

SUPPLEMENTARY MATERIALS

Supplementary Tables

Supplementary Table 1. Trend in colorectal cancer incidence rates among adults 20-49 years by state and subsite, all races

State	Available years	Number of cases	10 year AAPC 2006-2015 (95% CI)		
			CRC	Colon	Rectum
Alabama	1998 - 2015	4,299	1.1* (0.3, 1.9)	0.7 (-0.2, 1.6)	1.9* (0.7, 3.0)
Alaska	1996 - 2015	632	2.2* (0.6, 3.9)	2.3 (-0.0, 4.6)	2.2* (0.0, 4.5)
Arizona	1995 - 2015	4,064	1.6* (0.8, 2.3)	-1.6 (-5.6, 2.6)	2.2* (1.3, 3.1)
Arkansas	2001 - 2015	2,082	2.0* (0.6, 3.5)	2.8 (-3.8, 9.9)	3.5* (1.8, 5.3)
California	1995 - 2015	28,041	1.5* (1.3, 1.8)	1.2* (0.9, 1.5)	2.1* (1.6, 2.5)
Colorado	1995 - 2015	3,408	2.1* (1.5, 2.6)	1.0* (0.2, 1.8)	3.8* (2.9, 4.7)
Connecticut	1995 - 2015	3,158	1.3* (0.6, 2.0)	0.7 (-0.0, 1.4)	2.2* (1.0, 3.4)
Delaware	1995 - 2015	804	1.5 (-0.0, 3.0)	1.8* (0.2, 3.5)	1.2 (-1.1, 3.5)
District of Columbia†	1997 - 2014	507	0.6 (-0.9, 2.0)	0.3 (-2.0, 2.8)	‡
Florida	1995 - 2015	16,406	-0.0 (-0.4, 0.4)	0.2 (-0.3, 0.6)	0.6* (0.1, 1.2)
Georgia	1997 - 2015	8,533	1.3* (0.8, 1.7)	0.6* (0.0, 1.2)	2.2* (1.3, 3.2)
Hawaii	1995 - 2015	1,421	1.2* (0.3, 2.1)	1.1 (-0.5, 2.7)	1.4* (0.2, 2.7)
Idaho	1995 - 2015	956	2.4* (1.2, 3.7)	2.1* (0.8, 3.4)	2.8* (0.9, 4.8)
Illinois	1995 - 2015	11,166	1.0* (0.6, 1.4)	0.4* (0.0, 0.8)	1.8* (1.2, 2.4)
Indiana	1998 - 2015	4,939	1.7* (1.0, 2.3)	1.0* (0.2, 1.8)	2.7* (1.7, 3.6)
Iowa	1995 - 2015	2,554	2.4* (1.5, 3.3)	1.9* (0.9, 3.0)	3.1* (1.9, 4.2)
Kentucky	1995 - 2015	4,700	1.3* (0.8, 1.8)	0.6 (-0.0, 1.1)	2.4* (1.5, 3.3)
Louisiana	1995 - 2015	4,648	1.6* (0.8, 2.4)	0.5 (-0.0, 1.1)	2.2* (1.3, 3.2)
Maine	1995 - 2015	1,106	1.4* (0.3, 2.6)	1.4 (-0.1, 2.8)	1.5 (-0.0, 3.0)
Massachusetts	1997 - 2015	5,396	1.8* (1.1, 2.5)	1.1* (0.4, 1.8)	2.7* (1.7, 3.7)
Michigan	1995 - 2015	8,589	1.7* (1.3, 2.2)	1.4* (0.8, 2.0)	2.1* (1.4, 2.8)
Mississippi	2004 - 2015	1,928	-1.0 (-2.3, 0.4)	-0.5 (-2.4, 1.4)	-1.5 (-4.3, 1.3)
Missouri	1998 - 2015	4,769	0.5 (-0.1, 1.1)	0.0 (-0.8, 0.8)	1.2* (0.3, 2.1)
Montana	1996 - 2015	700	1.7* (0.3, 3.2)	1.1 (-0.5, 2.7)	2.3* (0.4, 4.3)
Nebraska	1995 - 2015	1,476	1.8* (0.9, 2.7)	1.4* (0.2, 2.7)	2.4* (0.8, 3.9)
Nevada§	1997 - 2010	1,234	2.8* (1.7, 3.8)	1.9* (0.3, 3.6)	4.2* (2.3, 6.1)
New Hampshire	1999 - 2015	1,021	2.0* (0.2, 3.8)	1.9 (-0.2, 4.0)	2.0 (-0.1, 4.2)
New Jersey	1995 - 2015	8,098	1.1* (0.6, 1.5)	0.6* (0.1, 1.1)	1.8* (1.0, 2.5)
New Mexico¶	1995 - 2012	1,228	3.5* (2.0, 5.1)	2.5* (0.7, 4.3)	‡
New York	1995 - 2015	17,280	1.6* (1.3, 1.9)	0.9* (0.6, 1.3)	2.5* (2.1, 3.0)
North Carolina	1995 - 2015	8,682	0.0 (-0.8, 0.8)	0.2 (-0.3, 0.7)	2.4* (1.7, 3.1)
North Dakota	1998 - 2015	461	3.0* (1.4, 4.6)	0.9 (-1.5, 3.4)	‡
Ohio	1997 - 2015	9,375	1.8* (1.3, 2.2)	1.2* (0.8, 1.7)	2.6* (1.9, 3.2)
Oklahoma	1997 - 2015	3,217	2.1* (1.2, 3.0)	1.7* (0.7, 2.7)	-0.6 (-4.2, 3.1)
Oregon	1996 - 2015	2,706	1.9* (1.3, 2.6)	1.5* (0.5, 2.4)	2.6* (1.4, 3.8)
Pennsylvania	1995 - 2015	11,623	1.5* (1.1, 1.8)	0.6* (0.1, 1.1)	2.0* (1.4, 2.6)

