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV). Any mental illness (AMI) includes adults with any mental disorder regardless of whether their disorder resulted in functional impairment. Serious mental illness (SMI) includes adults with any mental disorder that resulted in serious functional impairment. For details, see Section B of the "2015-2016 NSDUH: Guide to State Tables and Summary of Small Area Estimation Methodology" at <https://www.samhsa.gov/data/>.

² Mental health services are defined as having received inpatient treatment/counseling or outpatient treatment/counseling or having used prescription medication for problems with emotions, nerves, or mental health. Respondents were not to include treatment for drug or alcohol use.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2014, 2015, and 2016.

Table 22.6 Had Serious Thoughts of Suicide in the Past Year and Major Depressive Episode in the Past Year in Massachusetts among Adults Aged 18 or Older, by Substate Region: Percentages, Annual Averages Based on 2014, 2015, and 2016 NSDUHs

State/Substate Region	Had Serious Thoughts of Suicide in the Past Year ¹		Major Depressive Episode in the Past Year ²	
	Estimate	95% Confidence Interval	Estimate	95% Confidence Interval
Massachusetts	3.98	(3.32 - 4.77)	7.49	(6.53 - 8.57)
Boston	4.62	(3.60 - 5.91)	9.25	(7.34 - 11.59)
Central	4.02	(3.03 - 5.31)	7.14	(5.63 - 9.02)
Metrowest	3.85	(2.97 - 4.99)	6.99	(5.58 - 8.72)
Northeast	3.69	(2.85 - 4.77)	7.37	(5.89 - 9.19)
Southeast	3.78	(2.87 - 4.95)	7.11	(5.62 - 8.97)
Western	4.31	(3.26 - 5.69)	7.69	(6.05 - 9.72)

NOTE: For substate region definitions, see the "2014-2016 National Survey on Drug Use and Health Substate Region Definitions" at <https://www.samhsa.gov/data/>.

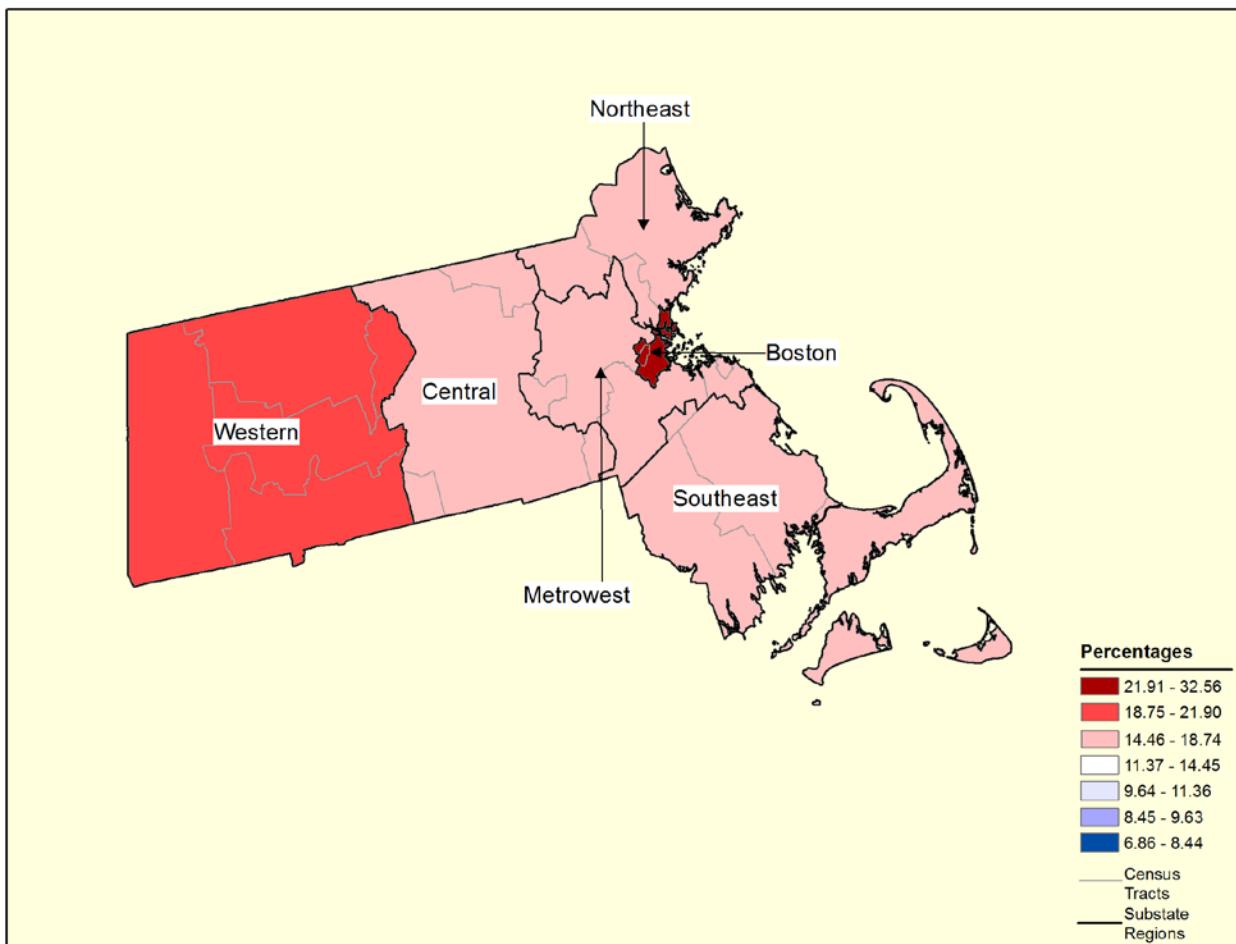
NOTE: Estimates along with the 95 percent Bayesian confidence (credible) intervals are based on a survey-weighted hierarchical Bayes estimation approach and generated by Markov Chain Monte Carlo techniques.

¹ Respondents were asked, "At any time in the past 12 months, did you seriously think about trying to kill yourself?" If they answered "Yes," they were categorized as having serious thoughts of suicide in the past year.

² Major depressive episode (MDE) is defined as in the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV), which specifies a period of at least 2 weeks when an individual experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. For details, see Section B in the "2015-2016 National Survey on Drug Use and Health: Guide to State Tables and Summary of Small Area Estimation Methodology" at <https://www.samhsa.gov/data/>.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2014, 2015, and 2016.

