

Table 23.1 Illicit Drug Use in Past Month and Illicit Drug Use Other Than Marijuana in Past Month in Michigan among Persons Aged 12 or Older, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs

State/Substate Region	Illicit Drug Use in Past Month		Illicit Drug Use Other Than Marijuana in Past Month	
	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval
Michigan	8.99	(8.36 - 9.66)	3.93	(3.54 - 4.35)
Bay	7.87	(6.15 - 10.02)	3.55	(2.58 - 4.86)
Detroit City	11.96	(9.87 - 14.43)	3.57	(2.63 - 4.82)
Genesee	10.87	(8.70 - 13.50)	4.83	(3.61 - 6.44)
Kalamazoo	8.22	(6.74 - 9.98)	3.57	(2.74 - 4.64)
Kent	8.30	(6.73 - 10.19)	3.81	(2.87 - 5.06)
Lakeshore	7.80	(6.37 - 9.52)	3.97	(3.04 - 5.16)
Macomb	9.04	(7.41 - 10.99)	4.26	(3.20 - 5.66)
Mid South	9.32	(7.76 - 11.15)	3.94	(3.10 - 4.99)
Northern	7.35	(5.95 - 9.04)	3.11	(2.33 - 4.14)
Oakland	9.47	(8.03 - 11.14)	3.93	(3.14 - 4.92)
Pathways	9.46	(7.18 - 12.35)	3.71	(2.64 - 5.20)
Saginaw	8.39	(6.31 - 11.07)	3.69	(2.58 - 5.26)
Southeast	8.84	(7.43 - 10.47)	4.57	(3.67 - 5.68)
St. Clair	7.19	(5.48 - 9.39)	3.62	(2.59 - 5.05)
Washtenaw	9.40	(7.66 - 11.48)	4.39	(3.34 - 5.74)
Western	7.31	(5.37 - 9.88)	3.34	(2.34 - 4.74)

NOTE: For Substate Region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

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

NOTE: Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically. Illicit Drugs Other Than Marijuana include cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

Table 23.2 Marijuana Use in Past Month, Average Annual Rate of First Use of Marijuana, and Perceptions of Great Risk of Smoking Marijuana Once a Month in Michigan among Persons Aged 12 or Older, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs

State/Substate Region	Marijuana Use in Past Month		Average Annual Rate of First Use of Marijuana ¹		Perceptions of Great Risk of Smoking Marijuana Once a Month	
	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval
Michigan	6.79	(6.25 - 7.37)	1.96	(1.82 - 2.12)	35.97	(34.63 - 37.34)
Bay	5.48	(4.15 - 7.22)	1.58	(1.22 - 2.06)	38.36	(33.92 - 43.00)
Detroit City	9.75	(7.94 - 11.91)	2.00	(1.62 - 2.46)	42.85	(39.10 - 46.69)
Genesee	7.75	(6.12 - 9.76)	1.87	(1.46 - 2.40)	33.87	(29.72 - 38.29)
Kalamazoo	6.36	(5.10 - 7.89)	2.23	(1.80 - 2.76)	36.29	(32.53 - 40.23)
Kent	6.17	(4.88 - 7.78)	1.90	(1.52 - 2.38)	35.20	(31.11 - 39.52)
Lakeshore	5.42	(4.34 - 6.76)	1.87	(1.52 - 2.31)	39.03	(35.13 - 43.08)
Macomb	6.27	(5.01 - 7.82)	1.88	(1.52 - 2.33)	32.78	(29.23 - 36.55)
Mid South	7.15	(5.90 - 8.64)	2.34	(1.91 - 2.85)	33.07	(29.78 - 36.54)
Northern	5.87	(4.62 - 7.42)	1.88	(1.54 - 2.30)	37.57	(33.77 - 41.53)
Oakland	7.93	(6.59 - 9.51)	1.75	(1.45 - 2.11)	31.32	(28.26 - 34.56)
Pathways	7.41	(5.46 - 10.00)	2.02	(1.49 - 2.74)	35.03	(29.87 - 40.55)
Saginaw	6.71	(4.92 - 9.09)	2.03	(1.49 - 2.75)	37.17	(31.98 - 42.66)
Southeast	5.91	(4.88 - 7.14)	1.81	(1.51 - 2.16)	39.49	(36.11 - 42.98)
St. Clair	5.31	(3.91 - 7.18)	1.73	(1.29 - 2.30)	38.32	(33.27 - 43.64)
Washtenaw	7.17	(5.70 - 8.98)	2.82	(2.22 - 3.57)	29.17	(25.57 - 33.06)
Western	5.38	(3.86 - 7.46)	1.75	(1.27 - 2.42)	37.43	(31.90 - 43.31)

NOTE: For Substate Region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

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

¹ *Average annual rate* = $100 * \{ [X_1 \div (0.5 * X_1 + X_2)] \div 2 \}$, where X_1 is the number of marijuana initiates in the past 24 months and X_2 is the number of persons who never used marijuana. Both of the computation components, X_1 and X_2 , are based on a survey-weighted hierarchical Bayes estimation approach. Note that 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 prediction intervals for Average Annual Rate 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.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

Table 23.3 Marijuana Use in Past Year, Cocaine Use in Past Year, and Nonmedical Use of Pain Relievers in Past Year in Michigan among Persons Aged 12 or Older, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs

State/Substate Region	Marijuana Use in Past Year		Cocaine Use in Past Year		Nonmedical Use of Pain Relievers in Past Year	
	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval
Michigan	12.07	(11.37 - 12.82)	2.25	(1.96 - 2.58)	5.57	(5.11 - 6.06)
Bay	9.84	(7.73 - 12.47)	1.89	(1.36 - 2.61)	5.52	(4.32 - 7.02)
Detroit City	15.19	(12.78 - 17.96)	2.43	(1.56 - 3.78)	4.31	(3.35 - 5.53)
Genesee	12.96	(10.62 - 15.72)	2.85	(2.03 - 4.01)	6.47	(5.12 - 8.14)
Kalamazoo	10.50	(8.79 - 12.51)	2.14	(1.57 - 2.91)	5.85	(4.66 - 7.33)
Kent	12.18	(10.12 - 14.59)	2.39	(1.74 - 3.28)	5.12	(4.01 - 6.51)
Lakeshore	9.54	(7.95 - 11.40)	2.01	(1.50 - 2.70)	5.60	(4.49 - 6.98)
Macomb	12.35	(10.27 - 14.77)	2.27	(1.66 - 3.12)	5.91	(4.73 - 7.36)
Mid South	13.37	(11.52 - 15.45)	2.27	(1.74 - 2.96)	6.25	(5.10 - 7.64)
Northern	10.37	(8.69 - 12.34)	1.76	(1.27 - 2.44)	4.95	(3.97 - 6.16)
Oakland	13.83	(11.99 - 15.89)	2.28	(1.74 - 3.00)	5.56	(4.55 - 6.77)
Pathways	12.01	(9.48 - 15.10)	2.28	(1.61 - 3.21)	5.44	(4.07 - 7.23)
Saginaw	11.81	(9.13 - 15.13)	2.17	(1.47 - 3.20)	4.80	(3.56 - 6.45)
Southeast	11.04	(9.49 - 12.79)	2.41	(1.85 - 3.14)	5.95	(4.98 - 7.10)
St. Clair	9.60	(7.46 - 12.28)	2.03	(1.42 - 2.90)	5.23	(3.93 - 6.92)
Washtenaw	13.74	(11.62 - 16.18)	2.49	(1.82 - 3.39)	6.07	(4.86 - 7.54)
Western	9.35	(7.05 - 12.29)	1.94	(1.36 - 2.77)	5.46	(4.08 - 7.29)

NOTE: For Substate Region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

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

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

Table 23.4 *Alcohol Use in Past Month, Binge Alcohol Use in Past Month, and Perceptions of Great Risk of Having Five or More Drinks of an Alcoholic Beverage Once or Twice a Week in Michigan among Persons Aged 12 or Older, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs*

State/Substate Region	Alcohol Use in Past Month		Binge Alcohol Use in Past Month ¹		Perceptions of Great Risk of Having Five or More Drinks of an Alcoholic Beverage Once or Twice a Week	
	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval
Michigan	54.78	(53.39 - 56.17)	25.15	(24.06 - 26.28)	37.68	(36.39 - 38.99)
Bay	51.69	(46.31 - 57.04)	25.72	(22.30 - 29.45)	33.86	(30.01 - 37.93)
Detroit City	39.72	(35.76 - 43.83)	21.73	(18.85 - 24.92)	51.09	(47.45 - 54.72)
Genesee	52.44	(47.65 - 57.19)	24.25	(20.92 - 27.93)	38.18	(34.43 - 42.08)
Kalamazoo	53.15	(48.79 - 57.46)	24.39	(21.53 - 27.49)	37.53	(33.96 - 41.25)
Kent	55.14	(50.50 - 59.69)	23.69	(20.63 - 27.05)	36.86	(33.13 - 40.76)
Lakeshore	51.78	(47.44 - 56.10)	24.18	(21.34 - 27.26)	38.64	(35.32 - 42.07)
Macomb	59.12	(55.06 - 63.06)	27.04	(24.01 - 30.30)	35.06	(31.79 - 38.47)
Mid South	54.95	(51.16 - 58.70)	26.72	(24.00 - 29.64)	34.13	(31.06 - 37.34)
Northern	53.60	(49.37 - 57.77)	26.08	(23.04 - 29.37)	35.45	(32.10 - 38.95)
Oakland	61.57	(58.15 - 64.88)	25.20	(22.67 - 27.90)	36.58	(33.45 - 39.82)
Pathways	57.21	(50.66 - 63.53)	30.80	(26.30 - 35.69)	34.54	(30.17 - 39.19)
Saginaw	54.25	(47.97 - 60.39)	22.85	(19.07 - 27.14)	36.39	(32.04 - 40.97)
Southeast	56.14	(52.55 - 59.66)	24.74	(22.26 - 27.41)	38.05	(35.02 - 41.17)
St. Clair	58.17	(52.23 - 63.89)	26.95	(22.83 - 31.51)	37.25	(32.81 - 41.93)
Washtenaw	63.30	(59.04 - 67.37)	26.09	(23.03 - 29.40)	36.35	(32.85 - 39.99)
Western	52.49	(45.62 - 59.27)	25.86	(21.90 - 30.26)	33.11	(28.47 - 38.11)

NOTE: For Substate Region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

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

¹ Binge Alcohol Use is defined as drinking five or more drinks on the same occasion (i.e., at the same time or within a couple of hours of each other) on at least 1 day in the past 30 days.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

Table 23.5 Alcohol Use in Past Month and Binge Alcohol Use in Past Month among Persons Aged 12 to 20 in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs

State/Substate Region	Alcohol Use in Past Month among Persons Aged 12 to 20		Binge Alcohol Use in Past Month among Persons Aged 12 to 20 ¹	
	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval
Michigan	29.01	(27.84 - 30.20)	19.97	(18.95 - 21.04)
Bay	31.08	(26.85 - 35.65)	22.18	(18.65 - 26.17)
Detroit City	19.05	(16.40 - 22.02)	10.96	(8.98 - 13.32)
Genesee	27.69	(24.15 - 31.53)	19.00	(16.05 - 22.34)
Kalamazoo	29.56	(26.15 - 33.22)	20.38	(17.37 - 23.76)
Kent	30.26	(26.88 - 33.87)	20.51	(17.45 - 23.96)
Lakeshore	28.87	(25.55 - 32.43)	19.90	(17.16 - 22.97)
Macomb	31.98	(28.61 - 35.56)	21.71	(18.81 - 24.92)
Mid South	32.18	(29.05 - 35.49)	23.26	(20.57 - 26.18)
Northern	29.13	(25.98 - 32.49)	21.34	(18.46 - 24.55)
Oakland	30.03	(27.21 - 32.99)	20.03	(17.53 - 22.80)
Pathways	34.19	(29.38 - 39.35)	26.17	(21.89 - 30.96)
Saginaw	29.63	(25.04 - 34.67)	19.51	(15.76 - 23.91)
Southeast	28.58	(25.88 - 31.43)	20.19	(17.70 - 22.93)
St. Clair	30.64	(26.29 - 35.36)	21.43	(17.65 - 25.77)
Washtenaw	31.52	(27.85 - 35.45)	20.95	(17.59 - 24.76)
Western	30.33	(25.24 - 35.95)	23.01	(18.76 - 27.88)

NOTE: For Substate Region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

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

¹ Binge Alcohol Use is defined as drinking five or more drinks on the same occasion (i.e., at the same time or within a couple of hours of each other) on at least 1 day in the past 30 days.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

Table 23.6 *Cigarette Use in Past Month, Tobacco Product Use in Past Month, and Perceptions of Great Risk of Smoking One or More Packs of Cigarettes Per Day in Michigan among Persons Aged 12 or Older, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs*

State/Substate Region	Cigarette Use in Past Month		Tobacco Product Use in Past Month ¹		Perceptions of Great Risk of Smoking One or More Packs of Cigarettes Per Day	
	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval
Michigan	27.87	(26.70 - 29.08)	32.25	(31.01 - 33.51)	72.33	(71.16 - 73.48)
Bay	29.87	(26.37 - 33.62)	35.06	(31.03 - 39.32)	68.47	(64.81 - 71.91)
Detroit City	29.10	(25.94 - 32.49)	32.77	(29.55 - 36.16)	74.11	(71.16 - 76.87)
Genesee	30.15	(26.56 - 34.00)	34.03	(30.30 - 37.97)	71.14	(67.76 - 74.31)
Kalamazoo	28.42	(25.38 - 31.67)	33.77	(30.45 - 37.25)	71.09	(67.95 - 74.03)
Kent	26.18	(23.31 - 29.26)	29.70	(26.57 - 33.04)	72.32	(69.15 - 75.28)
Lakeshore	26.50	(23.61 - 29.60)	31.19	(28.07 - 34.49)	71.73	(68.64 - 74.63)
Macomb	30.88	(27.90 - 34.02)	34.90	(31.67 - 38.28)	69.26	(66.15 - 72.20)
Mid South	27.99	(25.22 - 30.93)	32.87	(30.01 - 35.87)	71.83	(69.04 - 74.47)
Northern	27.29	(24.32 - 30.47)	31.67	(28.53 - 34.99)	72.18	(69.13 - 75.04)
Oakland	24.86	(22.42 - 27.47)	28.44	(25.81 - 31.23)	75.24	(72.53 - 77.77)
Pathways	31.18	(27.11 - 35.56)	36.44	(32.03 - 41.09)	71.06	(67.19 - 74.65)
Saginaw	29.08	(25.10 - 33.40)	33.78	(29.53 - 38.31)	70.47	(66.51 - 74.15)
Southeast	29.05	(26.39 - 31.87)	33.89	(31.04 - 36.86)	73.27	(70.67 - 75.72)
St. Clair	29.61	(25.80 - 33.72)	34.06	(29.80 - 38.59)	69.35	(65.33 - 73.09)
Washtenaw	23.34	(20.69 - 26.22)	27.62	(24.68 - 30.77)	75.74	(72.70 - 78.54)
Western	27.04	(23.05 - 31.44)	32.23	(27.77 - 37.04)	70.92	(66.80 - 74.72)

NOTE: For Substate Region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

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

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

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

Table 23.7 Alcohol Dependence in Past Year and Illicit Drug Dependence in Past Year in Michigan among Persons Aged 12 or Older, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs

State/Substate Region	Alcohol Dependence in Past Year		Illicit Drug Dependence in Past Year ¹	
	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval
Michigan	3.57	(3.17 - 4.01)	2.19	(1.93 - 2.49)
Bay	3.43	(2.50 - 4.69)	1.87	(1.32 - 2.64)
Detroit City	5.10	(3.72 - 6.94)	3.80	(2.70 - 5.34)
Genesee	3.56	(2.63 - 4.81)	2.63	(1.90 - 3.63)
Kalamazoo	3.43	(2.55 - 4.62)	2.00	(1.46 - 2.73)
Kent	3.97	(3.00 - 5.25)	2.52	(1.87 - 3.38)
Lakeshore	3.51	(2.68 - 4.59)	1.92	(1.40 - 2.61)
Macomb	3.33	(2.47 - 4.46)	1.86	(1.39 - 2.50)
Mid South	3.56	(2.77 - 4.57)	1.91	(1.43 - 2.54)
Northern	2.92	(2.21 - 3.84)	1.44	(1.01 - 2.05)
Oakland	3.48	(2.67 - 4.51)	2.56	(1.98 - 3.31)
Pathways	3.70	(2.64 - 5.15)	1.95	(1.35 - 2.79)
Saginaw	3.37	(2.38 - 4.75)	1.90	(1.29 - 2.78)
Southeast	3.30	(2.51 - 4.32)	1.89	(1.44 - 2.47)
St. Clair	3.26	(2.33 - 4.56)	1.79	(1.26 - 2.54)
Washtenaw	3.53	(2.66 - 4.66)	2.28	(1.69 - 3.09)
Western	3.37	(2.40 - 4.71)	1.87	(1.29 - 2.69)

NOTE: For Substate Region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

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

NOTE: Dependence is based on the definition found in the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV).