Rhode Island	1995 - 2015	953	0.5 (-0.7, 1.7)	-1.3 (-2.9, 0.3)	2.9* (1.3, 4.6)
South Carolina	1997 - 2015	4,221	-0.1 (-0.9, 0.8)	1.1 (-1.8, 4.1)	0.4 (-0.7, 1.4)
South Dakota	2001 - 2015	484	1.5 (-1.1, 4.3)	1.0 (-1.8, 3.8)	2.4 (-1.2, 6.0)
Tennessee	2004 - 2015	3,776	1.0* (0.4, 1.6)	1.0 (-0.5, 2.4)	0.9 (-0.8, 2.7)
Texas	1995 - 2015	20,091	0.8* (0.5, 1.0)	0.6* (0.3, 0.9)	1.0* (0.6, 1.5)
Utah	1995 - 2015	1,660	2.3* (1.6, 3.1)	1.3* (0.0, 2.7)	3.7* (2.6, 4.7)
Vermont	1996 -2015	509	1.7 (-0.0, 3.5)	-0.0 (-2.1, 2.1)	‡
Virginia#	1998 - 2015	5,810	0.6 (-0.1, 1.3)	0.0 (-0.8, 0.8)	-0.4 (-1.7, 1.1)
Washington	1995 - 2015	5,184	2.1* (1.4, 2.7)	1.9* (1.0, 2.7)	2.3* (1.4, 3.2)
West Virginia	1995 - 2015	1,984	3.2* (0.4, 6.1)	3.2 (-4.0, 10.9)	2.1* (0.9, 3.3)
Wisconsin	1995 - 2015	4,645	1.0* (0.4, 1.6)	0.5 (-0.3, 1.3)	1.9* (1.0, 2.7)
Wyoming	1995 - 2015	391	1.8 (-0.1, 3.7)	1.3 (-0.8, 3.3)	‡
US	1995 - 2015	240,915	1.1* (0.3, 2.0)	0.7* (0.5, 0.9)	1.7* (1.4, 2.0)

*Indicates AAPC is statistically significantly different from zero ($P < 0.05$) using a 2-sided test based on the permutation method. AAPC = Average Annual Percent Change; CI = confidence interval

†Data unavailable for 2002; AAPC reflects data during 2005-2014.

‡ <6 cases in 1 or more years.

§AAPC during 2001-2010.

¶AAPC during 2003-2012.

#Data unavailable for 2001.

Supplementary Table 2. Trend in colorectal cancer incidence rates among adults 20-49 years by state and subsite, non-Hispanic white