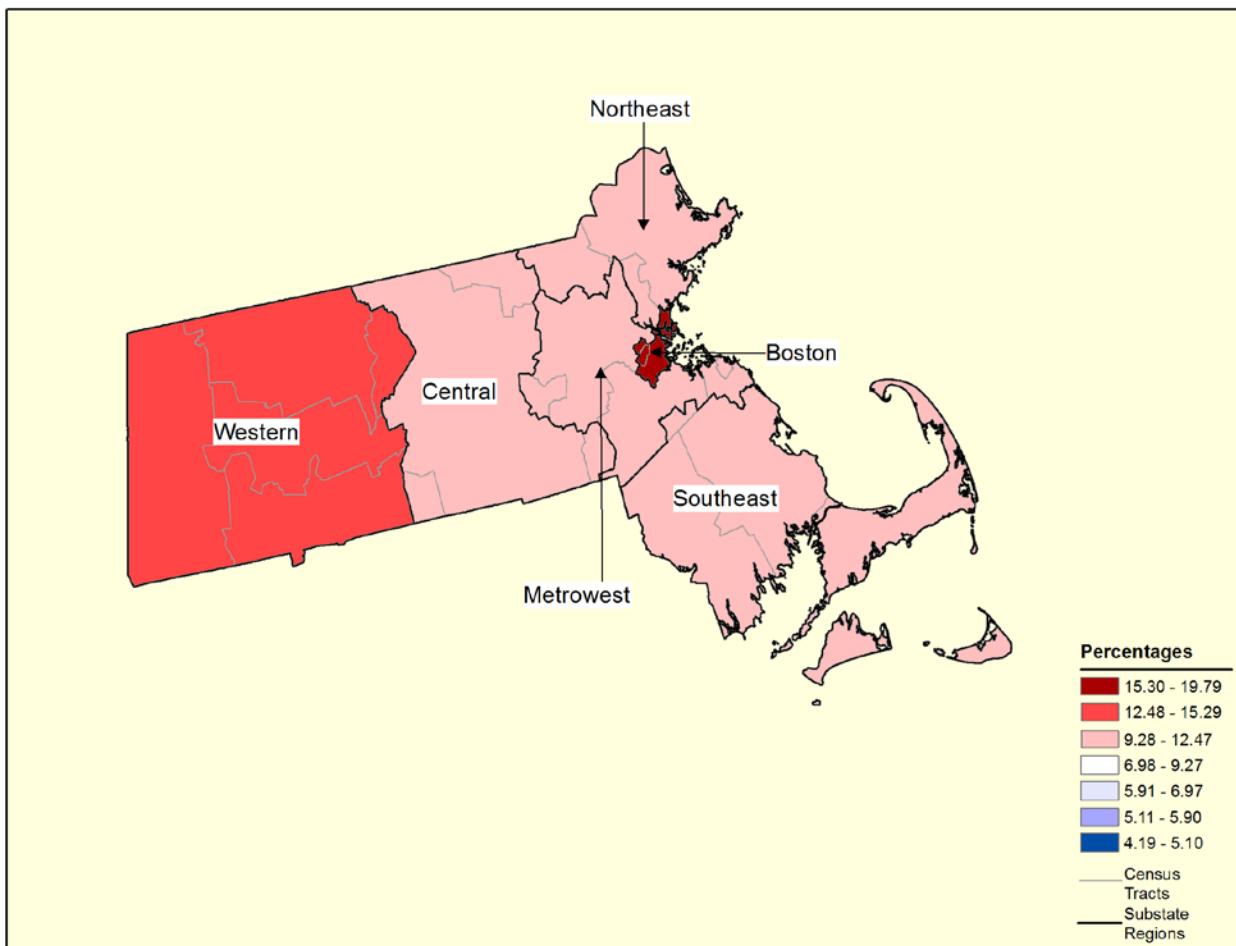
Figure 22.1 Marijuana Use in the Past Year among Individuals Aged 12 or Older in Massachusetts, by Substate Region: Percentages, Annual Averages Based on 2014, 2015, and 2016 NSDUHs



NOTE: The legend's ranges were created by dividing 395 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see the "2014-2016 National Survey on Drug Use and Health Substate Region Definitions" at <https://www.samhsa.gov/data/>.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2014, 2015, and 2016.

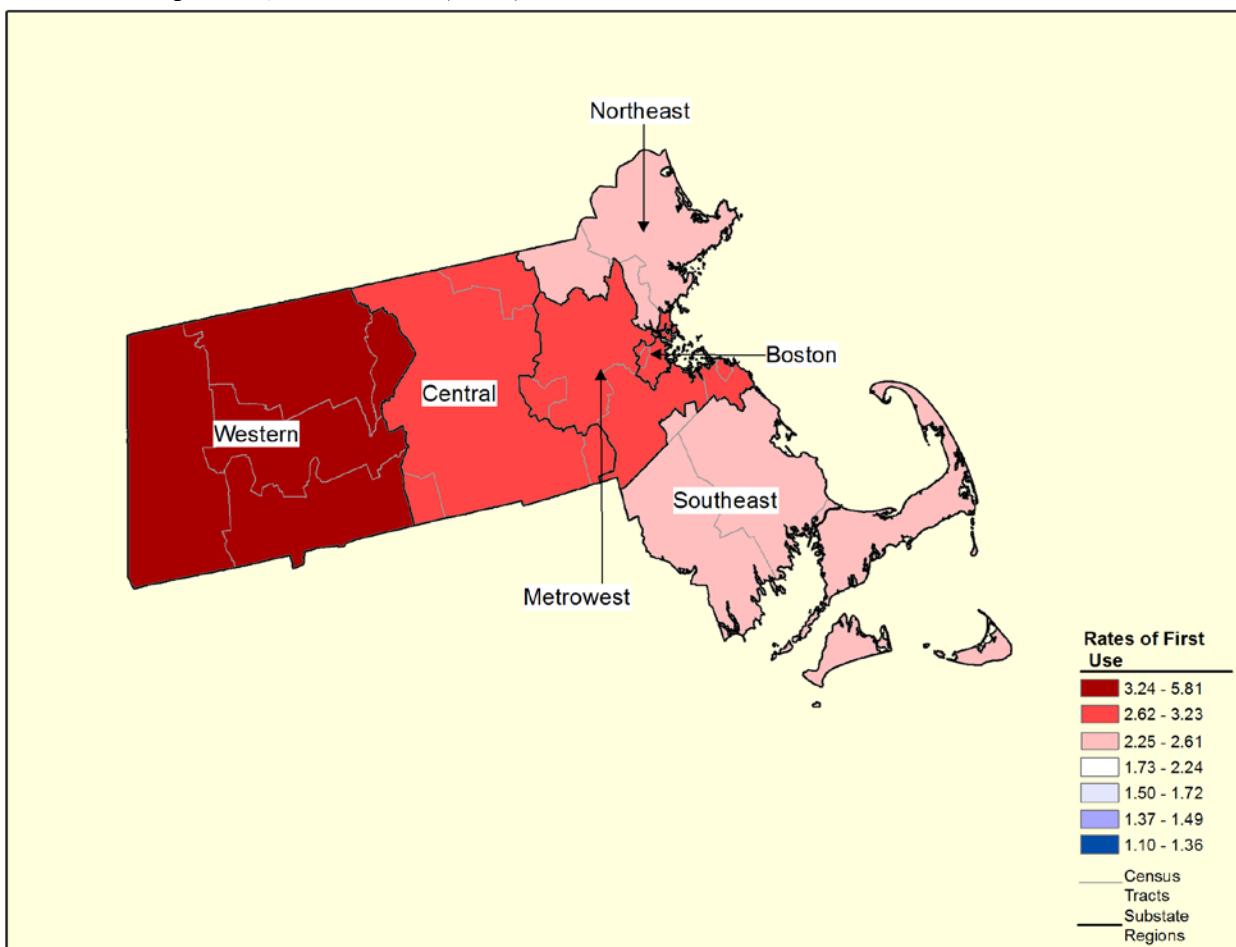
Figure 22.2 Marijuana Use in the Past Month among Individuals Aged 12 or Older in Massachusetts, by Substate Region: Percentages, Annual Averages Based on 2014, 2015, and 2016 NSDUHs



NOTE: The legend's ranges were created by dividing 395 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see the "2014-2016 National Survey on Drug Use and Health Substate Region Definitions" at <https://www.samhsa.gov/data/>.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2014, 2015, and 2016.

Figure 22.3 First Use of Marijuana among Individuals Aged 12 or Older in Massachusetts, by Substate Region: Average Annual Incidence Estimates (Expressed as Percentages of the At-Risk Population) Based on 2014, 2015, and 2016 NSDUHs