¹ Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

Table 23.8 *Alcohol Dependence or Abuse in Past Year, Illicit Drug Dependence or Abuse in Past Year, and Dependence on or Abuse of Illicit Drugs or Alcohol in Past Year in Michigan among Persons Aged 12 or Older, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs*

State/Substate Region	Alcohol Dependence or Abuse in Past Year		Illicit Drug Dependence or Abuse in Past Year ¹		Dependence on or Abuse of Illicit Drugs or Alcohol in Past Year ¹	
	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval
Michigan	8.01	(7.41 - 8.64)	3.08	(2.76 - 3.43)	9.70	(9.05 - 10.40)
Bay	8.08	(6.47 - 10.05)	2.77	(2.01 - 3.81)	9.20	(7.48 - 11.27)
Detroit City	7.87	(6.33 - 9.76)	4.74	(3.51 - 6.36)	10.70	(8.88 - 12.84)
Genesee	8.06	(6.52 - 9.92)	3.79	(2.83 - 5.05)	10.75	(8.87 - 12.97)
Kalamazoo	7.98	(6.52 - 9.72)	2.65	(1.99 - 3.51)	9.25	(7.75 - 11.01)
Kent	8.45	(6.97 - 10.20)	3.32	(2.53 - 4.34)	10.31	(8.65 - 12.24)
Lakeshore	8.42	(7.00 - 10.09)	2.90	(2.25 - 3.73)	9.83	(8.33 - 11.57)
Macomb	7.91	(6.57 - 9.49)	3.00	(2.29 - 3.93)	9.79	(8.23 - 11.62)
Mid South	8.08	(6.79 - 9.58)	2.87	(2.22 - 3.70)	9.58	(8.17 - 11.21)
Northern	7.35	(6.07 - 8.88)	2.31	(1.73 - 3.09)	8.49	(7.07 - 10.17)
Oakland	8.29	(6.99 - 9.80)	3.43	(2.69 - 4.35)	10.14	(8.77 - 11.70)
Pathways	8.39	(6.62 - 10.59)	2.79	(1.99 - 3.90)	9.94	(8.01 - 12.28)
Saginaw	7.60	(5.89 - 9.74)	2.85	(2.02 - 4.01)	9.05	(7.15 - 11.39)
Southeast	7.92	(6.67 - 9.40)	2.62	(2.06 - 3.33)	9.49	(8.13 - 11.06)
St. Clair	7.53	(5.93 - 9.52)	2.57	(1.83 - 3.60)	8.70	(6.91 - 10.91)
Washtenaw	8.33	(6.91 - 10.02)	3.14	(2.38 - 4.12)	9.88	(8.24 - 11.81)
Western	7.07	(5.42 - 9.17)	2.63	(1.89 - 3.65)	8.74	(6.90 - 11.02)

NOTE: For Substate Region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

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

NOTE: Dependence or abuse is based on definitions found in the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*.

¹ Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

Table 23.9 *Needing But Not Receiving Treatment for Alcohol Use in Past Year and Needing But Not Receiving Treatment for Illicit Drug Use in Past Year in Michigan among Persons Aged 12 or Older, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs*

State/Substate Region	Needing But Not Receiving Treatment for Alcohol Use in Past Year ¹		Needing But Not Receiving Treatment for Illicit Drug Use in Past Year ²	
	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval
Michigan	7.56	(6.97 - 8.20)	2.73	(2.45 - 3.04)
Bay	7.67	(6.13 - 9.56)	2.35	(1.68 - 3.28)
Detroit City	7.12	(5.69 - 8.87)	4.76	(3.52 - 6.42)
Genesee	7.67	(6.16 - 9.50)	3.24	(2.42 - 4.32)
Kalamazoo	7.45	(6.14 - 9.01)	2.23	(1.66 - 2.99)
Kent	7.94	(6.49 - 9.70)	2.95	(2.23 - 3.91)
Lakeshore	8.00	(6.62 - 9.65)	2.54	(1.92 - 3.35)
Macomb	7.30	(5.99 - 8.87)	2.56	(1.95 - 3.35)
Mid South	7.76	(6.51 - 9.23)	2.50	(1.92 - 3.26)
Northern	7.08	(5.80 - 8.61)	2.08	(1.54 - 2.81)
Oakland	7.84	(6.60 - 9.29)	2.99	(2.34 - 3.82)
Pathways	7.98	(6.29 - 10.08)	2.40	(1.67 - 3.44)
Saginaw	7.14	(5.51 - 9.20)	2.49	(1.75 - 3.51)
Southeast	7.43	(6.24 - 8.83)	2.31	(1.80 - 2.96)
St. Clair	7.18	(5.58 - 9.18)	2.15	(1.51 - 3.05)
Washtenaw	8.15	(6.65 - 9.95)	2.65	(1.97 - 3.55)
Western	6.82	(5.24 - 8.83)	2.33	(1.65 - 3.28)

NOTE: For Substate Region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

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

¹ Needing But Not Receiving Treatment refers to respondents classified as needing treatment for alcohol, but not receiving treatment for an alcohol problem at a specialty facility (i.e., drug and alcohol rehabilitation facilities [inpatient or outpatient], hospitals [inpatient only], and mental health centers).

² Needing But Not Receiving Treatment refers to respondents classified as needing treatment for illicit drugs, but not receiving treatment for an illicit drug problem at a specialty facility (i.e., drug and alcohol rehabilitation facilities [inpatient or outpatient], hospitals [inpatient only], and mental health centers). Illicit Drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

Table 23.10 *Serious Psychological Distress in Past Year and Having at Least One Major Depressive Episode in Past Year in Michigan among Persons Aged 18 or Older, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs*

State/Substate Region	Serious Psychological Distress in Past Year ¹		Having at Least One Major Depressive Episode in Past Year ²	
	Estimate	95% Prediction Interval	Estimate	95% Prediction Interval
Michigan	11.60	(10.79 - 12.47)	7.98	(7.20 - 8.84)
Bay	11.20	(9.14 - 13.66)	8.49	(6.49 - 11.02)
Detroit City	13.53	(11.37 - 16.02)	8.19	(6.37 - 10.48)
Genesee	12.14	(10.11 - 14.53)	7.67	(5.98 - 9.78)
Kalamazoo	12.26	(10.25 - 14.60)	8.78	(6.95 - 11.02)
Kent	11.98	(10.05 - 14.23)	8.55	(6.72 - 10.83)
Lakeshore	11.15	(9.29 - 13.33)	7.76	(6.09 - 9.83)
Macomb	11.76	(9.93 - 13.86)	8.08	(6.39 - 10.17)
Mid South	11.52	(9.88 - 13.39)	8.78	(7.08 - 10.84)
Northern	12.14	(10.22 - 14.37)	8.09	(6.34 - 10.26)
Oakland	9.88	(8.42 - 11.55)	6.66	(5.27 - 8.38)
Pathways	13.06	(10.59 - 16.01)	8.63	(6.56 - 11.27)
Saginaw	11.47	(9.28 - 14.11)	7.15	(5.40 - 9.40)
Southeast	11.29	(9.64 - 13.17)	7.87	(6.30 - 9.80)
St. Clair	10.42	(8.50 - 12.71)	7.98	(6.04 - 10.46)
Washtenaw	11.30	(9.59 - 13.29)	7.88	(6.24 - 9.92)
Western	13.02	(10.43 - 16.14)	7.98	(5.92 - 10.67)

NOTE: For Substate Region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

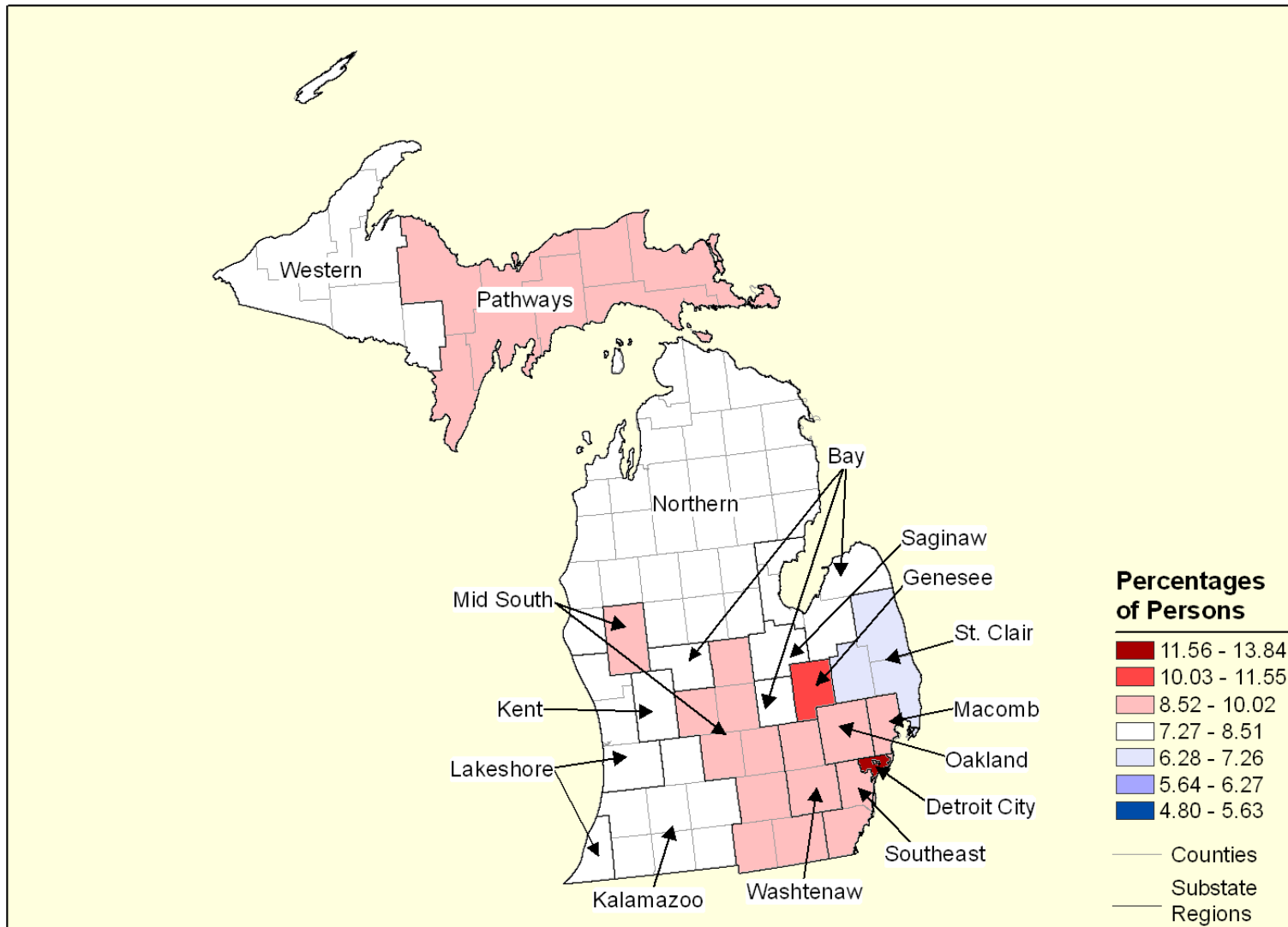
NOTE: Estimates are based on a survey-weighted hierarchical Bayes estimation approach, and the 95 percent prediction (credible) intervals are generated by Markov Chain Monte Carlo techniques.

¹ Serious Psychological Distress (SPD) is defined as having a score of 13 or higher on the K6 scale. Because of questionnaire changes, these estimates are not comparable with estimates from the 2002-2004 substate report. For details, see Section B.7 of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*. Data for SPD are not defined for 12 to 17 year olds; therefore, the estimates reflect only those aged 18 or older.

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 a person experienced a depressed mood or loss of interest or pleasure in daily activities and had a majority of specified depression symptoms. There are minor wording differences in the questions in the adult and adolescent MDE modules. Therefore, data from youths aged 12 to 17 were not combined with data from persons aged 18 or older to get an overall estimate (12 or older).