State	Available years	Number of cases	AAPC 2006-2015 (95% CI)		
			CRC	Colon	Rectum
Alabama	1998 - 2015	2,907	1.4* (0.4, 2.4)	1.4* (0.2, 2.7)	1.3 (-0.0, 2.7)
Alaska	1996 - 2015	373	1.6 (-0.5, 3.7)	2.2 (-0.5, 5.0)	†
Arizona	1995 - 2015	2,560	1.9* (0.9, 2.8)	1.4* (0.3, 2.6)	2.5* (1.4, 3.6)
Arkansas	2001 – 2015	1,577	2.3* (0.5, 4.1)	1.4 (-0.6, 3.5)	3.8* (1.6, 6.0)
California	1995 - 2015	13,658	2.1* (1.8, 2.4)	1.5* (1.1, 2.0)	2.9* (2.3, 3.6)
Colorado	1995 - 2015	2,505	2.6* (2.1, 3.1)	1.5* (0.8, 2.3)	4.2* (3.2, 5.2)
Connecticut	1995 - 2015	2,349	1.7* (0.9, 2.5)	0.9 (-0.1, 1.9)	2.8* (1.5, 4.1)
Delaware	1995 - 2015	557	1.8* (0.1, 3.6)	2.2* (0.4, 4.1)	†
District of Columbia†	1997 - 2014	116	†	†	†
Florida	1995 - 2015	9,935	0.9* (0.5, 1.3)	1.0* (0.5, 1.6)	1.3* (0.7, 2.0)
Georgia	1997 - 2015	4,969	2.0* (1.3, 2.6)	1.2* (0.3, 2.0)	3.0* (2.0, 4.0)
Hawaii	1995 - 2015	286	1.8 (-0.1, 3.6)	†	†
Idaho	1995 - 2015	853	2.8* (1.6, 4.1)	2.6* (1.3, 3.8)	3.0* (0.8, 5.2)
Illinois	1995 - 2015	7,600	1.4* (0.9, 1.8)	0.8* (0.3, 1.3)	2.1* (1.5, 2.7)
Indiana	1998 - 2015	4,177	2.1* (1.3, 2.8)	1.5* (0.8, 2.2)	2.9* (1.8, 4.0)
Iowa	1995 - 2015	2,375	2.6* (1.7, 3.5)	2.2* (1.2, 3.3)	2.5* (1.4, 3.6)
Kentucky	1995 - 2015	4,175	1.6* (1.1, 2.1)	0.8* (0.1, 1.5)	2.8* (2.0, 3.6)
Louisiana	1995 - 2015	2,845	1.6* (0.7, 2.5)	1.0* (0.1, 1.9)	2.3* (1.2, 3.5)
Maine	1995 - 2015	1,064	1.4* (0.2, 2.6)	1.2 (-0.2, 2.7)	1.5 (-0.1, 3.2)
Massachusetts	1997- 2015	4,308	2.1* (1.4, 2.7)	1.3* (0.6, 2.0)	3.1* (2.0, 4.1)
Michigan	1995 - 2015	6,537	2.1* (1.6, 2.5)	1.6* (1.0, 2.3)	2.6* (1.8, 3.4)
Mississippi	2004 - 2015	1,061	-0.5 (-1.8, 0.9)	-0.1 (-1.4, 1.3)	-1.0 (-4.2, 2.3)
Missouri	1998 - 2015	3,964	0.9* (0.3, 1.6)	0.6 (-0.3, 1.5)	1.4* (0.5, 2.2)
Montana	1996 - 2015	612	1.9* (0.5, 3.4)	1.3 (-0.4, 3.1)	2.6* (0.6, 4.5)
Nebraska	1995 - 2015	1,274	2.0* (1.0, 3.0)	1.5* (0.3, 2.7)	2.7* (1.2, 4.2)
Nevada‡	1997- 2010	813	2.8* (1.0, 4.8)	2.0* (0.3, 3.7)	4.2* (0.7, 7.9)
New Hampshire	1999 - 2015	964	2.6* (0.8, 4.5)	2.9* (0.8, 5.1)	2.3* (0.1, 4.5)
New Jersey	1995 - 2015	5,140	1.8* (1.2, 2.3)	1.3* (0.7, 1.9)	2.5* (1.5, 3.4)
New Mexico¶	1995 - 2012	540	3.8* (1.8, 5.7)	2.2* (0.7, 3.6)	†
New York	1995 - 2015	10,438	1.6* (1.3, 2.0)	1.0* (0.6, 1.4)	2.5* (1.9, 3.2)
North Carolina	1995 - 2015	5,838	1.4* (1.0, 1.8)	0.5 (-0.1, 1.1)	2.6* (1.9, 3.2)
North Dakota	1998 - 2015	419	3.1* (1.4, 4.9)	1.2 (-1.3, 3.8)	†
Ohio	1997 - 2015	7,669	1.9* (1.4, 2.3)	1.3* (0.8, 1.9)	2.7* (2.0, 3.4)
Oklahoma	1997 - 2015	2,283	2.2* (1.0, 3.3)	1.8* (0.3, 3.2)	2.8* (1.0, 4.7)
Oregon	1996 - 2015	2,244	2.1* (1.4, 2.8)	1.6* (0.6, 2.7)	2.7* (1.4, 4.0)
Pennsylvania	1995 - 2015	9,427	1.7* (1.3, 2.1)	2.2* (0.0, 4.3)	2.1* (1.4, 2.8)
Rhode Island	1995 - 2015	784	-3.9 (-9.5, 2.0)	-1.1 (-2.5, 0.4)	2.8* (0.6, 5.1)
South Carolina	1997 - 2015	2,641	0.7 (-0.3, 1.6)	0.3 (-0.6, 1.3)	1.1 (-0.2, 2.5)
South Dakota	2001 - 2015	424	1.6 (-1.1, 4.4)	1.1 (-1.8, 4.0)	2.4 (-1.2, 6.2)
Tennessee	2004 - 2015	2,885	1.9* (1.1, 2.7)	2.0* (0.2, 3.8)	1.6 (-0.9, 4.1)
Texas	1995 - 2015	10,621	1.8* (1.5, 2.2)	1.5* (1.0, 1.9)	2.3* (1.8, 2.9)
Utah	1995 - 2015	1,390	2.6* (1.8, 3.3)	1.5* (0.2, 2.7)	4.1* (3.0, 5.2)

Vermont	1996 -2015	498	1.8 (-0.1, 3.7)	0.0 (-2.3, 2.4)	†
Virginia#	1998 - 2015	3,853	1.5* (0.7, 2.3)	0.9* (0.1, 1.7)	2.3* (1.2, 3.4)
Washington	1995 - 2015	4,024	2.6* (2.0, 3.2)	2.4* (1.7, 3.1)	2.8* (1.7, 3.9)
West Virginia	1995 - 2015	1,886	3.6* (0.6, 6.6)	4.1 (-3.2, 11.9)	2.3* (1.1, 3.6)
Wisconsin	1995 - 2015	3,937	1.1* (0.4, 1.8)	0.6 (-0.3, 1.5)	1.9* (0.9, 2.8)
Wyoming	1995 - 2015	358	1.9* (0.1, 3.8)	1.7 (-0.3, 3.8)	†
US	1995 - 2015	161,713	1.6* (1.5, 1.8)	1.7* (0.9, 2.5)	2.2* (1.8, 2.6)

*Indicates AAPC is statistically significantly different from zero ($P < 0.05$) using a 2-sided test based on the permutation method. AAPC = Average Annual Percent Change; CI = confidence interval

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§AAPC during 2001-2010.