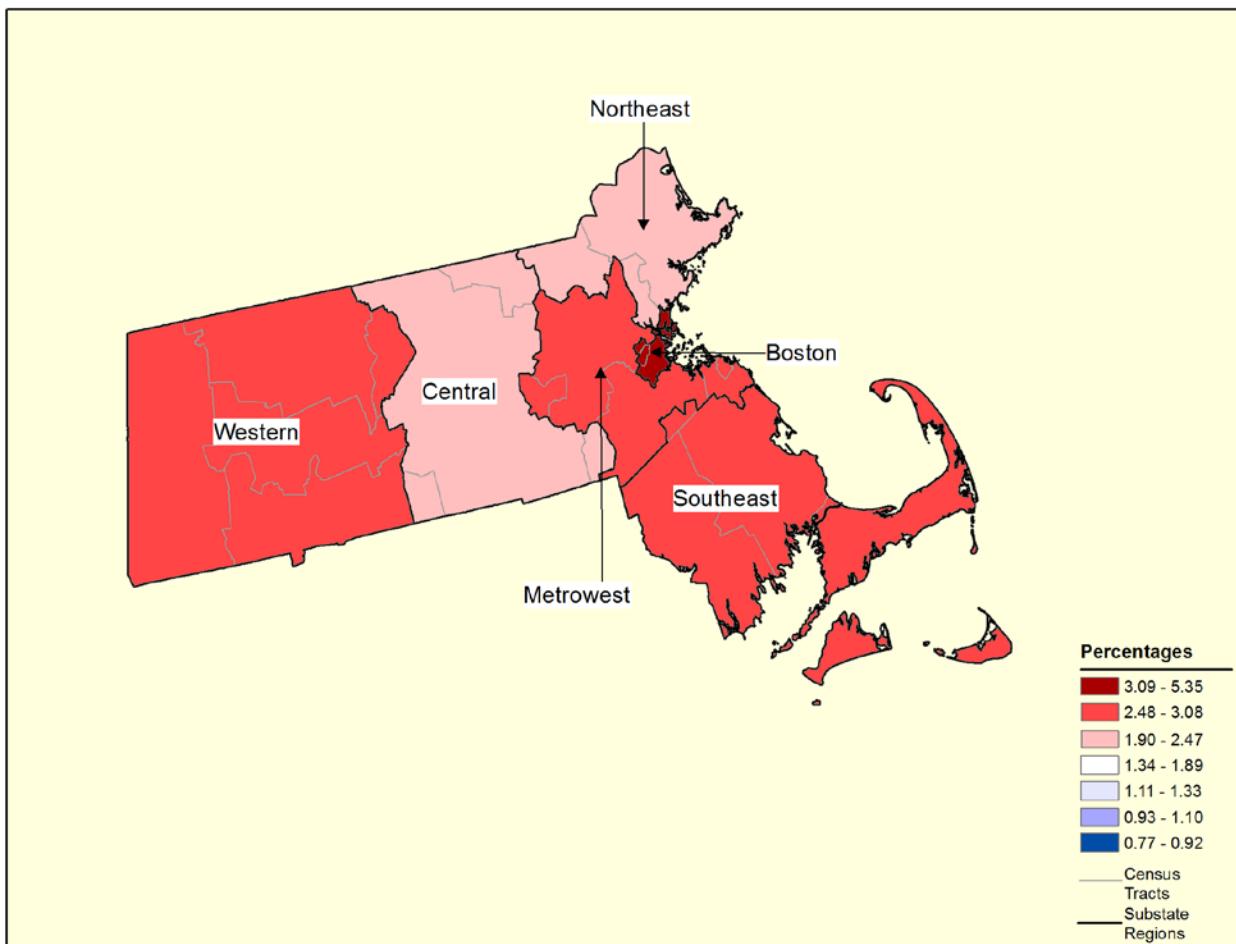


NOTE: The legend's ranges were created by dividing 395 substate regions, nationally, into 7 groups based on the magnitude of their percentages.

For substate region definitions, see the "2014-2016 National Survey on Drug Use and Health Substate Region Definitions" at <https://www.samhsa.gov/data/>.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2014, 2015, and 2016.

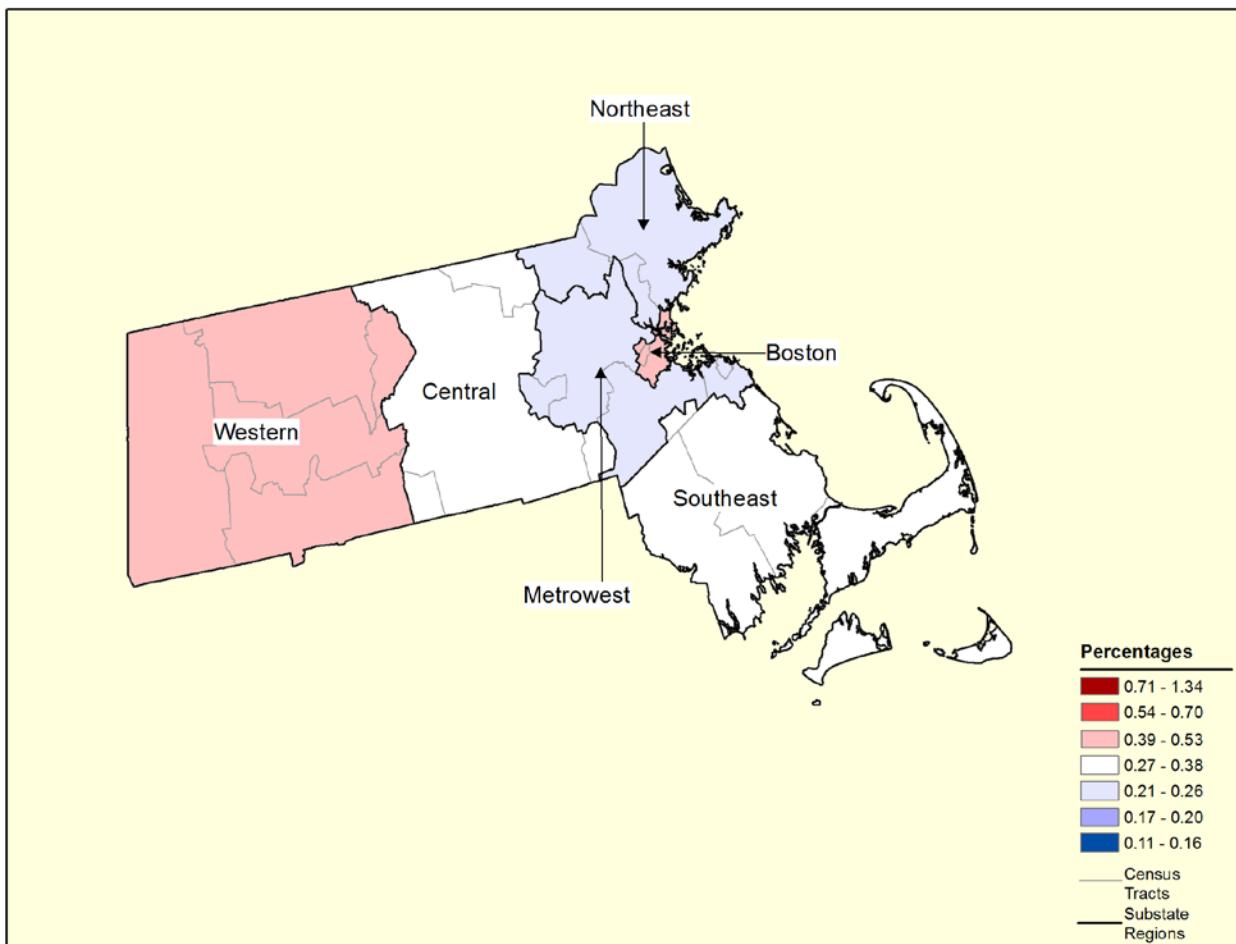
Figure 22.4 Cocaine Use in the Past Year among Individuals Aged 12 or Older in Massachusetts, by Substate Region: Percentages, Annual Averages Based on 2014, 2015, and 2016 NSDUHs



NOTE: The legend's ranges were created by dividing 395 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see the "2014-2016 National Survey on Drug Use and Health Substate Region Definitions" at <https://www.samhsa.gov/data/>.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2014, 2015, and 2016.