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

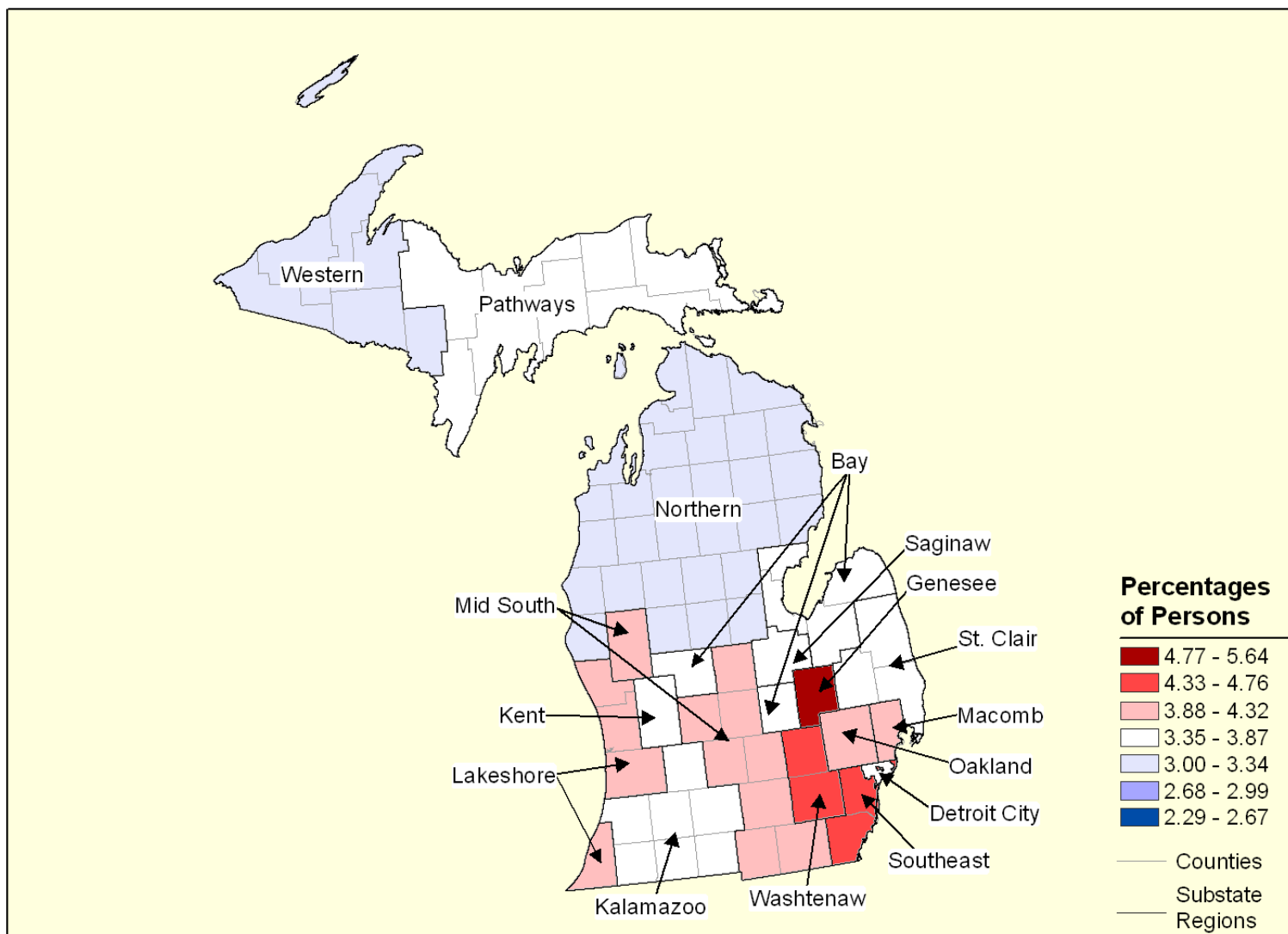
Figure 23.1.1 *Illicit Drug Use in Past Month* among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

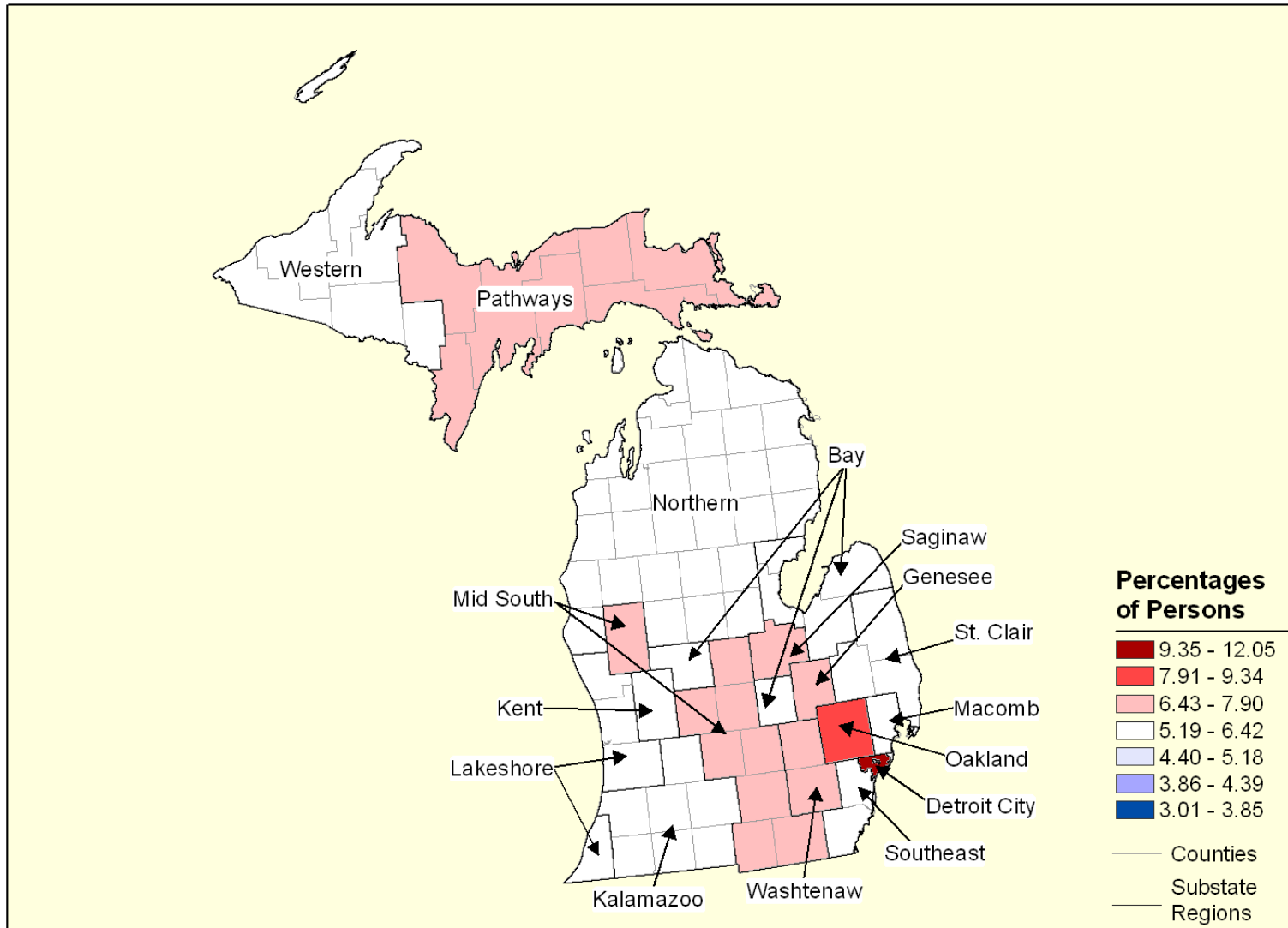
Figure 23.1.2 Illicit Drug Use Other Than Marijuana in Past Month among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

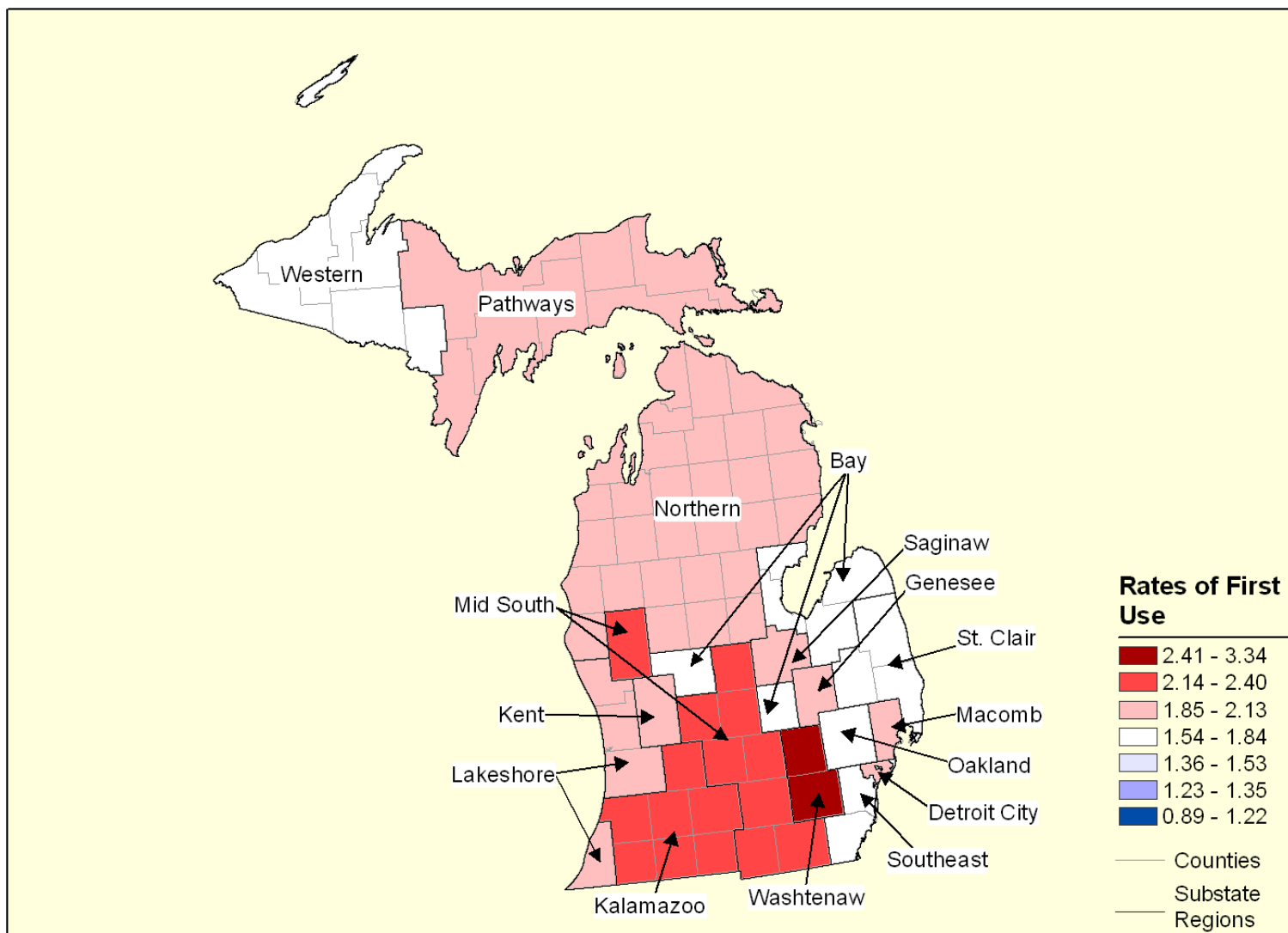
Figure 23.2.1 Marijuana Use in Past Month among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

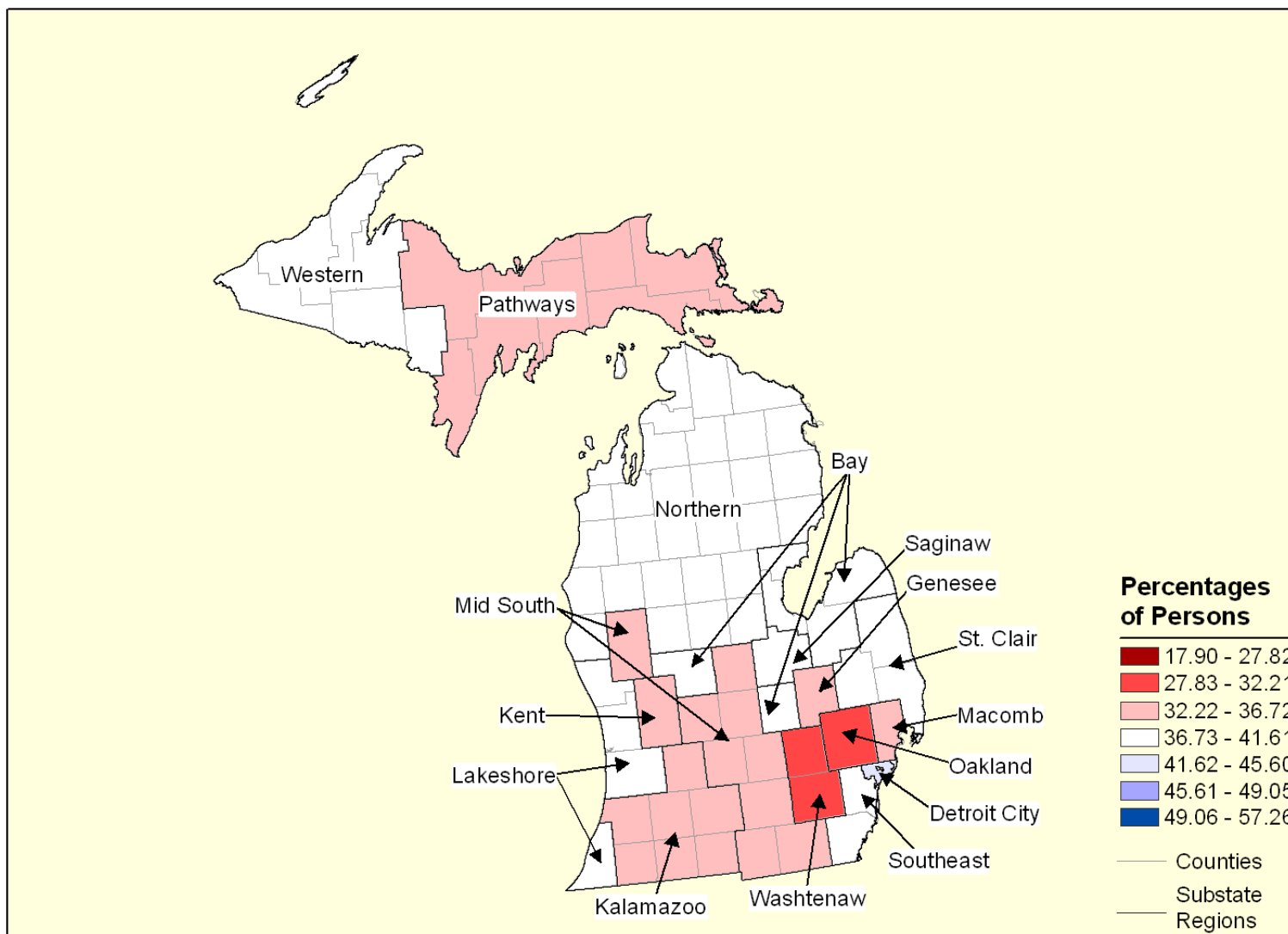
Figure 23.2.2 *First Use of Marijuana* among Persons Aged 12 or Older in Michigan, by Substate Region: Average Annual Rates Based on 2004, 2005, and 2006 NSDUHs