¶AAPC during 2003-2012.

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Supplementary Table 3. Pairwise comparison between states in the joinpoint regression function (i.e., slope of the trend) for colorectal cancer incidence trends among non-Hispanic whites 20-49 years from 1995-2015 (ranked from largest to smallest difference)

Cohort 1	Cohort 2	P-Value*
Colorado	New York	<.001
Colorado	North Carolina	<.001
California	Florida	<.001
Colorado	Florida	0.001
California	Illinois	0.001
North Carolina	Washington	0.001
Colorado	Illinois	0.001
Colorado	Wisconsin	0.001
California	North Carolina	0.001
Florida	Washington	0.002
Pennsylvania	Washington	0.002
Washington	Wisconsin	0.002
Kentucky	Washington	0.003
Utah	Wisconsin	0.004
Colorado	Kentucky	0.004
Florida	Utah	0.005
Colorado	Pennsylvania	0.005
Colorado	Rhode Island	0.006
Louisiana	Washington	0.007
Florida	Iowa	0.007
Illinois	Washington	0.008
California	Rhode Island	0.009
Idaho	Wisconsin	0.010
Delaware	Illinois	0.011
California	West Virginia	0.012
North Carolina	Utah	0.012
Florida	Michigan	0.013
Florida	Nebraska	0.013
Iowa	North Carolina	0.013
New York	Washington	0.013
California	Wisconsin	0.014
Illinois	Iowa	0.015
Florida	Texas	0.017
West Virginia	Wyoming	0.017
Kentucky	Utah	0.017
New York	Rhode Island	0.018
Michigan	Wisconsin	0.018
Pennsylvania	Utah	0.019
Iowa	Rhode Island	0.019
Delaware	Florida	0.020
Colorado	New Jersey	0.021

Idaho	Illinois	0.021
Colorado	Texas	0.021
California	New York	0.022
New York	Utah	0.022
Idaho	North Carolina	0.022
Illinois	Utah	0.023
Michigan	Rhode Island	0.024
Illinois	Michigan	0.026
Iowa	Wisconsin	0.026
Connecticut	Rhode Island	0.029
Michigan	North Carolina	0.029
Colorado	West Virginia	0.030
North Carolina	Texas	0.031
North Carolina	Rhode Island	0.032
Iowa	New York	0.033
Colorado	Maine	0.035
New Jersey	Rhode Island	0.036
Iowa	Kentucky	0.039
Nebraska	Rhode Island	0.039
Idaho	New York	0.041
Texas	Washington	0.042
Delaware	West Virginia	0.042
Arizona	Wisconsin	0.043
Louisiana	West Virginia	0.043
Florida	Idaho	0.043
Florida	New York	0.045
Idaho	Pennsylvania	0.045
Hawaii	Rhode Island	0.045
Nebraska	West Virginia	0.047
Maine	Washington	0.050
New Jersey	North Carolina	0.055
Rhode Island	Texas	0.062
Idaho	Rhode Island	0.063
Michigan	New York	0.063
Idaho	Kentucky	0.063
Iowa	West Virginia	0.064
Pennsylvania	Wisconsin	0.067
Kentucky	Rhode Island	0.068
California	Kentucky	0.068
Rhode Island	Utah	0.070
Colorado	Louisiana	0.072
Michigan	West Virginia	0.073
Iowa	Pennsylvania	0.074
New York	North Carolina	0.075
North Carolina	West Virginia	0.075
Colorado	Connecticut	0.076

Florida	Rhode Island	0.081
Maine	West Virginia	0.084
New Jersey	Washington	0.084
Colorado	Michigan	0.089
Rhode Island	Washington	0.091
Iowa	Texas	0.100
Nebraska	North Carolina	0.101
Illinois	Texas	0.103
Louisiana	Rhode Island	0.105
Idaho	New Jersey	0.106
Rhode Island	West Virginia	0.107
Connecticut	Washington	0.107
Iowa	New Jersey	0.108
Louisiana	Maine	0.112
Utah	West Virginia	0.114
California	New Jersey	0.115
California	Connecticut	0.117
Michigan	Washington	0.119
Connecticut	Iowa	0.119
Texas	Wisconsin	0.121
Michigan	Utah	0.124
New Jersey	Utah	0.125
Idaho	Texas	0.129
Louisiana	Utah	0.129
California	Colorado	0.131
Connecticut	Idaho	0.133
California	Louisiana	0.133
Iowa	Maine	0.136
Arizona	Florida	0.138
New York	Wisconsin	0.141
New York	West Virginia	0.146
Florida	West Virginia	0.148
Maine	Utah	0.148
Texas	Utah	0.148
Delaware	Michigan	0.151
Arizona	Rhode Island	0.152
Pennsylvania	Rhode Island	0.153
Illinois	Rhode Island	0.155
California	Pennsylvania	0.156
Illinois	New Jersey	0.157
New Jersey	Wisconsin	0.157
California	Iowa	0.161
Kentucky	Michigan	0.163
California	Maine	0.167
Florida	Pennsylvania	0.167
Idaho	Louisiana	0.171