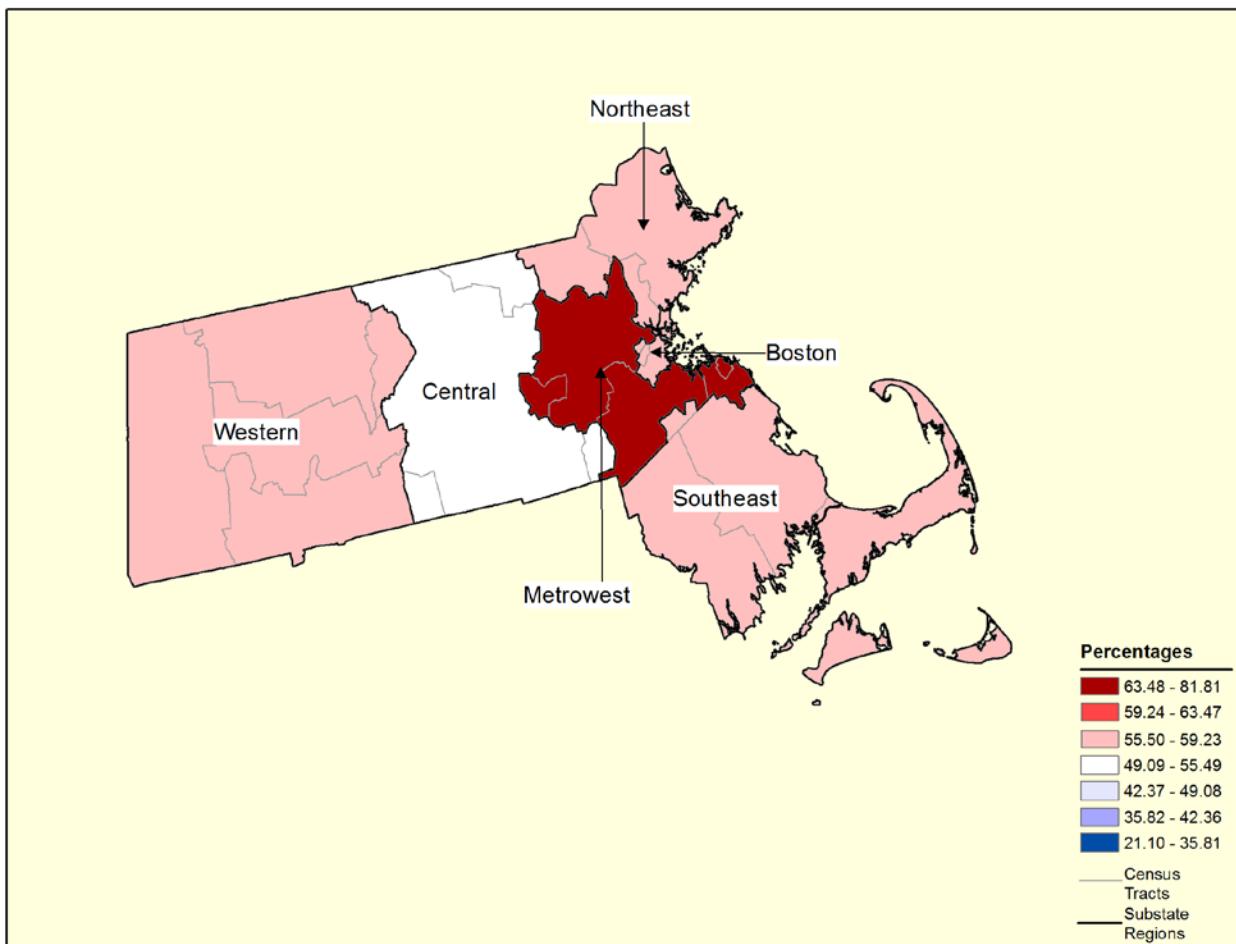
Figure 22.5 Heroin Use in the Past Year among Individuals Aged 12 or Older in Massachusetts, by Substate Region: Percentages, Annual Averages Based on 2014, 2015, and 2016 NSDUHs



NOTE: The legend's ranges were created by dividing 395 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see the "2014-2016 National Survey on Drug Use and Health Substate Region Definitions" at <https://www.samhsa.gov/data/>.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2014, 2015, and 2016.

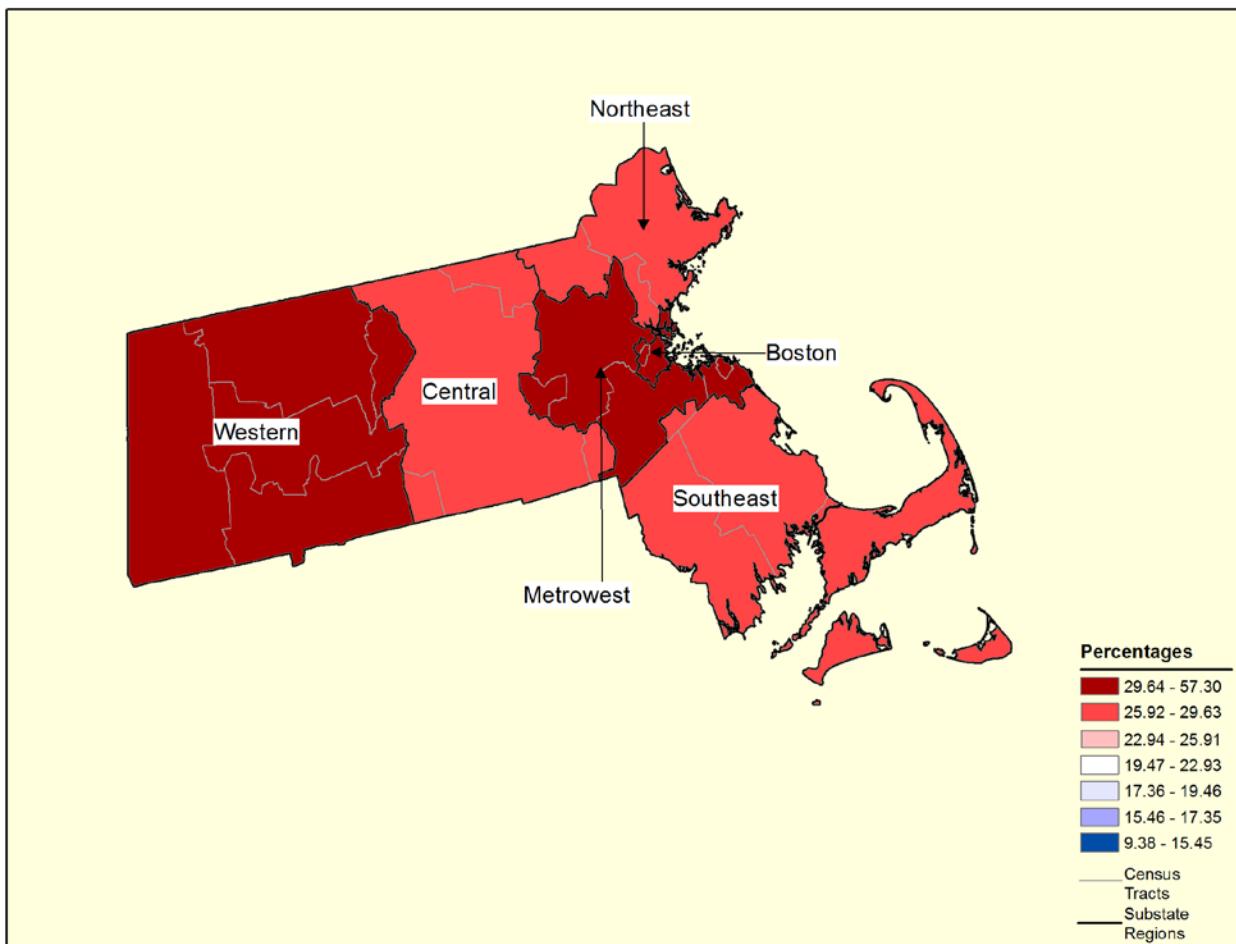
Figure 22.6 Alcohol Use in the Past Month among Individuals Aged 12 or Older in Massachusetts, by Substate Region: Percentages, Annual Averages Based on 2014, 2015, and 2016 NSDUHs



NOTE: The legend's ranges were created by dividing 395 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see the "2014-2016 National Survey on Drug Use and Health Substate Region Definitions" at <https://www.samhsa.gov/data/>.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2014, 2015, and 2016.