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

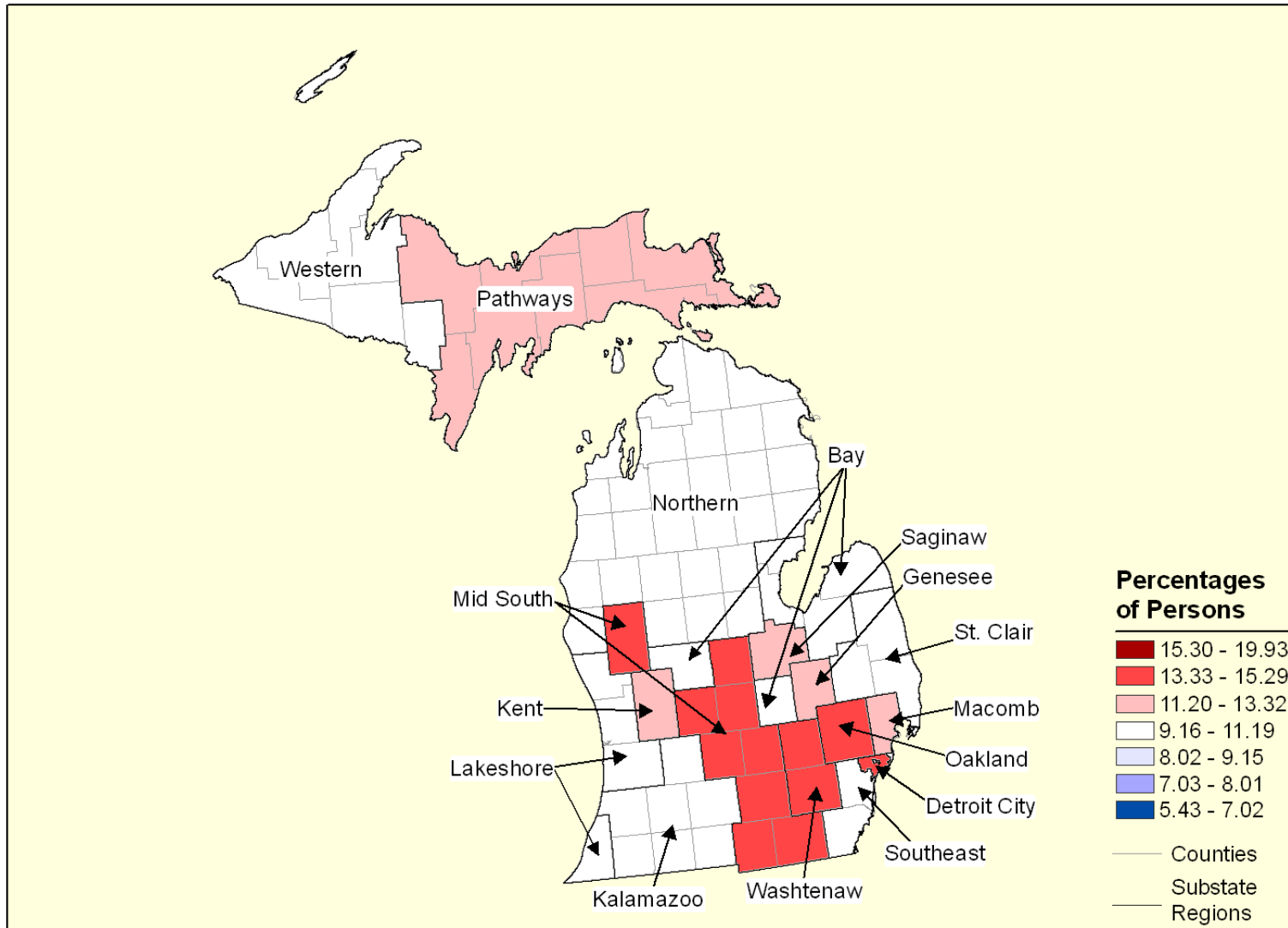
Figure 23.2.3 *Perceptions of Great Risk of Smoking Marijuana Once a Month among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs*



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

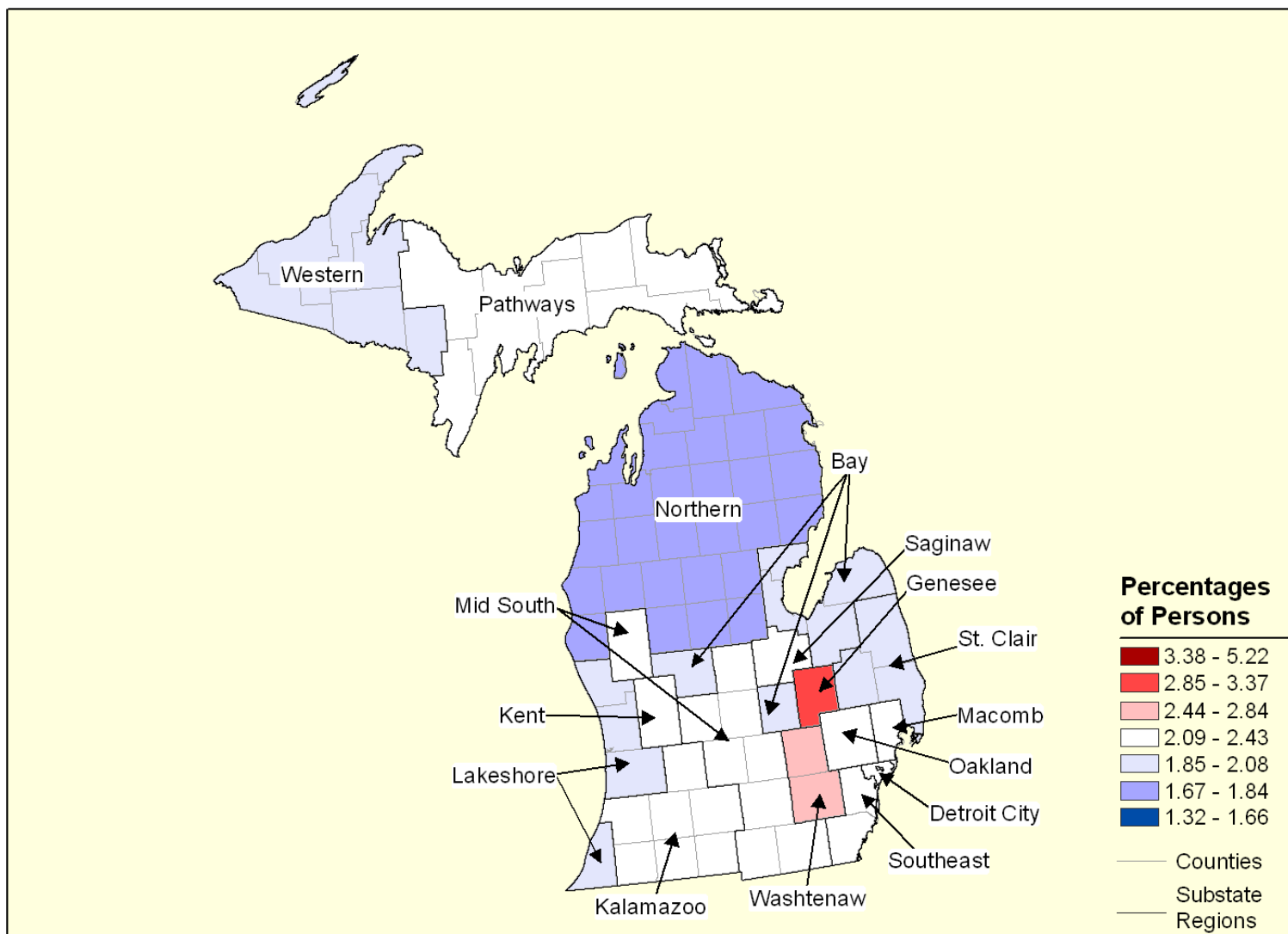
Figure 23.3.1 Marijuana Use in Past Year among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

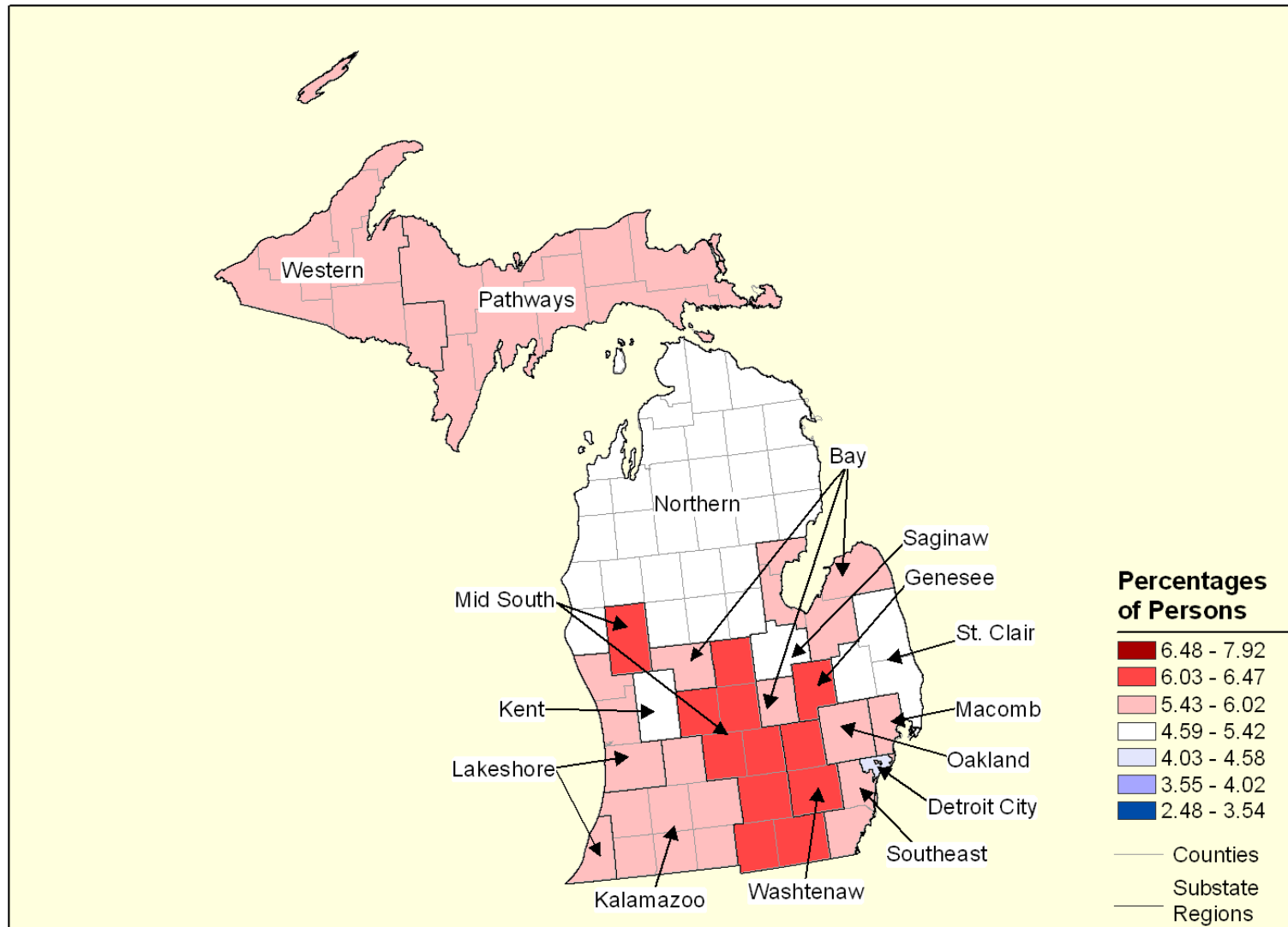
Figure 23.3.2 Cocaine Use in Past Year among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

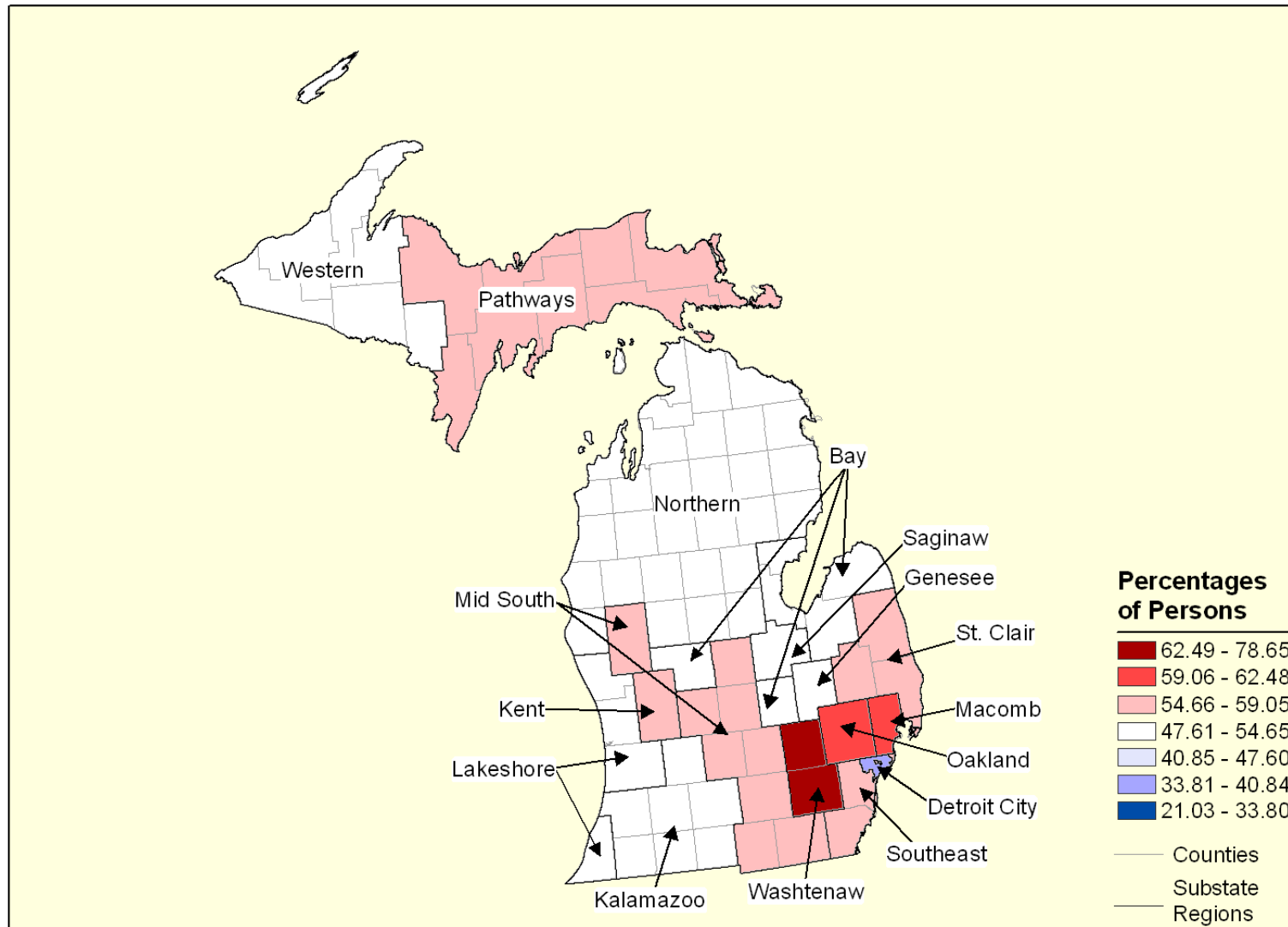
Figure 23.3.3 *Nonmedical Use of Pain Relievers in Past Year* among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