Arizona	Washington	0.172
Colorado	Nebraska	0.176
Connecticut	Utah	0.176
Florida	Maine	0.185
Kentucky	Texas	0.187
Idaho	Maine	0.188
Michigan	Pennsylvania	0.191
Rhode Island	Wisconsin	0.202
Florida	Hawaii	0.202
Maine	Michigan	0.204
California	Texas	0.204
Colorado	Delaware	0.207
California	Washington	0.211
Arizona	Colorado	0.213
Florida	New Jersey	0.214
Iowa	Louisiana	0.214
Arizona	Idaho	0.232
West Virginia	Wisconsin	0.237
Nebraska	Wisconsin	0.238
Illinois	Nebraska	0.245
Idaho	West Virginia	0.254
Florida	Wyoming	0.257
North Carolina	Pennsylvania	0.268
Arizona	Utah	0.270
Iowa	Michigan	0.272
Texas	West Virginia	0.273
Colorado	Wyoming	0.274
Illinois	New York	0.276
Florida	Kentucky	0.279
Delaware	Maine	0.288
Rhode Island	Wyoming	0.289
Arizona	West Virginia	0.290
Delaware	Washington	0.293
Arizona	North Carolina	0.301
Washington	West Virginia	0.301
Nebraska	New York	0.302
Florida	Louisiana	0.303
Illinois	West Virginia	0.304
Wisconsin	Wyoming	0.304
California	Idaho	0.308
Kentucky	Wisconsin	0.309
Hawaii	Louisiana	0.309
Washington	Wyoming	0.310
Connecticut	Wisconsin	0.311
Nebraska	Washington	0.313
Delaware	Rhode Island	0.322

Delaware	Idaho	0.326
Michigan	New Jersey	0.333
Connecticut	West Virginia	0.340
Maine	Nebraska	0.341
Arizona	Iowa	0.349
Kentucky	West Virginia	0.353
Idaho	Nebraska	0.355
Illinois	Pennsylvania	0.358
Delaware	North Carolina	0.366
California	Utah	0.369
Utah	Wyoming	0.369
Colorado	Hawaii	0.370
Arizona	Illinois	0.377
New Jersey	West Virginia	0.384
Hawaii	Idaho	0.385
Idaho	Wyoming	0.386
Louisiana	Michigan	0.390
Kentucky	Nebraska	0.396
Connecticut	Florida	0.397
Louisiana	Wisconsin	0.399
Hawaii	Iowa	0.407
Florida	Illinois	0.407
Connecticut	Michigan	0.416
Delaware	Wisconsin	0.417
Nebraska	Utah	0.418
Delaware	Iowa	0.427
North Carolina	Wyoming	0.432
Maine	Wyoming	0.441
Connecticut	Illinois	0.442
Connecticut	North Carolina	0.443
Delaware	Utah	0.452
Illinois	North Carolina	0.455
Hawaii	West Virginia	0.459
Kentucky	North Carolina	0.462
Idaho	Michigan	0.464
Hawaii	Washington	0.468
Arizona	Maine	0.469
New York	Texas	0.488
Illinois	Maine	0.492
Illinois	Wyoming	0.509
Michigan	Texas	0.514
Maine	New York	0.515
Pennsylvania	West Virginia	0.516
Hawaii	Utah	0.518
Maine	New Jersey	0.525
Maine	Texas	0.526

Pennsylvania	Texas	0.537
New Jersey	New York	0.540
Illinois	Louisiana	0.548
Illinois	Kentucky	0.553
Florida	Wisconsin	0.554
Nebraska	Pennsylvania	0.555
Louisiana	Texas	0.555
Iowa	Wyoming	0.558
Kentucky	New Jersey	0.571
Arizona	New York	0.575
Arizona	Kentucky	0.576
Illinois	Wisconsin	0.576
Maine	Rhode Island	0.577
Louisiana	North Carolina	0.584
California	Delaware	0.587
Hawaii	Illinois	0.609
California	Hawaii	0.611
Hawaii	Wisconsin	0.611
Kentucky	Wyoming	0.618
New York	Wyoming	0.620
Connecticut	Maine	0.623
Hawaii	North Carolina	0.624
Iowa	Nebraska	0.628
Nebraska	New Jersey	0.632
Arizona	Michigan	0.646
Connecticut	Nebraska	0.651
Colorado	Idaho	0.653
Nebraska	Texas	0.656
Maine	Pennsylvania	0.656
Arizona	Pennsylvania	0.663
Arizona	California	0.670
Florida	North Carolina	0.677
Idaho	Utah	0.682
Arizona	Louisiana	0.683
Maine	Wisconsin	0.701
North Carolina	Wisconsin	0.708
Arizona	Connecticut	0.726
Idaho	Washington	0.729
Kentucky	Pennsylvania	0.735
Louisiana	Wyoming	0.735
Louisiana	Nebraska	0.736
Pennsylvania	Wyoming	0.737
Connecticut	Wyoming	0.752
Hawaii	Kentucky	0.752
Delaware	New York	0.758
California	Nebraska	0.763