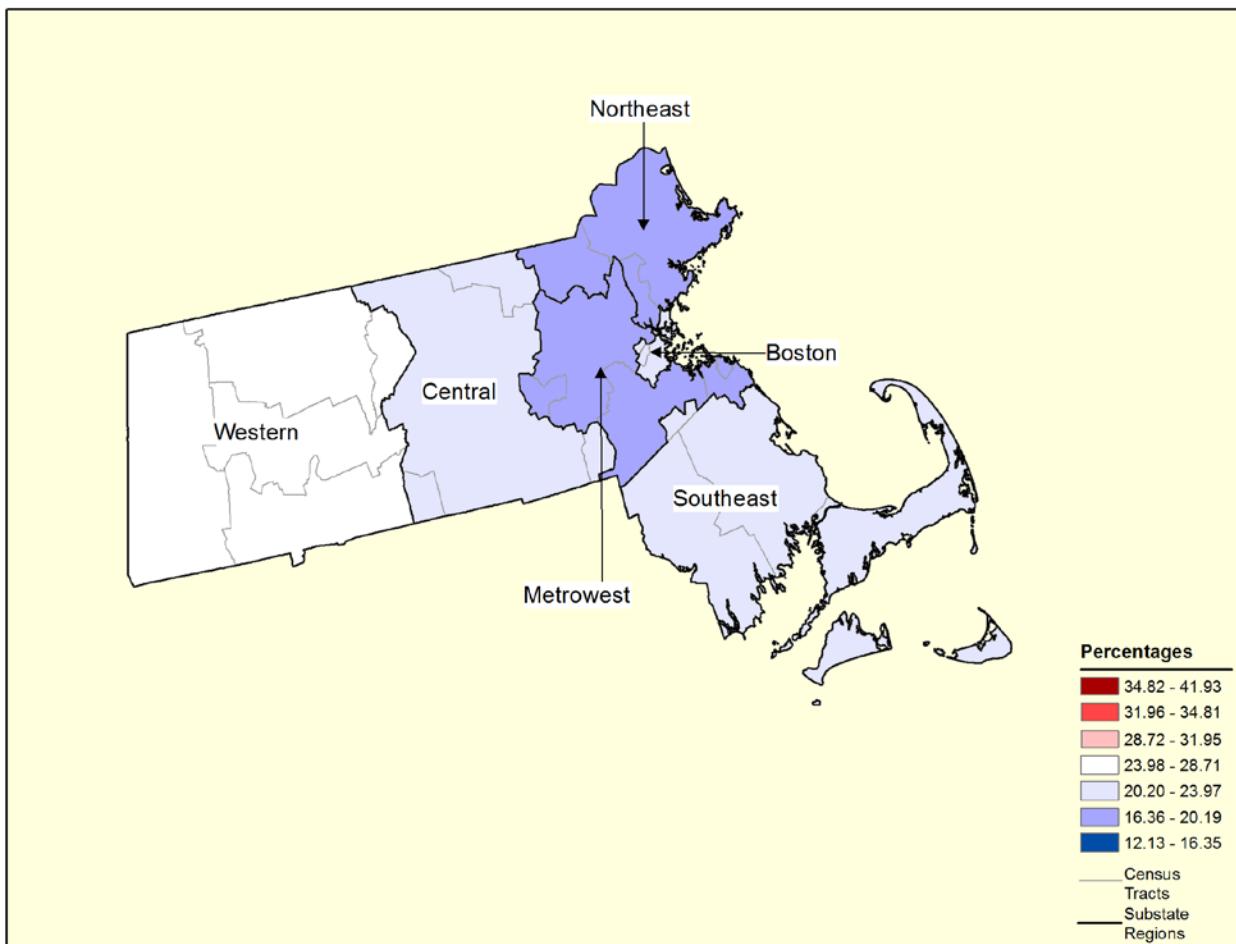
Figure 22.7 Alcohol Use in the Past Month among Individuals Aged 12 to 20 in Massachusetts, by Substate Region: Percentages, Annual Averages Based on 2014, 2015, and 2016 NSDUHs



NOTE: The legend's ranges were created by dividing 395 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see the "2014-2016 National Survey on Drug Use and Health Substate Region Definitions" at <https://www.samhsa.gov/data/>.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2014, 2015, and 2016.

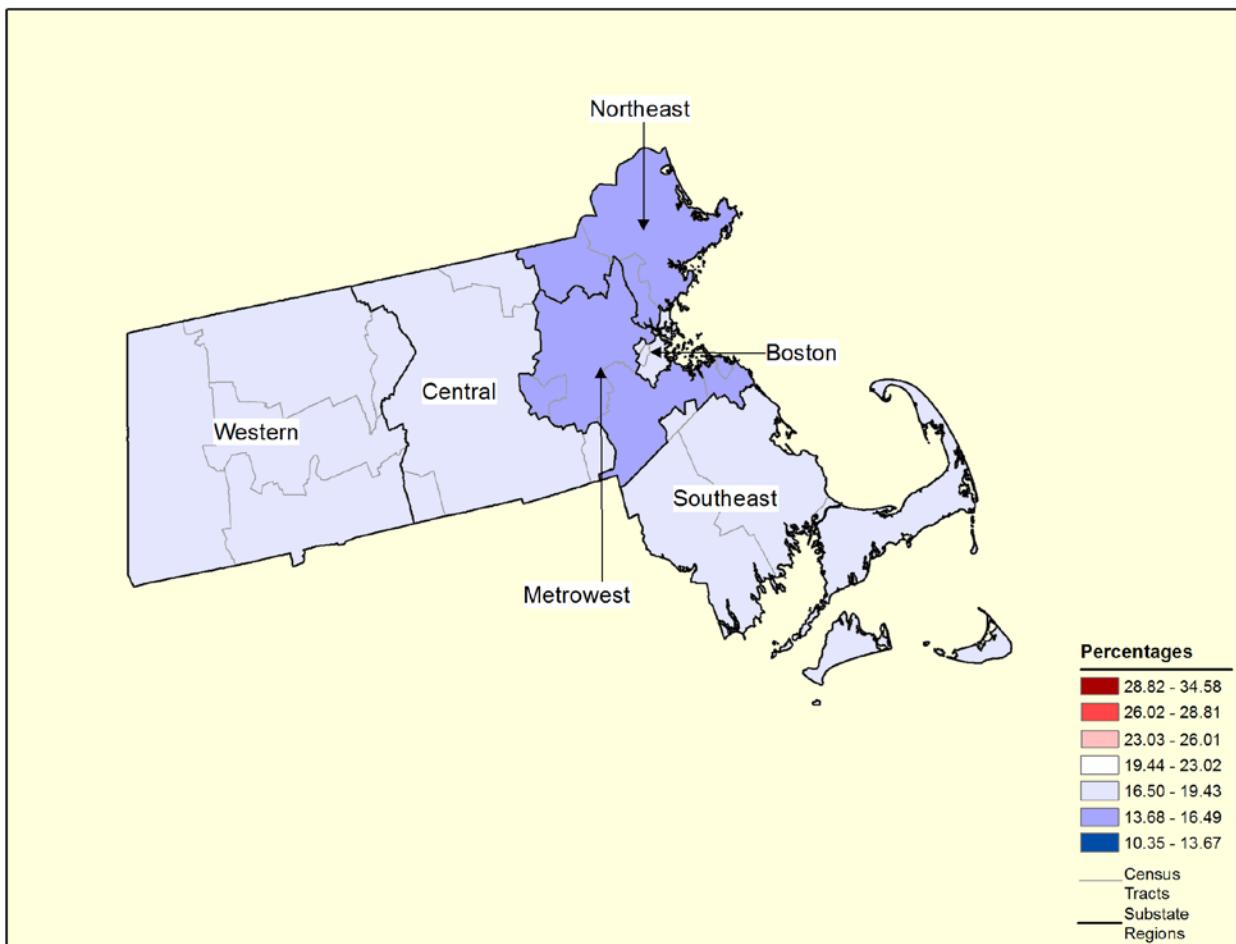
Figure 22.8 Tobacco Product Use in the Past Month among Individuals Aged 12 or Older in Massachusetts, by Substate Region: Percentages, Annual Averages Based on 2014, 2015, and 2016 NSDUHs



NOTE: The legend's ranges were created by dividing 395 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see the "2014-2016 National Survey on Drug Use and Health Substate Region Definitions" at <https://www.samhsa.gov/data/>.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2014, 2015, and 2016.