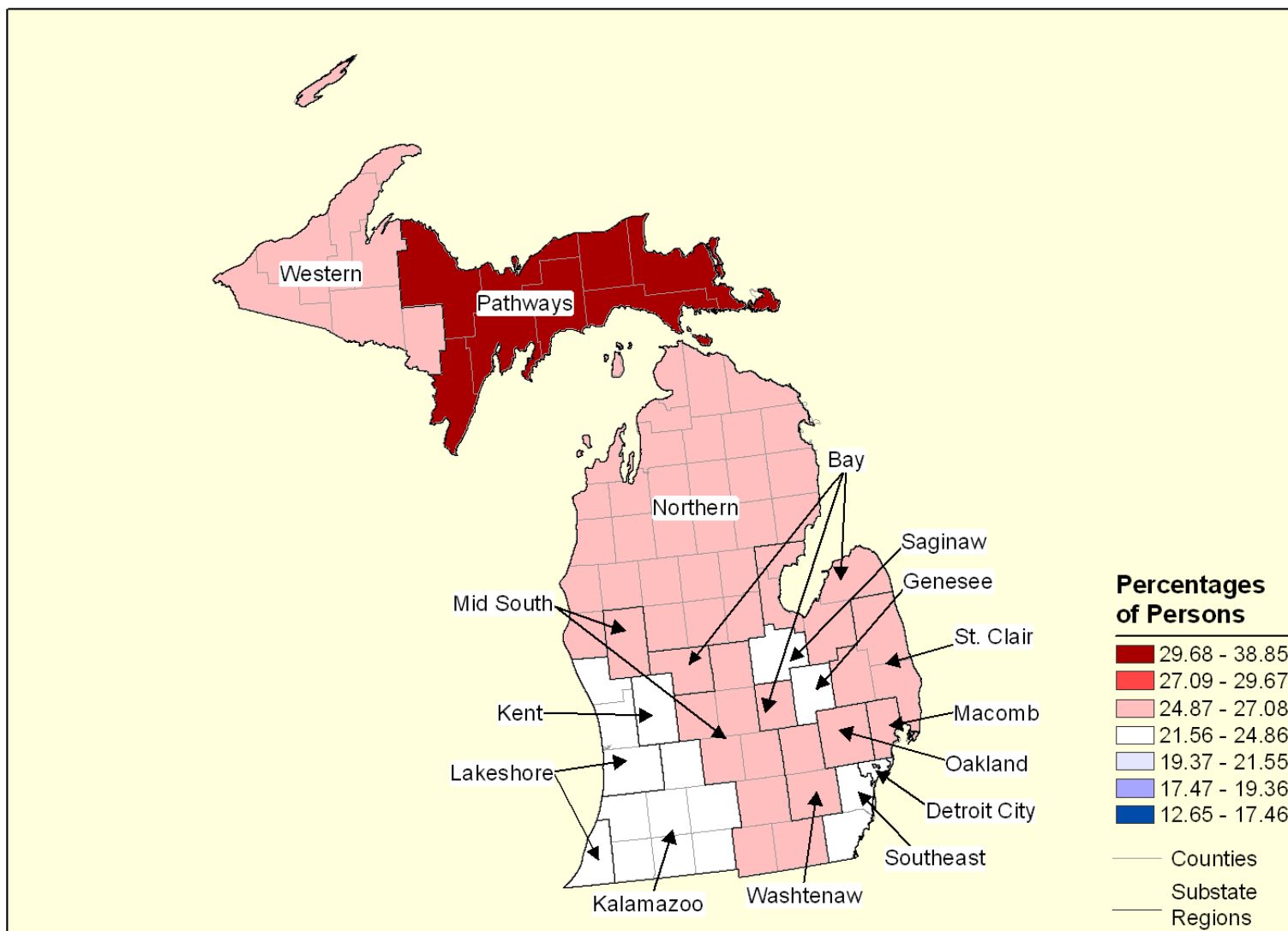
Figure 23.4.1 Alcohol Use in Past Month among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

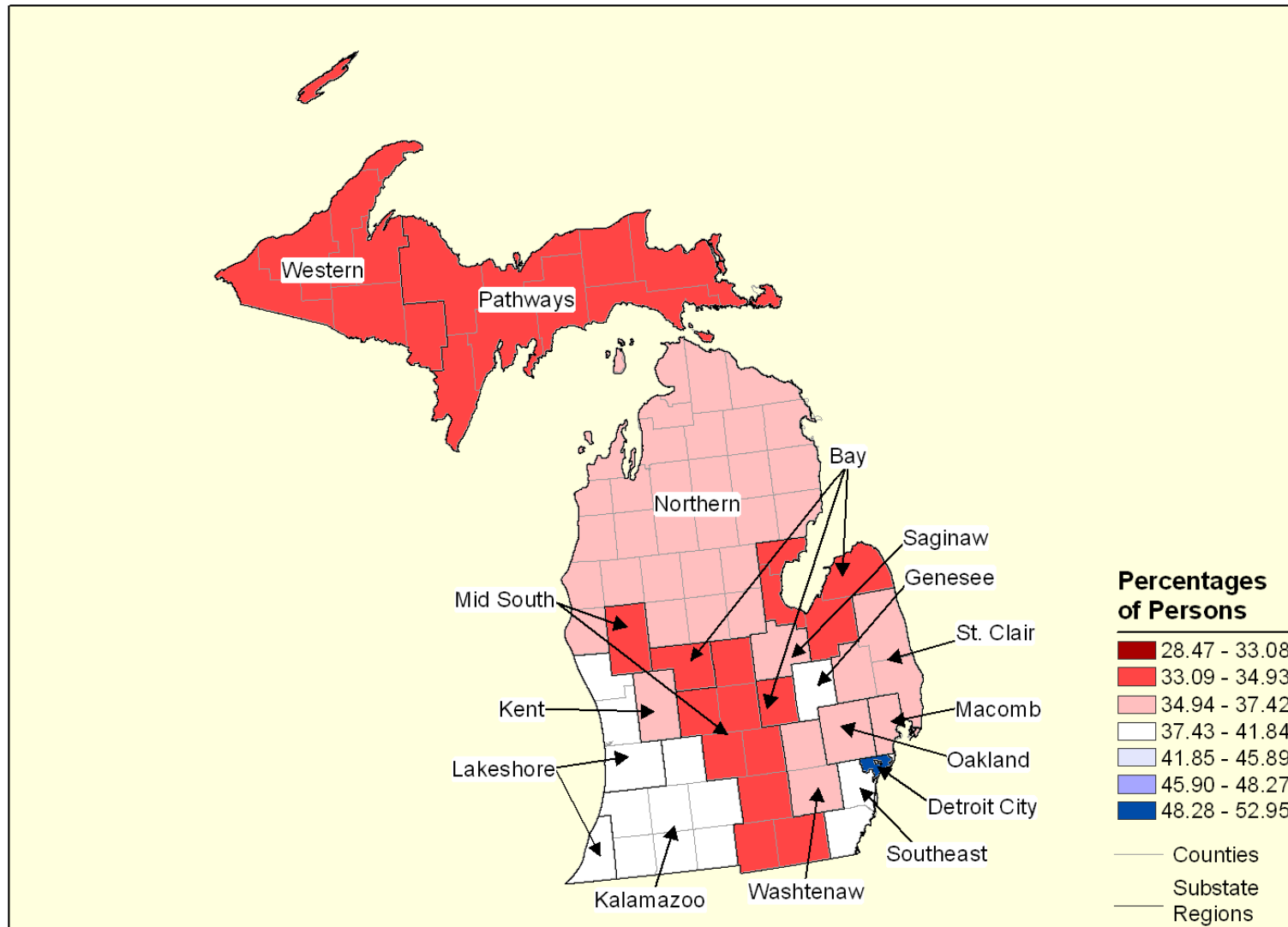
Figure 23.4.2 *Binge Alcohol Use in Past Month* among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

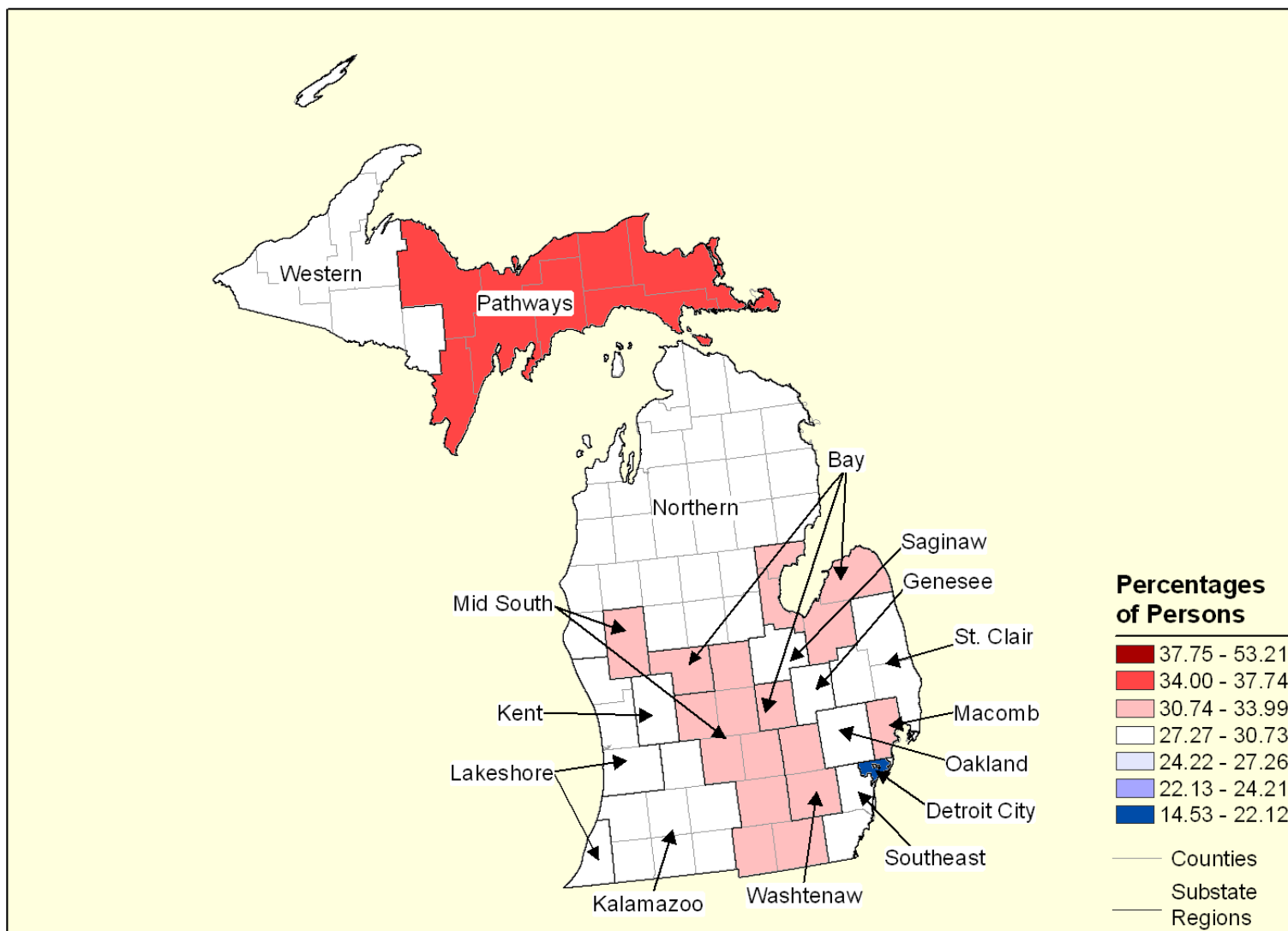
Figure 23.4.3 *Perceptions of Great Risk of Having Five or More Drinks of an Alcoholic Beverage Once or Twice a Week among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs*



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

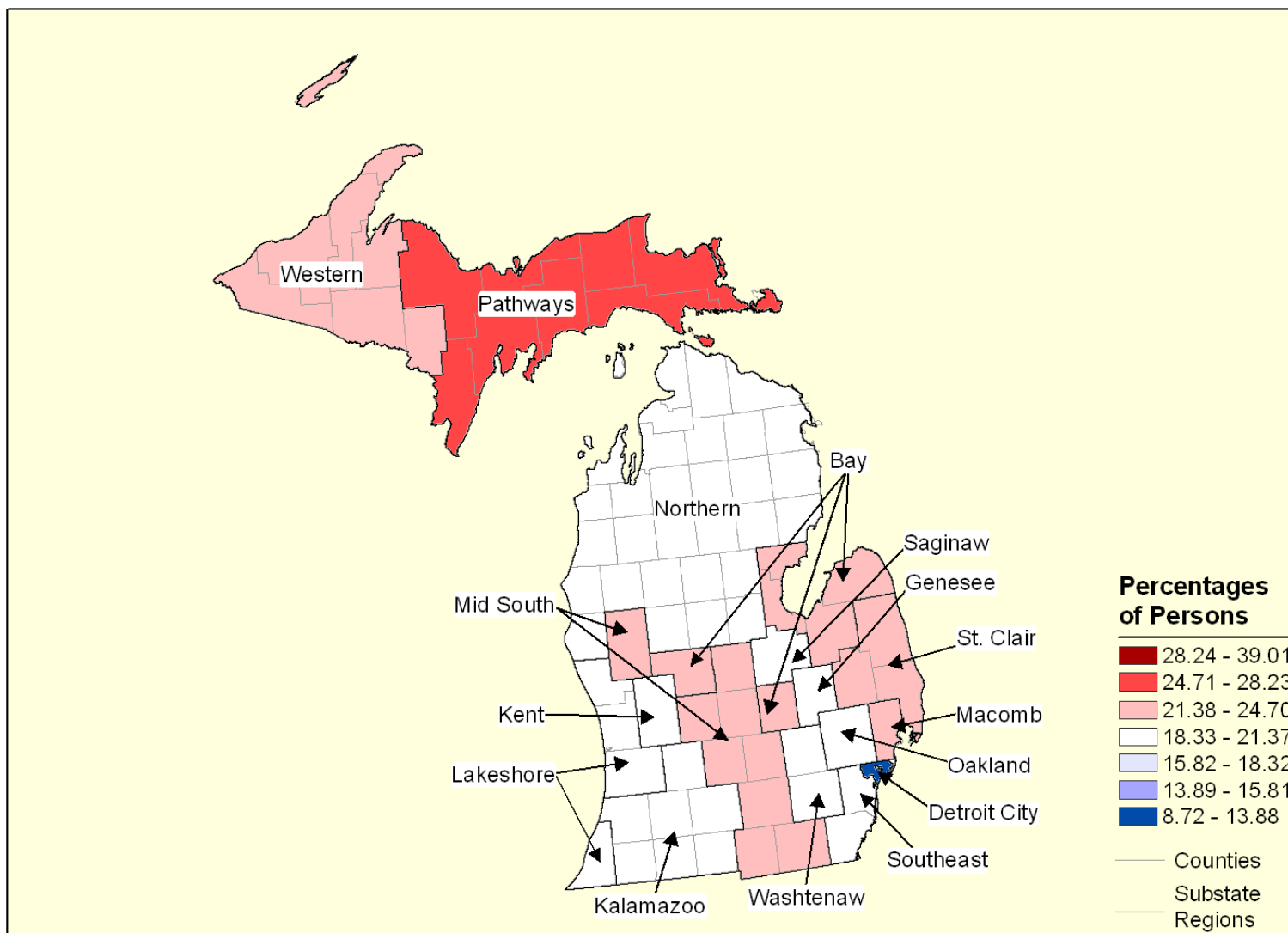
Figure 23.5.1 Alcohol Use in Past Month among Persons Aged 12 to 20 in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