Hawaii	Michigan	0.767
Delaware	Kentucky	0.768
Louisiana	New Jersey	0.770
Kentucky	Maine	0.775
New Jersey	Texas	0.775
Connecticut	Texas	0.794
Connecticut	Kentucky	0.797
Hawaii	Maine	0.804
New Jersey	Pennsylvania	0.819
Michigan	Wyoming	0.819
Hawaii	Nebraska	0.821
Arizona	New Jersey	0.822
Kentucky	New York	0.822
Delaware	Pennsylvania	0.825
Delaware	Louisiana	0.826
Idaho	Iowa	0.828
New Jersey	Wyoming	0.830
California	Wyoming	0.832
California	Michigan	0.851
Connecticut	Louisiana	0.853
Connecticut	Delaware	0.862
Connecticut	New York	0.865
Delaware	Nebraska	0.867
Hawaii	Texas	0.893
Louisiana	Pennsylvania	0.895
Arizona	Nebraska	0.897
Hawaii	New York	0.900
Michigan	Nebraska	0.902
Texas	Wyoming	0.905
New York	Pennsylvania	0.906
Utah	Washington	0.907
Colorado	Utah	0.911
Hawaii	Wyoming	0.911
Delaware	New Jersey	0.914
Connecticut	New Jersey	0.915
Iowa	Utah	0.916
Delaware	Wyoming	0.928
Louisiana	New York	0.929
Arizona	Texas	0.936
Arizona	Hawaii	0.938
Nebraska	Wyoming	0.941
Hawaii	Pennsylvania	0.945
Kentucky	Louisiana	0.945
Arizona	Wyoming	0.945
Colorado	Iowa	0.946
Connecticut	Pennsylvania	0.948

Iowa	Washington	0.951
Arizona	Delaware	0.953
Connecticut	Hawaii	0.955
Delaware	Hawaii	0.960
Maine	North Carolina	0.967
Colorado	Washington	0.991
Hawaii	New Jersey	0.993
Delaware	Texas	0.994

*Of 325 comparisons, differences were statistically significantly different for 71 ($P < 0.05$) using a 2-sided test based on the permutation method to test for parallelism.

Supplementary Table 4. Colorectal Cancer Incidence Rates among Adults Aged 20 to 49 years by Race/ethnicity and State, 2011 -2015

State	All races		Non-Hispanic White		Non-Hispanic Black		Hispanic		Asian/Pacific Islander	
	N	Rate (95% CI)	N	Rate (95% CI)	N	Rate (95% CI)	N	Rate (95% CI)	N	Rate (95% CI)
Alabama	1,265	13.9 (13.2-14.7)	827	13.5 (12.6 -14.4)	395	16.6 (15.0-18.3)		*		*
Alaska	163	11.6 (9.9-13.6)	83	8.7 (6.9 -10.8)		*		*		*
Arizona	1,142	9.5 (8.9-10.0)	679	10.0 (9.3 -10.8)	57	10.2 (7.7 -13.2)	295	8.0 (7.1-9.0)	33	5.8 (4.0-8.1)
Arkansas	721	13.5 (12.5-14.5)	534	13.3 (12.2-14.5)	134	16.5 (13.8-19.5)	33	8.7 (6.0-12.3)		*
California	7,566	10.0 (9.8-10.2)	3252	11.1 (10.7-11.5)	529	11.2 (10.2-12.2)	2441	8.4 (8.1-8.7)	1217	9.5 (9.0-10.1)
Colorado	971	9.4 (8.8-10.0)	679	9.3 (8.6-10.0)	56	12.3 (9.3 -16.0)	191	9.1 (7.8-10.4)	32	7.5 (5.1-10.6)
Connecticut	799	11.3 (10.5-12.1)	551	11.3 (10.4-12.3)	91	12.1 (9.7 -14.8)	109	10.1 (8.3-12.2)		*
Delaware	202	11.5 (9.9-13.2)	124	11.1 (9.2-13.2)	66	16.2 (12.5 - 20.6)		*		*
District of Columbia†	132	12.7 (10.6-15.1)	37	8.2 (5.6-11.5)	74	16.0 (12.5- 20.1)		*		*
Florida	4,154	11.2 (10.9-11.6)	2319	11.9 (11.4-12.4)	738	12.5 (11.6-13.4)	917	9.1 (8.5-9.7)	122	9.0 (7.5-10.8)
Georgia	2,527	12.5 (12.0-13.0)	1417	12.8 (12.1-13.5)	882	13.9 (13.0-14.8)	137	7.6 (6.4-9.0)	79	8.4 (6.6-10.4)
Hawaii	358	13.8 (12.4-15.3)	71	12.6 (9.8-15.9)		*		*	259	13.8 (12.2-15.6)
Idaho	282	9.9 (8.8-11.2)	252	10.5 (9.3-11.9)		*				*
Illinois	2,660	10.7 (10.3-11.1)	1701	10.9 (10.4-11.4)	476	13.5 (12.3-14.8)	308	7.2 (6.4-8.1)	137	8.9 (7.4-10.5)
Indiana	1,458	11.8 (11.2-12.5)	1236	12.2 (11.5-12.9)	131	11.5 (9.6-13.6)	63	8.1 (6.2-10.3)		*
Iowa	676	12.4 (11.4-13.3)	622	12.9 (11.9-13.9)		*		*		*
Kentucky	1,184	14.1 (13.3-14.9)	1042	14.3 (13.4, 15.2)	95	14.3 (11.6-17.5)		*		*
Louisiana	1,173	13.8 (13.0-14.6)	709	13.6 (12.6-14.7)	410	15.5 (14.1-17.1)	35	8.2 (5.7-11.4)		*
Maine	250	10.0 (8.8-11.4)	236	9.9 (8.6-11.2)		*		*		*
Massachusetts	1,501	11.4 (10.8-12.0)	1150	11.6 (11.0 -12.3)	126	13.3 (11.1-15.9)	122	8.9 (7.4-10.7)	78	8.3 (6.5-10.3)
Michigan	2,057	11.0 (10.5-11.5)	1548	10.8 (10.3-11.3)	363	13.6 (12.2 -15.0)	62	7.6 (5.8-9.8)	51	7.8 (5.8-10.3)
Mississippi	780	14.2 (13.2-15.2)	428	13.4 (12.1-14.7)	329	16.1 (14.4 -18.0)		*		*
Missouri	1,249	11.3 (10.6-11.9)	1050	11.6 (10.9 -12.4)	144	11.0 (9.3- 13.0)	27	6.1 (4.0-8.9)		*
Montana	181	10.4 (8.9-12.0)	160	10.3 (8.8-12.0)		*		*		*
Nebraska	398	12.0 (10.8-13.2)	333	12.2 (10.9-13.6)	25	15.6 (10.1-22.9)	26	7.6 (4.9-11.1)		*
Nevada‡	553	10.1 (9.2-10.9)	337	10.5 (9.4-11.7)	58	12.8 (9.7-16.6)	101	7.8 (6.4-9.5)	43	8.5 (6.2-11.5)
New Hampshire	298	11.5 (10.2-12.9)	285	11.9 (10.6-13.4)		*		*		*
New Jersey	1,981	10.9 (10.5-11.4)	1173	11.7 (11.1-12.4)	320	13.0 (11.6-14.5)	300	8.2 (7.3-9.2)	150	7.5 (6.4 -8.8)
New Mexico§	181	11.7 (10.1-13.6)	74	12.1 (9.5-15.3)		*	80	11.1 (8.8-13.8)		*
New York	4,390	11.4 (11.0-11.7)	2496	11.6 (11.2-12.1)	759	12.7 (11.8-13.7)	679	9.2 (8.5-9.9)	398	10.6 (9.6-11.7)
North Carolina	2,288	11.8 (11.4-12.3)	1499	12.0 (11.4-12.6)	555	13.1 (12.0 -14.2)	121	7.2 (6.0-8.6)	46	7.4 (5.4-9.9)