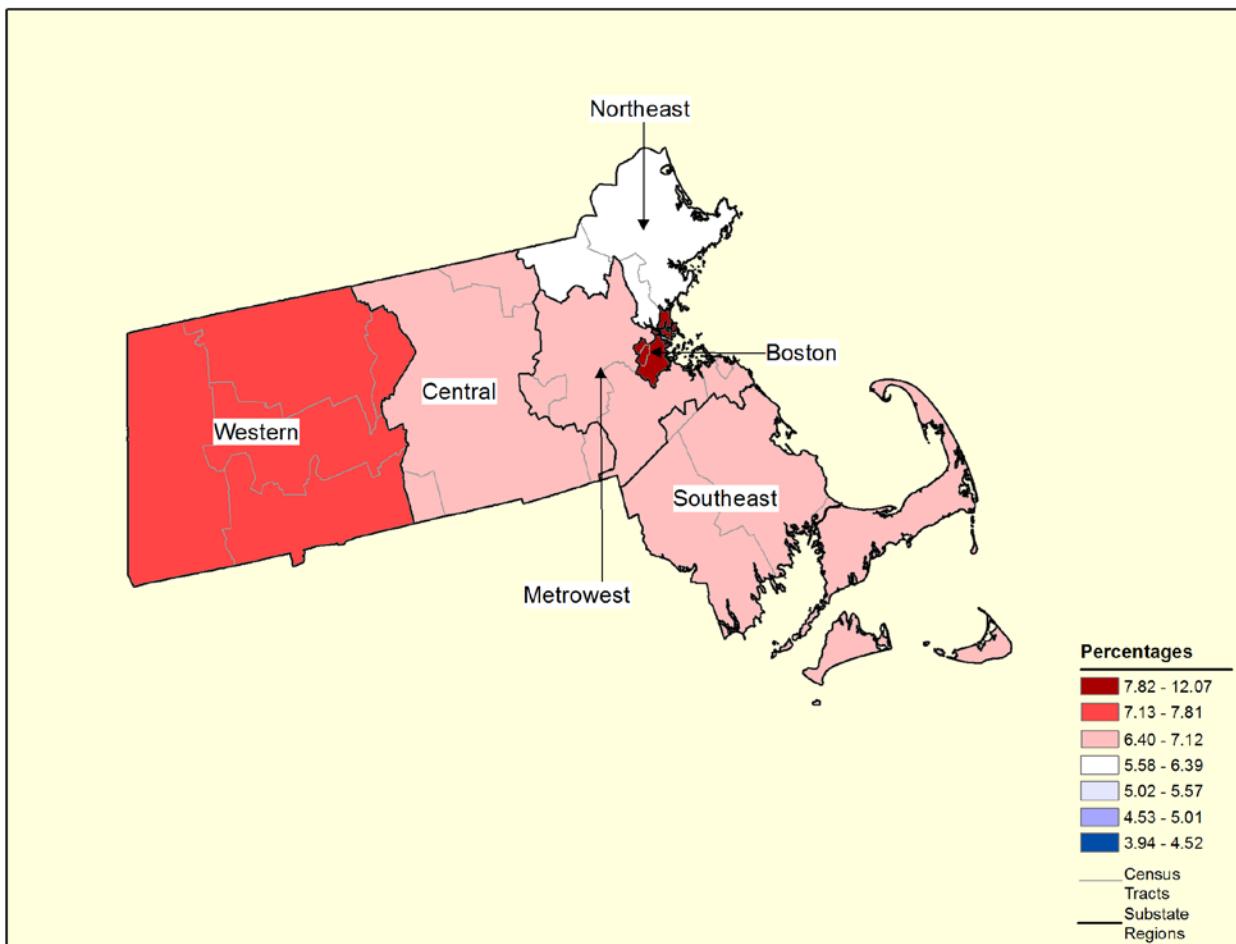
Figure 22.9 Cigarette Use in the Past Month among Individuals Aged 12 or Older in Massachusetts, by Substate Region: Percentages, Annual Averages Based on 2014, 2015, and 2016 NSDUHs



NOTE: The legend's ranges were created by dividing 395 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see the "2014-2016 National Survey on Drug Use and Health Substate Region Definitions" at <https://www.samhsa.gov/data/>.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2014, 2015, and 2016.

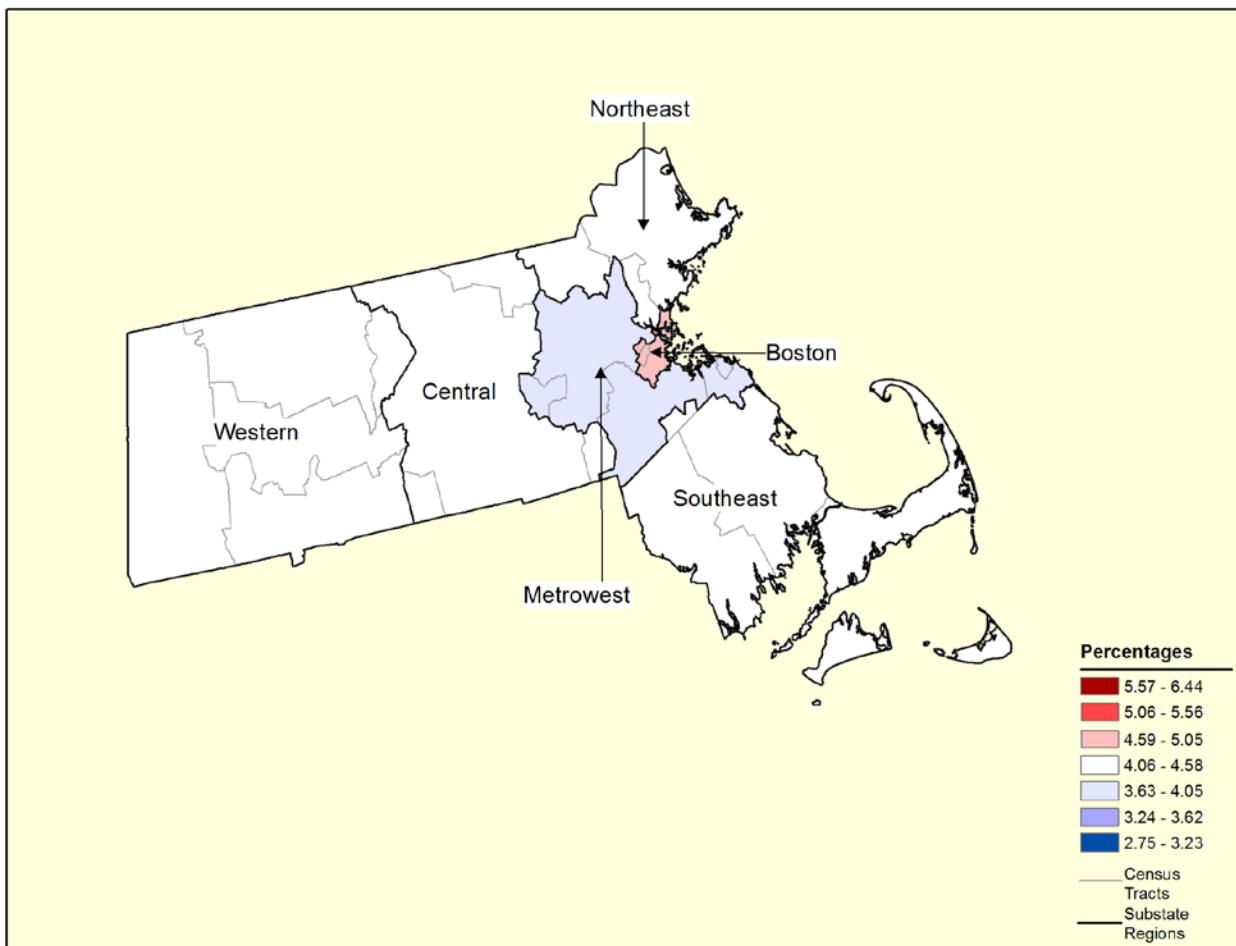
Figure 22.10 Alcohol Use Disorder in the Past Year among Individuals Aged 12 or Older in Massachusetts, by Substate Region: Percentages, Annual Averages Based on 2014, 2015, and 2016 NSDUHs



NOTE: The legend's ranges were created by dividing 395 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see the "2014-2016 National Survey on Drug Use and Health Substate Region Definitions" at <https://www.samhsa.gov/data/>.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2014, 2015, and 2016.