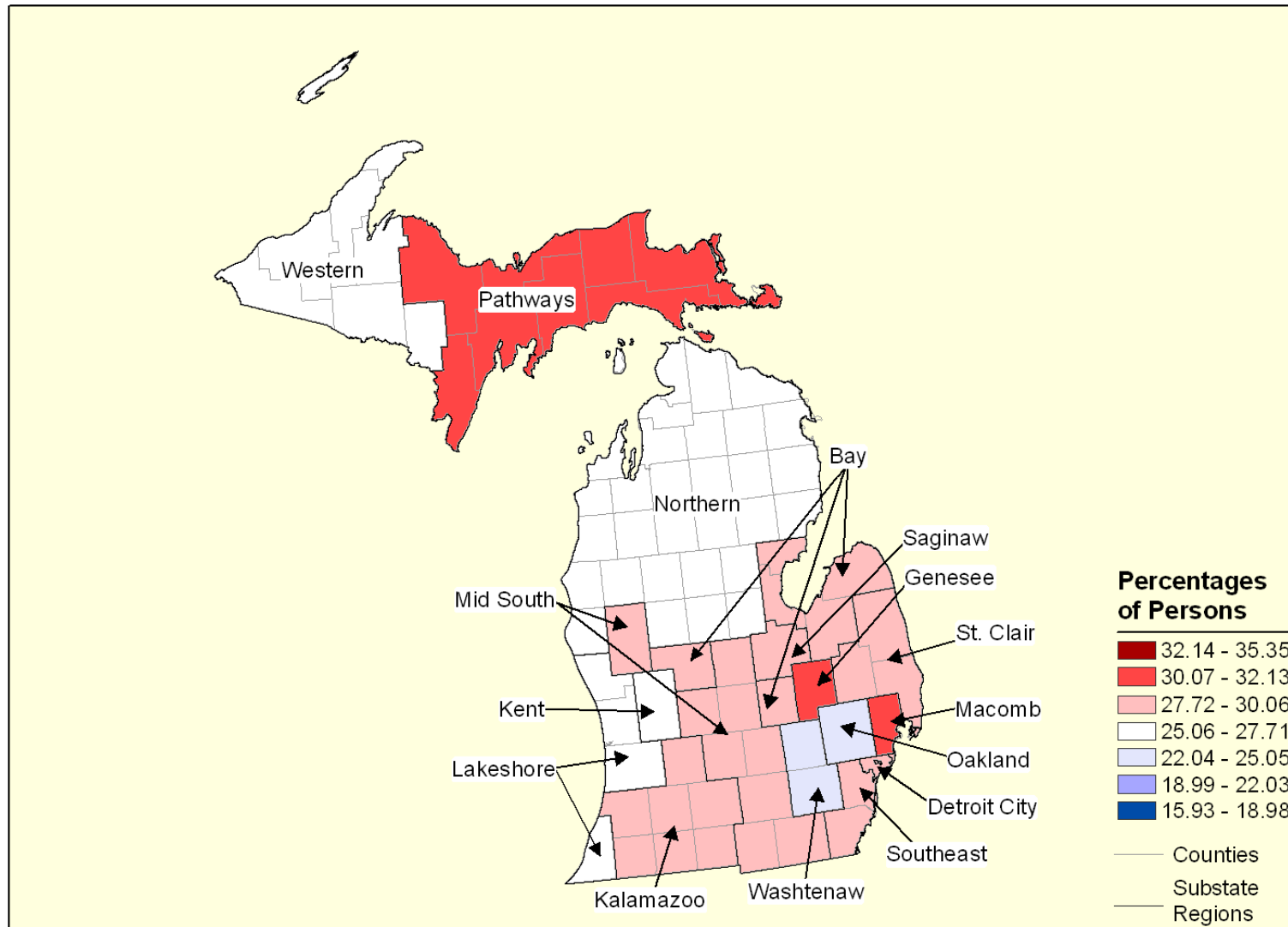
Figure 23.5.2 Binge Alcohol Use in Past Month among Persons Aged 12 to 20 in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

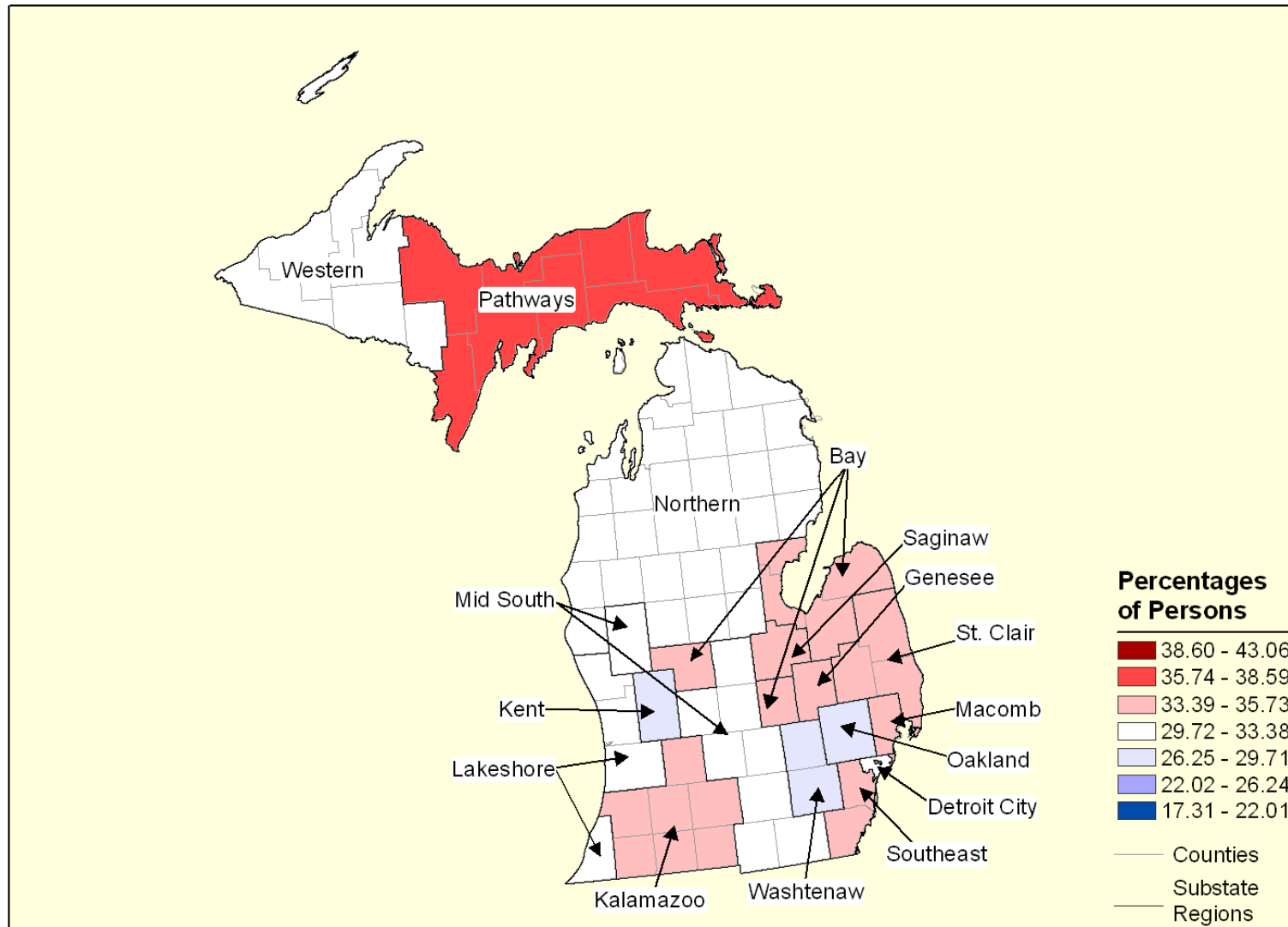
Figure 23.6.1 Cigarette Use in Past Month among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

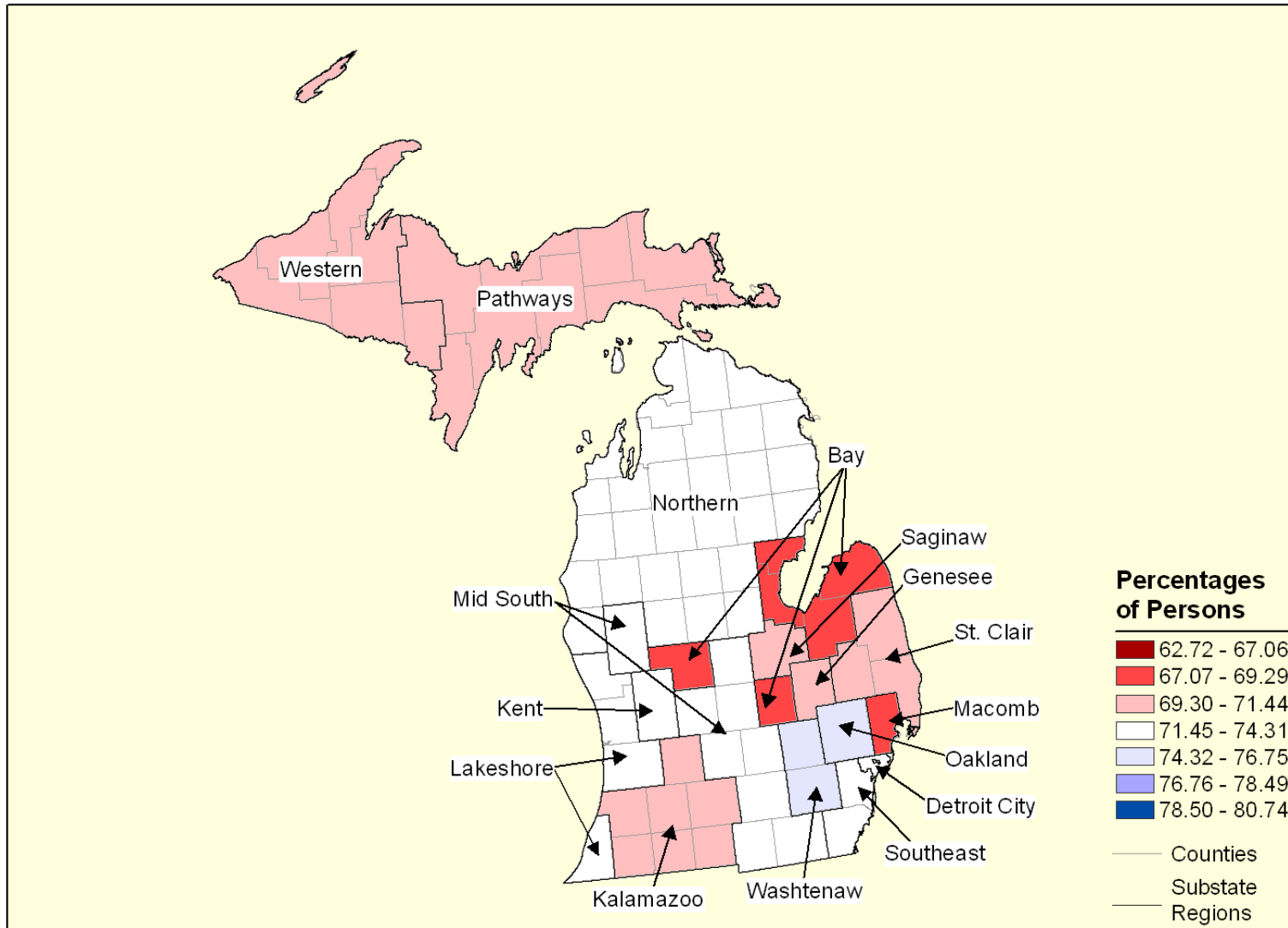
Figure 23.6.2 Tobacco Product Use in Past Month among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

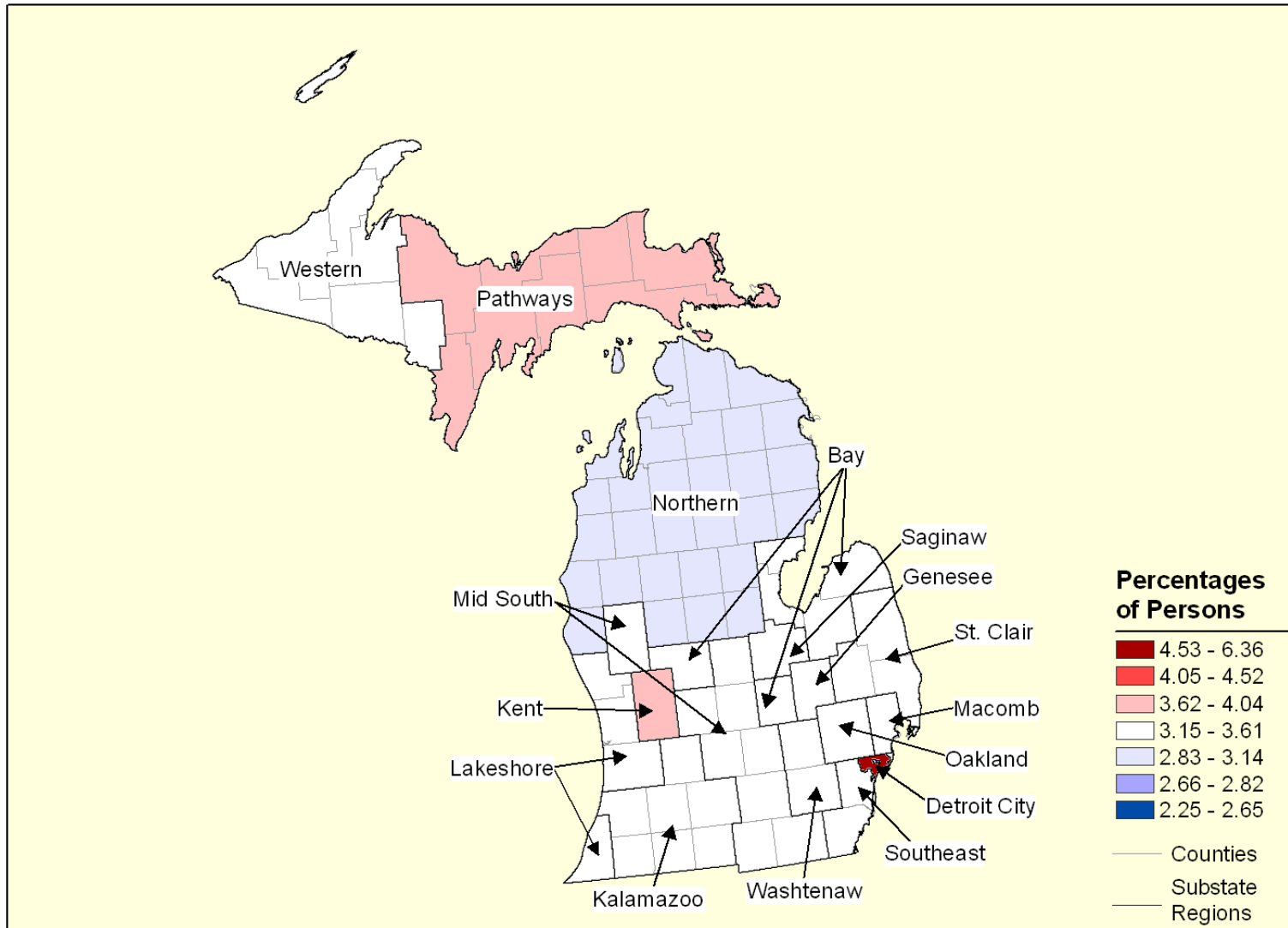
Figure 23.6.3 *Perceptions of Great Risk of Smoking One or More Packs of Cigarettes Per Day among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs*