North Dakota	150	12.4 (10.5-14.6)	136	12.7 (10.7-15.1)	*	*	*			
Ohio	2,544	11.7 (11.3-12.2)	2061	11.6 (11.1-12.1)	327	12.3 (11.0-13.7)	49	6.9 (5.1-9.2)	36	6.6 (4.6-9.1)
Oklahoma	920	13.4 (12.6-14.3)	627	12.9 (11.9-13.9)	77	14.1 (11.1-17.6)	61	9.8 (7.5-12.7)		
Oregon	744	10.1 (9.4-10.8)	588	10.2 (9.4-11.1)	*		83	9.2 (7.3-11.5)	36	8.3 (5.8-11.4)
Pennsylvania	2,854	12.0 (11.5-12.4)	2229	11.9 (11.4-12.4)	382	14.4 (13.0-15.9)	129	8.6 (7.2-10.2)	59	6.3 (4.8- 8.1)
Rhode Island	201	9.9 (8.6-11.4)	148	9.6 (8.1-11.3)			27	10.1 (6.6-14.6)		*
South Carolina	1,124	12.5 (11.8-13.3)	719	12.4 (11.5-13.4)	344	13.8 (12.4 -15.4)	42	9.0 (6.5-12.2)		*
South Dakota	157	11.1 (9.4-12.9)	132	10.8 (9.1-12.9)	*		*			*
Tennessee	1,613	12.9 (12.3-13.6)	1243	13.1 (12.4-13.9)	303	14.5 (12.9 -16.2)	33	5.9 (4.0 – 8.3)	25	8.9 (5.8-13.2)
Texas	5,585	10.9 (10.6-11.2)	2785	12.3 (11.9-12.8)	801	12.6 (11.8 -13.5)	1769	9.2 (8.7-9.6)	204	7.1 (6.1-8.1)
Utah	526	10.4 (9.5-11.3)	420	10.3 (9.4-11.4)	*		68	9.8 (7.6-12.4)		*
Vermont	121	10.5 (8.7-12.5)	118	10.7 (8.8-12.8)	*		*			*
Virginia	1,696	10.3 (9.8-10.8)	1110	10.6 (10.0-11.3)	383	11.9 (10.8-13.2)	79	5.1 (4.0 -6.3)	86	6.7 (5.4-8.3)
Washington	1,375	10.2 (9.7-10.8)	1023	10.5 (9.8-11.1)	71	12.0 (9.3-15.1)	112	7.5 (6.2-9.1)	107	7.4 (6.1-8.9)
West Virginia	475	13.9 (12.7-15.2)	455	14.2 (12.9-15.5)	*		*			*
Wisconsin	1,140	10.5 (9.9-11.1)	927	10.1 (9.5-10.8)	108	16.1 (13.2-19.5)	51	8.1 (6.0-10.7)		*
Wyoming	92	9.1 (7.3-11.2)	83	9.5 (7.5-11.8)	*		*			*
US	63,991	11.3 (11.2-11.3)	41,260	11.7 (11.5-11.8)	9,579	13.2 (13.0-13.5)	8,521	8.5 (8.3-8.7)	3,372	8.8 (8.5-9.1)

* < 25 cases. CI = confidence interval.