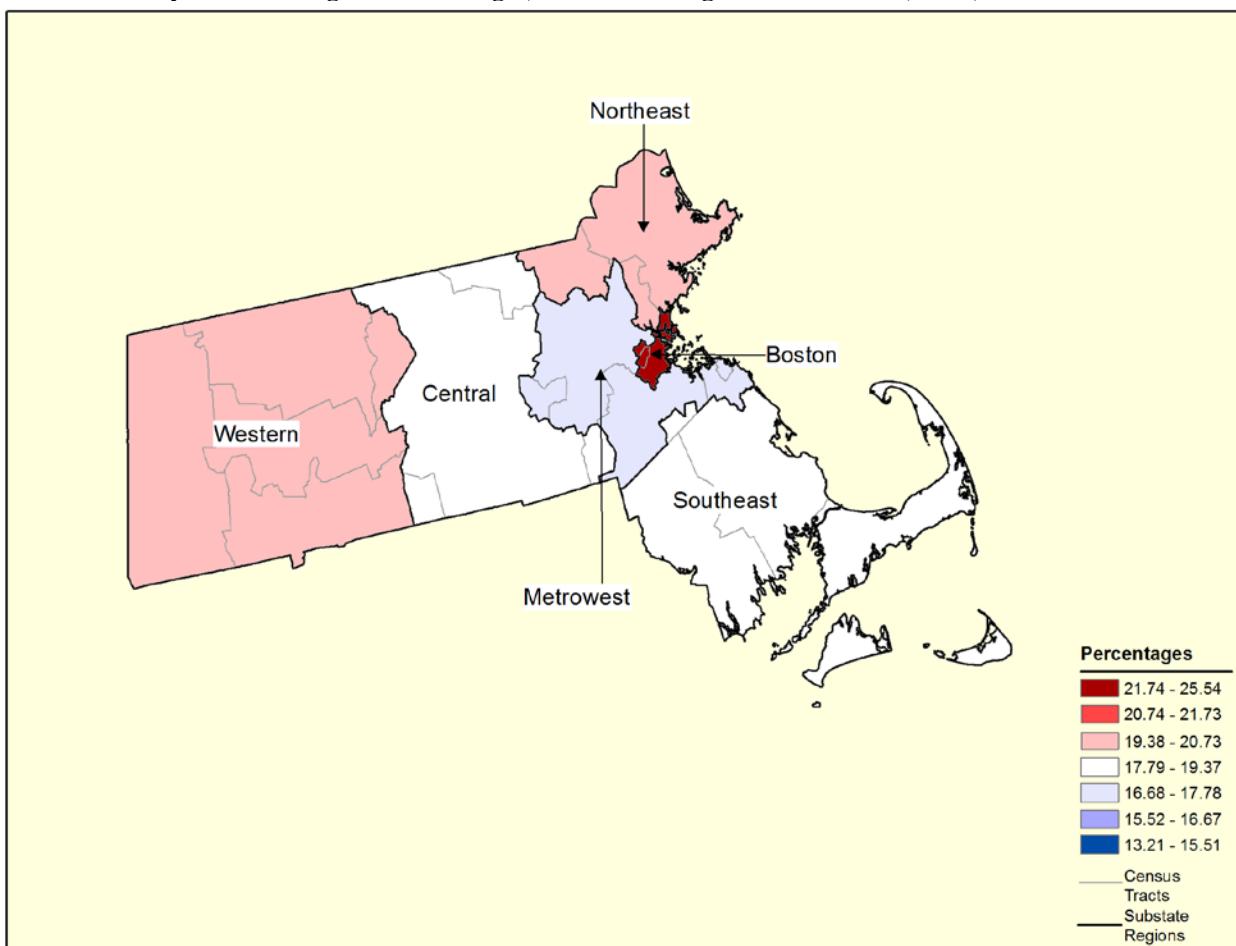
Figure 22.11 Serious Mental Illness in the Past Year among Adults Aged 18 or Older in Massachusetts, by Substate Region: Percentages, Annual Averages Based on 2014, 2015, and 2016 NSDUHs



NOTE: The legend's ranges were created by dividing 395 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see the "2014-2016 National Survey on Drug Use and Health Substate Region Definitions" at <https://www.samhsa.gov/data/>.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2014, 2015, and 2016.

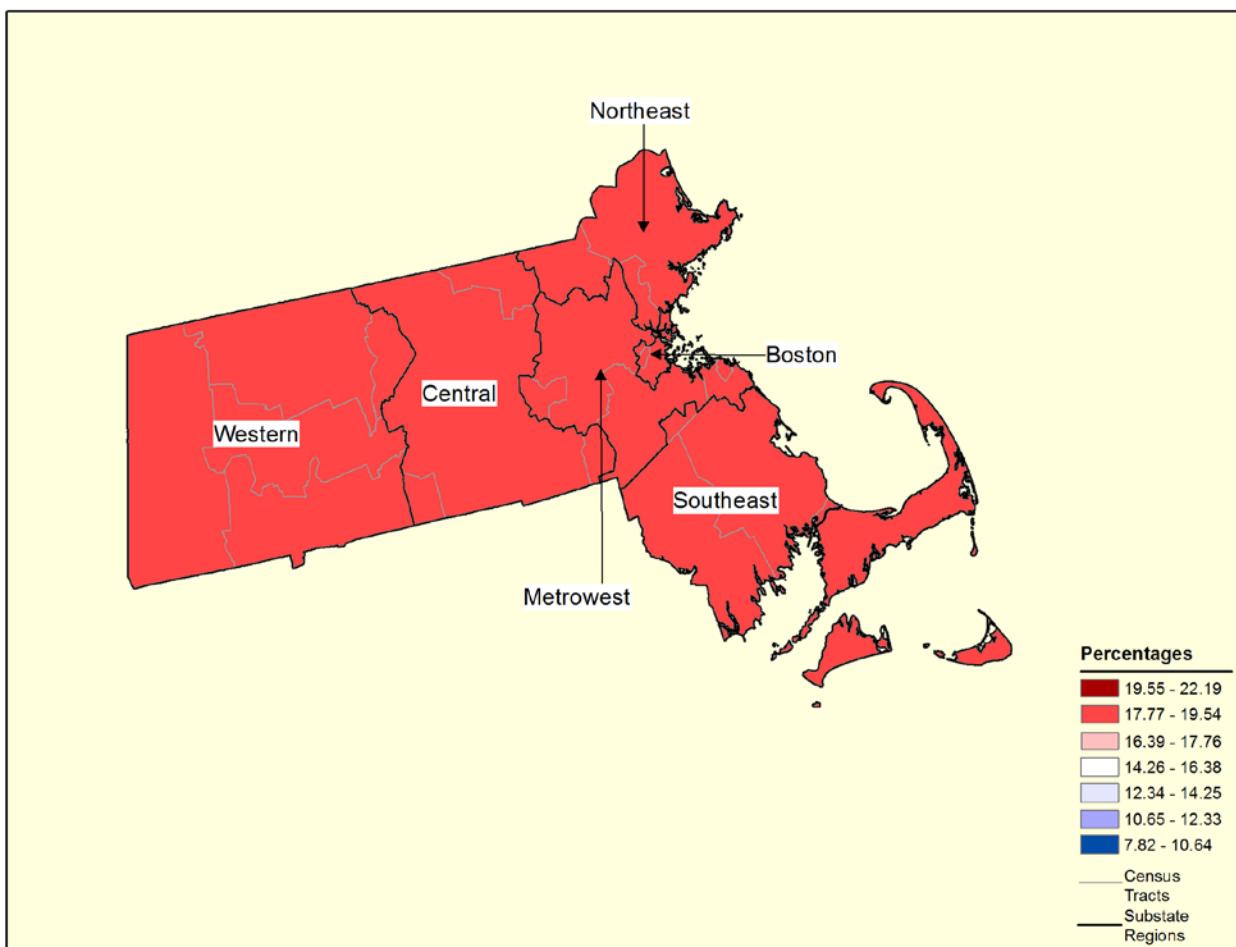
Figure 22.12 Any Mental Illness in the Past Year among Adults Aged 18 or Older in Massachusetts, by Substate Region: Percentages, Annual Averages Based on 2014, 2015, and 2016 NSDUHs



NOTE: The legend's ranges were created by dividing 395 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see the "2014-2016 National Survey on Drug Use and Health Substate Region Definitions" at <https://www.samhsa.gov/data/>.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2014, 2015, and 2016.