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

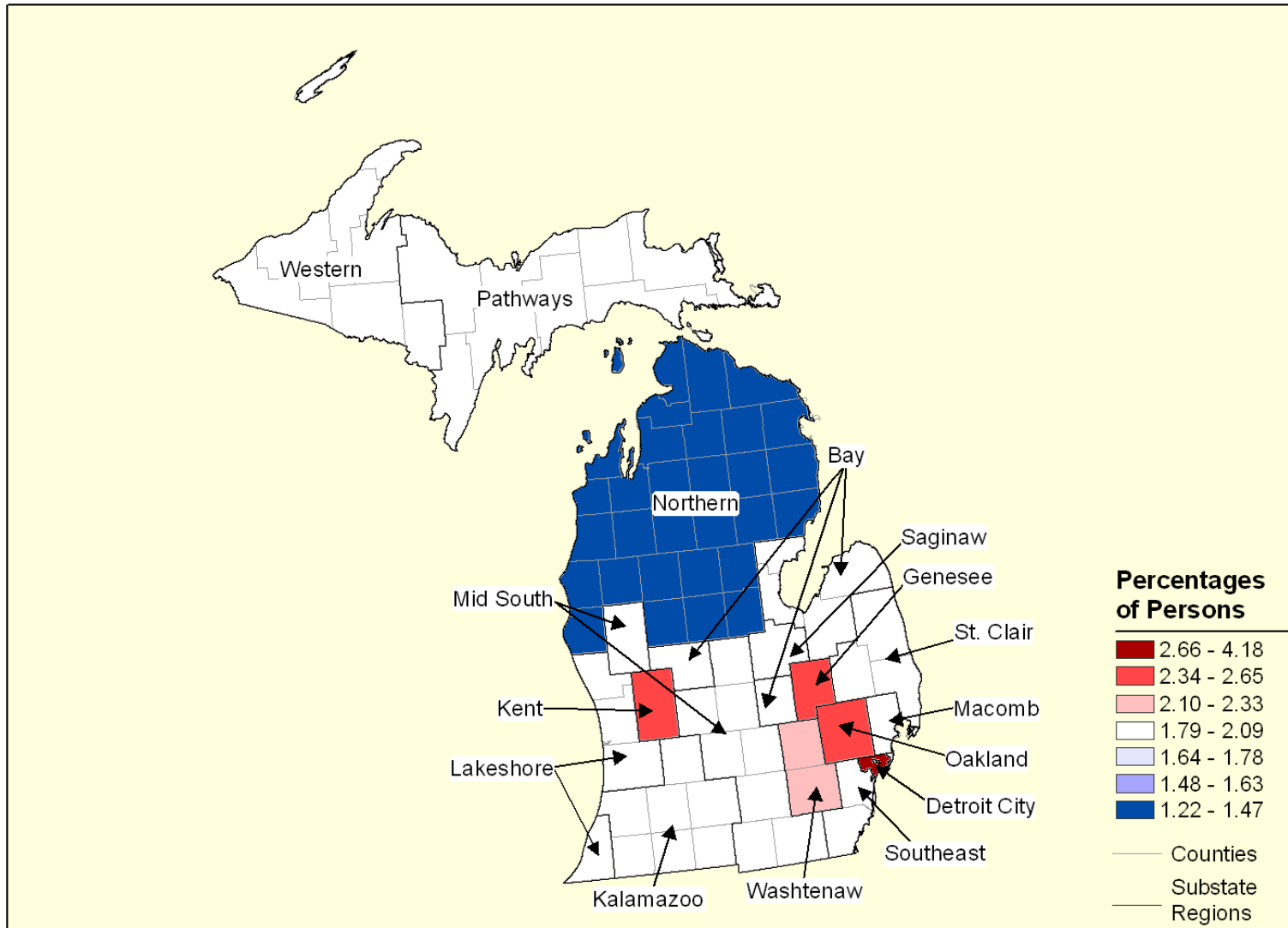
Figure 23.7.1 Alcohol Dependence in Past Year among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

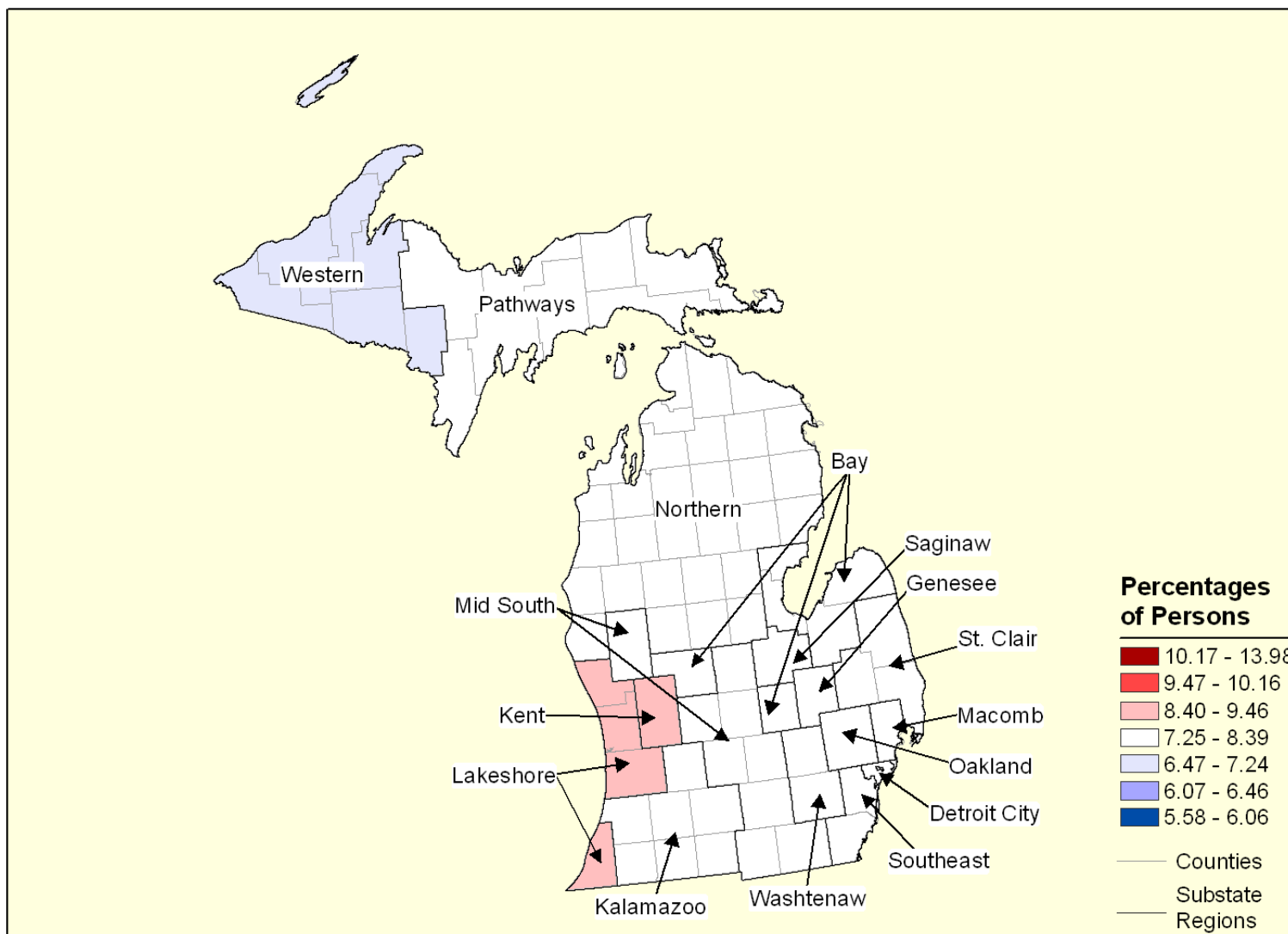
Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

Figure 23.7.2 Illicit Drug Dependence in Past Year among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.
 Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

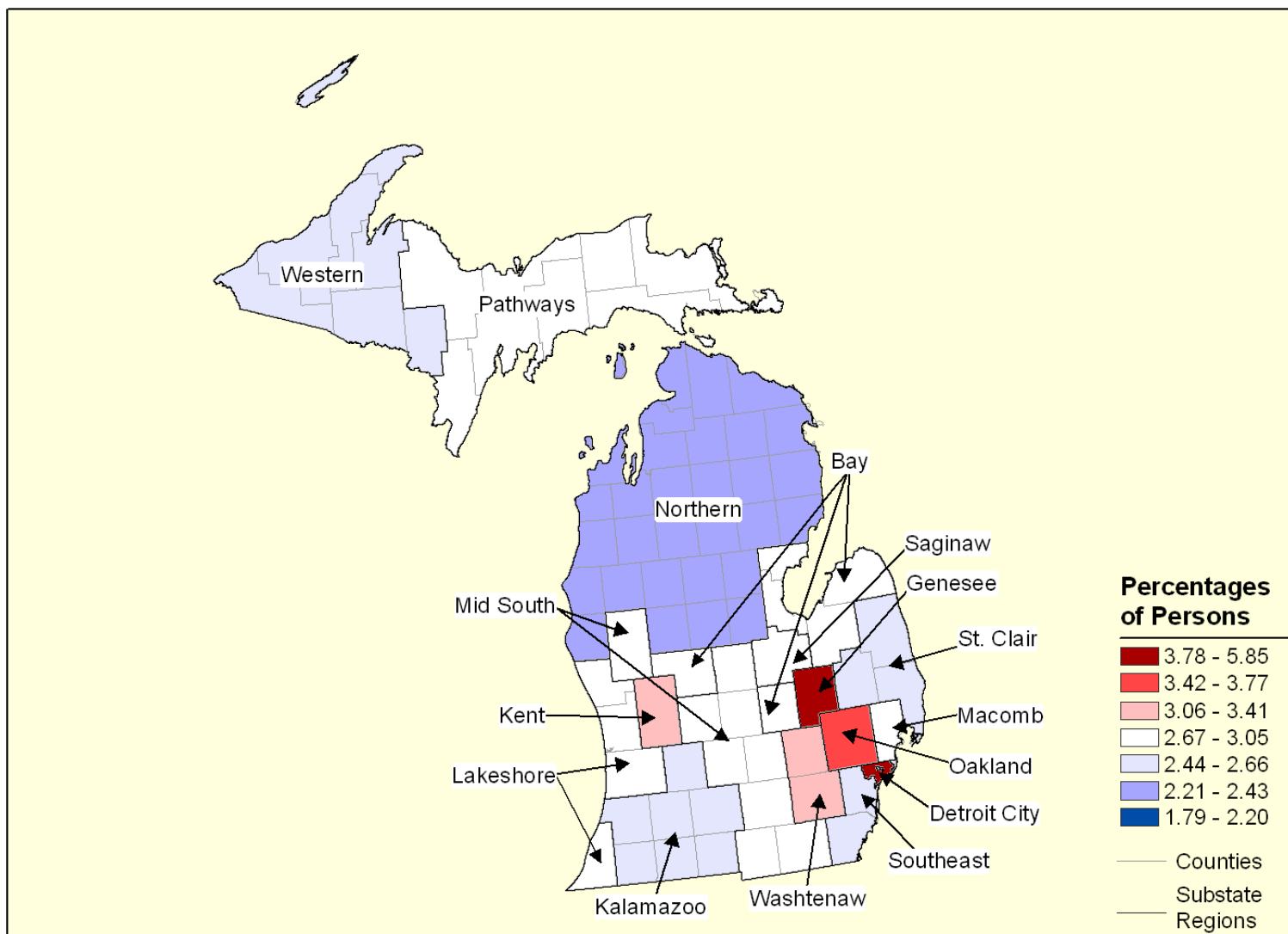
Figure 23.8.1 Alcohol Dependence or Abuse in Past Year among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

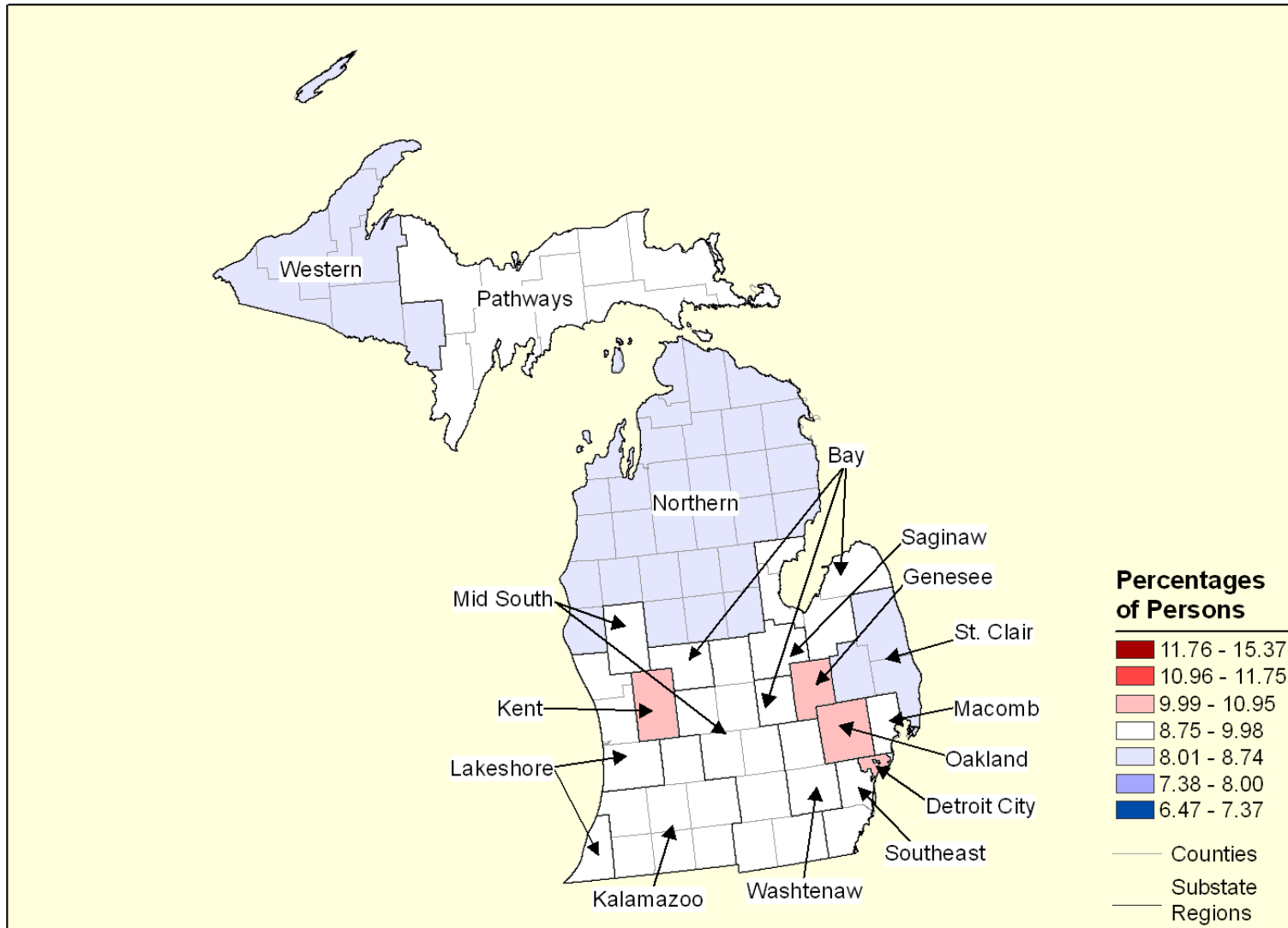
Figure 23.8.2 Illicit Drug Dependence or Abuse in Past Year among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

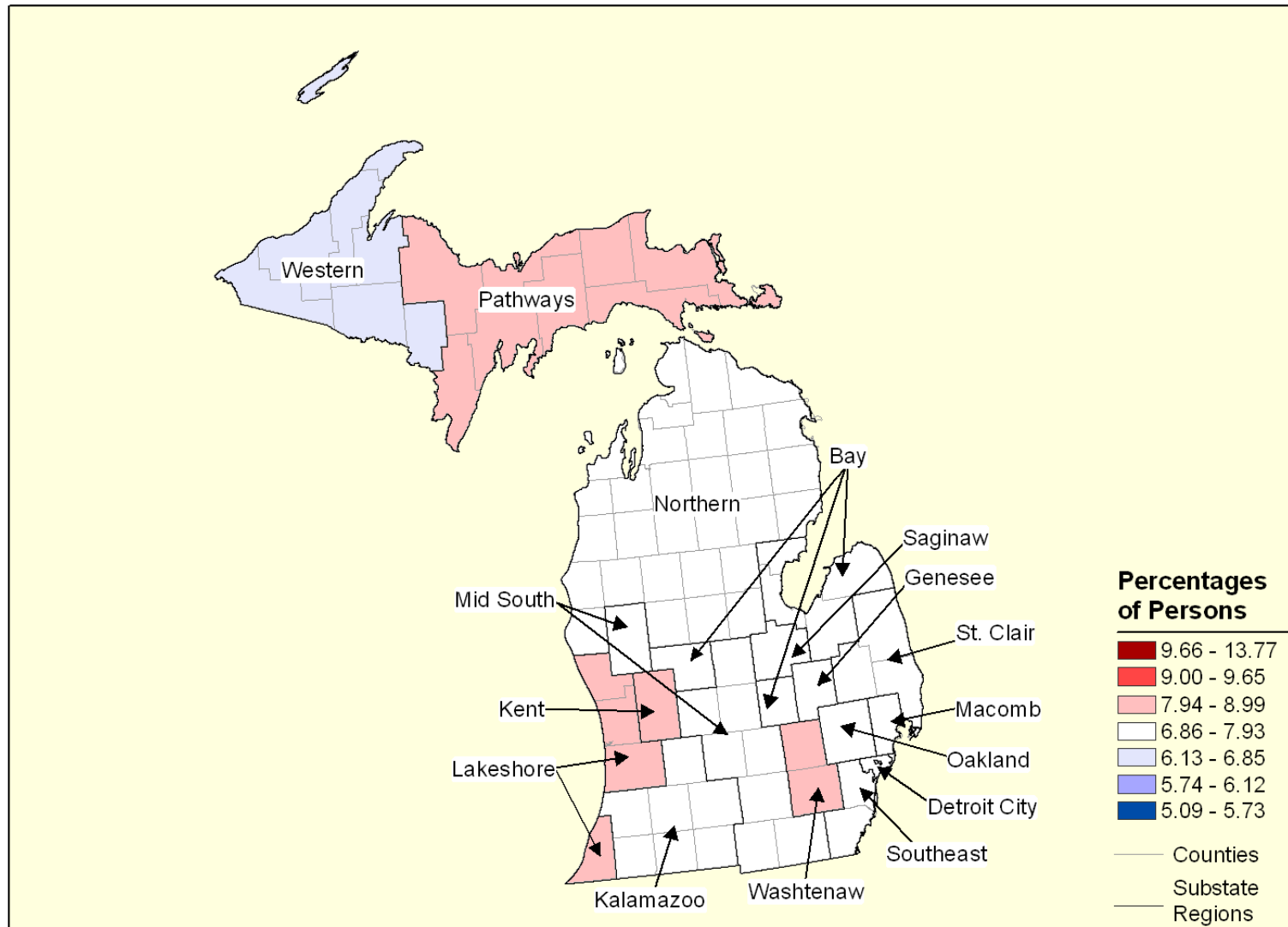
Figure 23.8.3 *Dependence on or Abuse of Illicit Drugs or Alcohol in Past Year among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs*



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

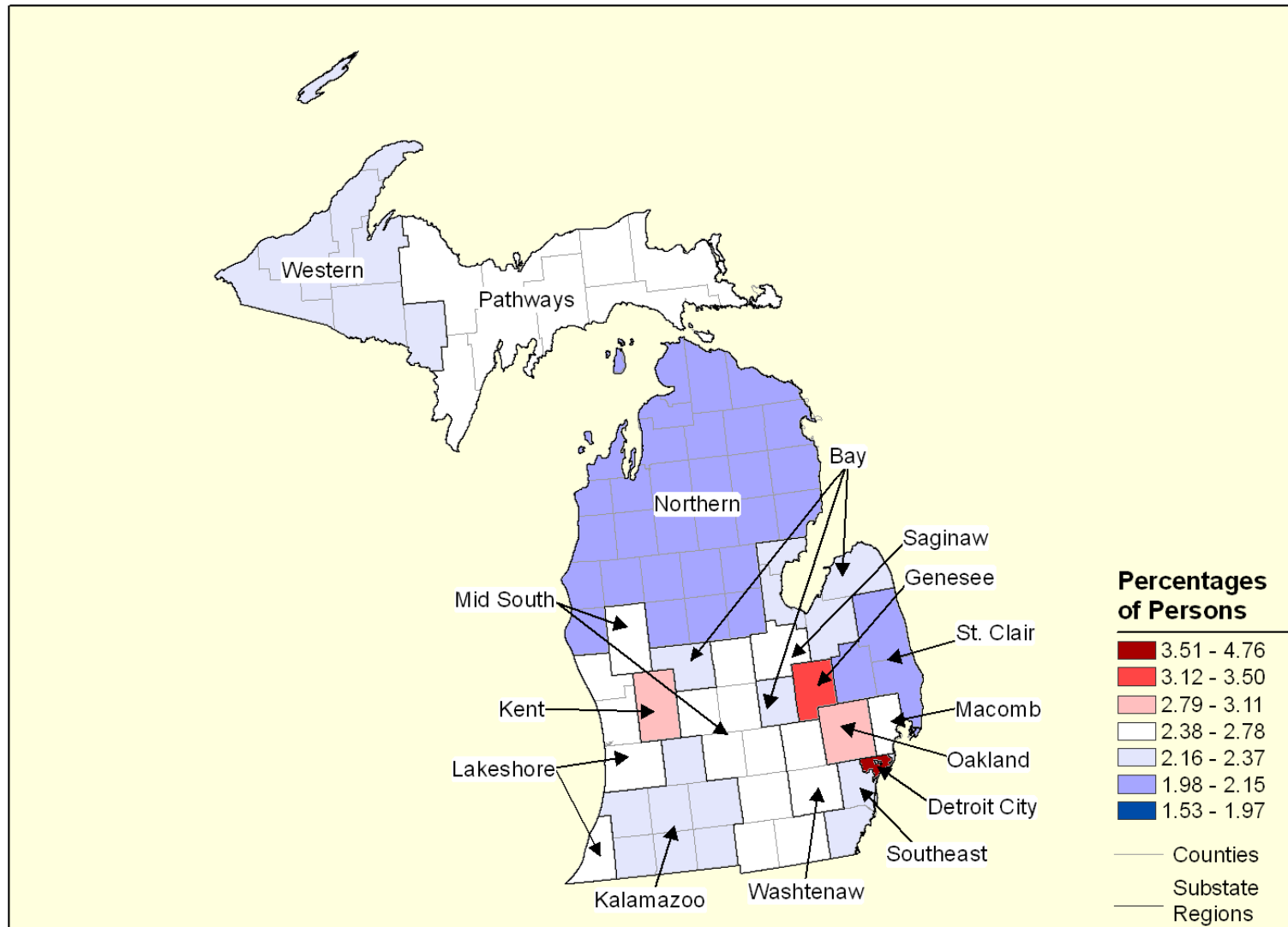
Figure 23.9.1 *Needing But Not Receiving Treatment for Alcohol Use in Past Year among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs*



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

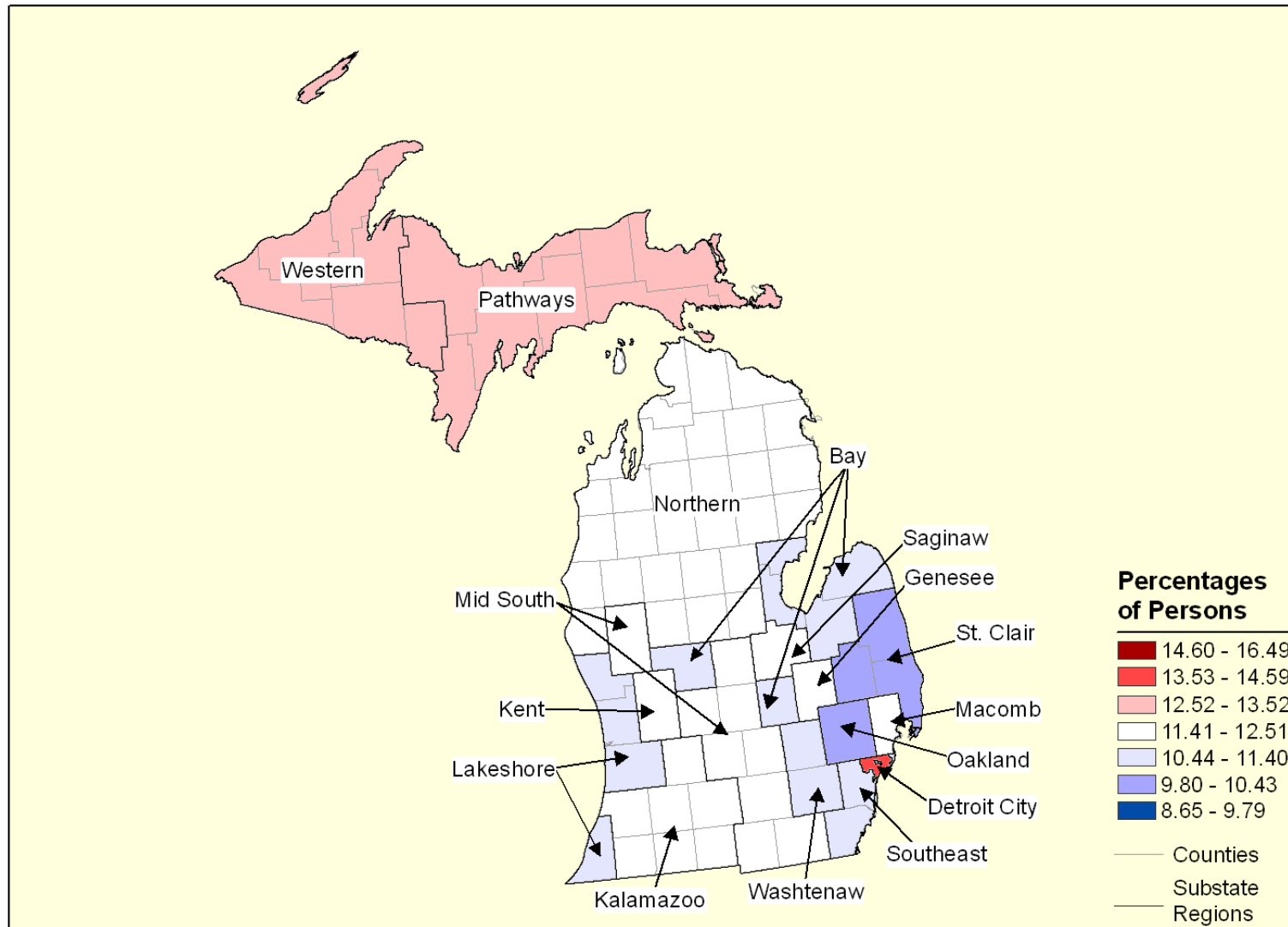
Figure 23.9.2 *Needing But Not Receiving Treatment for Illicit Drug Use in Past Year among Persons Aged 12 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs*



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

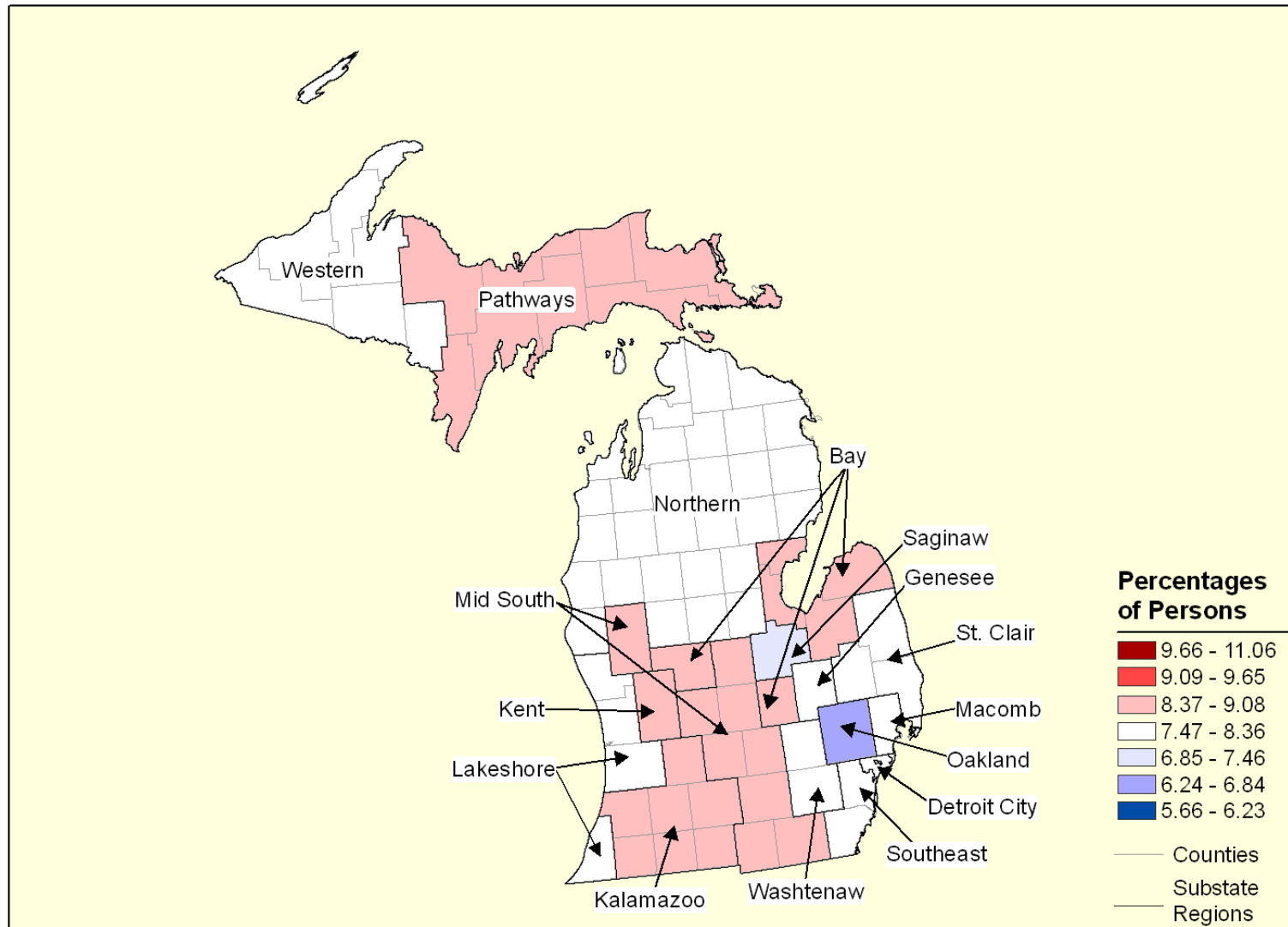
Figure 23.10.1 *Serious Psychological Distress in Past Year* among Persons Aged 18 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.

Figure 23.10.2 *Having at Least One Major Depressive Episode in Past Year among Persons Aged 18 or Older in Michigan, by Substate Region: Percentages, Annual Averages Based on 2004, 2005, and 2006 NSDUHs*



NOTE: The legend's ranges were created by dividing 345 substate regions, nationally, into 7 groups based on the magnitude of their percentages. For substate region definitions, see Section D of the report on *Substate Estimates from the 2004-2006 National Surveys on Drug Use and Health*.

Source: SAMHSA, Office of Applied Studies, National Survey on Drug Use and Health, 2004, 2005, and 2006.