Figure 22.13 Received Mental Health Services in the Past Year among Adults Aged 18 or Older in Massachusetts, by Substate Region: Percentages, Annual Averages Based on 2014, 2015, and 2016 NSDUHs

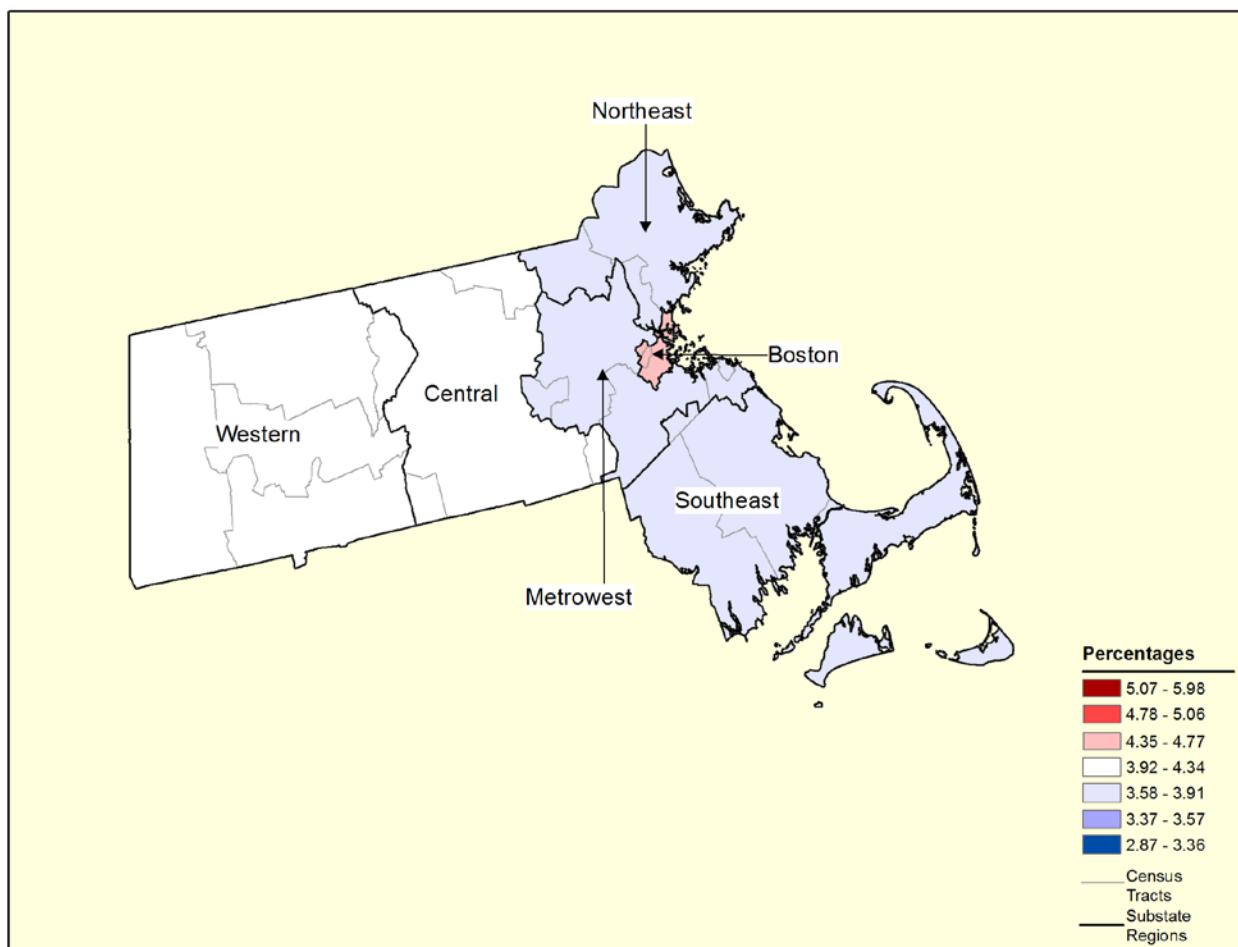


NOTE: The legend's ranges were created by dividing 395 substate regions, nationally, into 7 groups based on the magnitude of their percentages.

For substate region definitions, see the "2014-2016 National Survey on Drug Use and Health Substate Region Definitions" at <https://www.samhsa.gov/data/>.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2014, 2015, and 2016.

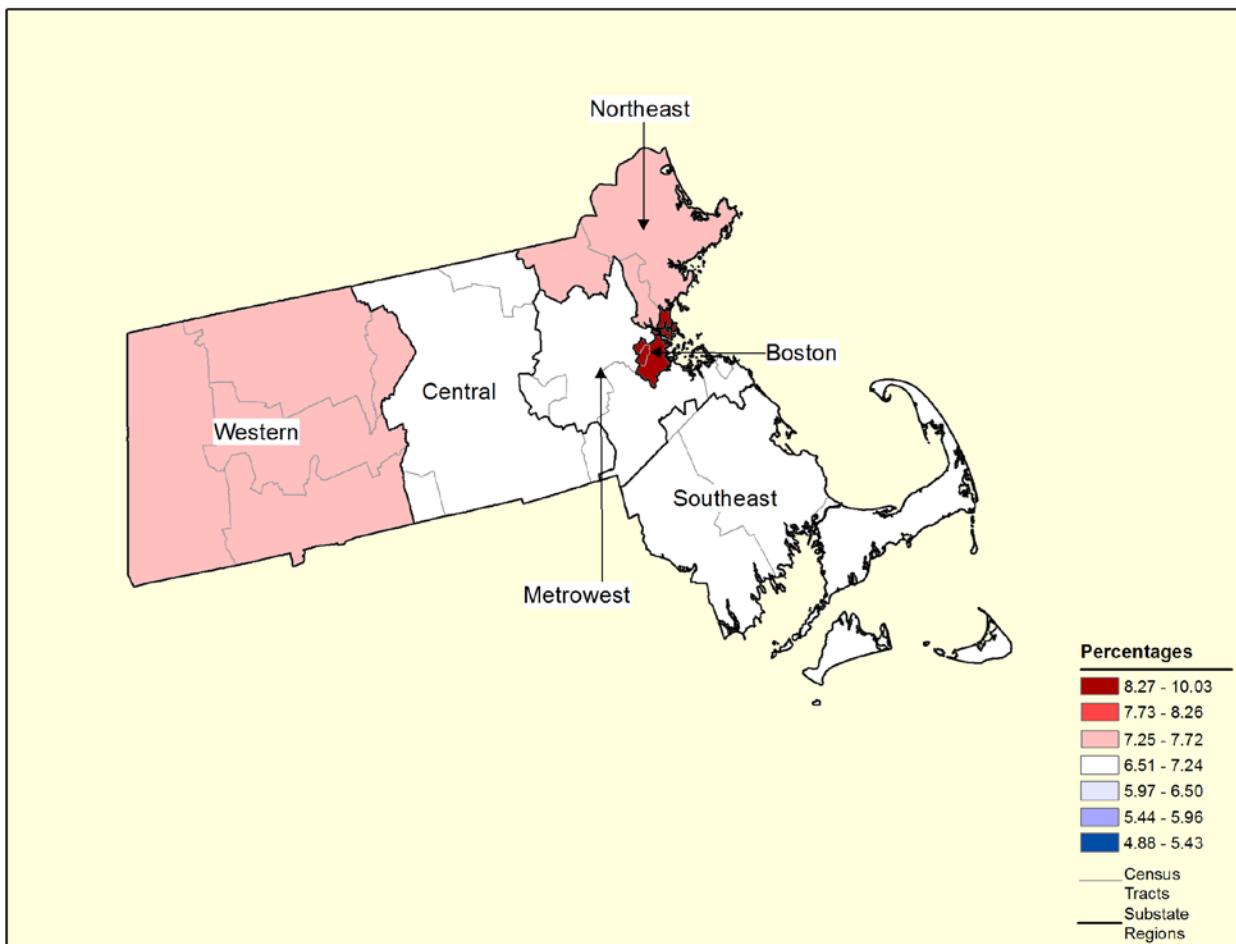
Figure 22.14 Had Serious Thoughts of Suicide in the Past Year among Adults Aged 18 or Older in Massachusetts, by Substate Region: Percentages, Annual Averages Based on 2014, 2015, and 2016 NSDUHs



NOTE: The legend's ranges were created by dividing 395 substate regions, nationally, into 7 groups based on the magnitude of their percentages.
For substate region definitions, see the "2014-2016 National Survey on Drug Use and Health Substate Region Definitions" at <https://www.samhsa.gov/data/>.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2014, 2015, and 2016.

Figure 22.15 Major Depressive Episode in the Past Year among Adults Aged 18 or Older in Massachusetts, by Substate Region: Percentages, Annual Averages Based on 2014, 2015, and 2016 NSDUHs



NOTE: The legend's ranges were created by dividing 395 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see the "2014-2016 National Survey on Drug Use and Health Substate Region Definitions" at <https://www.samhsa.gov/data/>.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2014, 2015, and 2016.