†Rates based on diagnosis years 2011-2014.

‡Rates based on diagnosis years 2006-2010.

§Rates based on diagnosis years 2011-2012.

Supplementary Table 5. Trend in colorectal cancer incidence rates among adults 20-49 years by state and subsite, non-Hispanic black

State	Available years	Number of cases	AAPC 2006-2015 (95% CI)		
			CRC	Colon	Rectum
Alabama	1998 -2015	1,273	1.2* (0.2, 2.2)	0.1 (-0.9, 1.1)	3.9* (2.0, 5.8)
Alaska	1996 - 2015		†		
Arizona	1995 - 2015	201	†	†	†
Arkansas	2001-2015	388	1.5 (-1.0, 4.1)	0.7 (-2.2, 3.6)	†
California	1995 - 2015	2,347	0.4 (-0.5, 1.3)	0.6 (-0.5, 1.8)	0.0 (-1.3, 1.3)
Colorado	1995 - 2015	189	†	†	†
Connecticut	1995 - 2015	346	-0.8 (-2.9, 1.4)	†	†
Delaware	1995 - 2015	200	†	†	†
District of Columbia†	1997 -2014	322	1.5 (-0.5, 3.5)	†	†
Florida	1995 - 2015	2,943	-0.8* (-1.5, -0.2)	-0.9* (-1.7, -0.2)	-0.5 (-1.6, 0.6)
Georgia	1997 - 2015	3,024	0.4 (-0.4, 1.1)	-0.1 (-1.0, 0.9)	1.4 (-0.3, 3.1)
Hawaii	1995 - 2015	29	†	†	†
Idaho	1995 - 2015		†		
Illinois	1995 - 2015	2,048	0.3 (-0.4, 1.1)	-0.1 (-0.9, 0.7)	1.4 (-0.2, 3.1)
Indiana	1998 - 2015	508	-1.2 (-2.6, 0.3)	-1.9 (-3.9, 0.1)	0.3 (-2.0, 2.7)
Iowa	1995 - 2015	76	†	†	†
Kentucky	1995 - 2015	392	-1.2 (-3.2, 0.9)	†	†
Louisiana	1995 - 2015	1,643	0.9 (-0.0, 1.8)	0.1 (-0.9, 1.1)	2.5* (1.0, 4.0)
Maine	1995 - 2015		†		
Massachusetts	1997- 2015	403	1.2 (-0.7, 3.1)	-0.2 (-2.8, 2.5)	†
Michigan	1995 - 2015	1,512	0.9 (-0.4, 2.2)	1.4* (0.1, 2.7)	0.1 (-1.9, 2.0)
Mississippi	2004 - 2015	819	-1.8 (-4.5, 0.9)	-1.0 (-4.5, 2.6)	-3.4 (-7.0, 0.3)
Missouri	1998 - 2015	627	-0.8 (-2.6, 1.1)	-2.0 (-4.1, 0.1)	†
Montana	1996 - 2015		†		
Nebraska	1995 - 2015	67	†	†	†
Nevada§	1997- 2010	118	†	†	†
New Hampshire	1999 - 2015		†		
New Jersey	1995 - 2015	1,289	0.4 (-0.6, 1.3)	-0.1 (-1.3, 1.0)	1.0 (-0.2, 2.2)
New Mexico¶	1995 - 2012		†		
New York	1995 - 2015	3,007	1.5* (0.7, 2.3)	0.5 (-0.8, 1.7)	3.4* (2.6, 4.2)
North Carolina	1995 - 2015	2,286	-2.8* (-5.3, -0.2)	-2.6* (-5.0, -0.2)	-1.9 (-6.3, 2.6)

North Dakota	1998 - 2015		†		
Ohio	1997 - 2015	1,267	0.7 (-0.4, 1.9)	0.4 (-1.0, 1.8)	1.6 (-0.3, 3.6)
Oklahoma	1997 - 2015	290	0.4 (-1.6, 2.5)	-0.1 (-2.0, 2.0)	†
Oregon	1996 - 2015	62	†	†	†
Pennsylvania	1995 - 2015	1,424	1.2* (0.3, 2.1)	-2.9 (-8.3, 2.7)	1.8* (0.0, 3.7)
Rhode Island	1995 - 2015	45	†	†	†
South Carolina	1997 - 2015	1,439	0.9 (-3.5, 5.5)	0.7 (-3.0, 4.5)	-0.7 (-2.6, 1.4)
South Dakota	2001 - 2015		†		
Tennessee	2004 - 2015	736	-1.1 (-3.5, 1.3)	-1.4 (-4.6, 2.0)	-0.3 (-3.8, 3.3)
Texas	1995 - 2015	3,121	-0.6 (-1.2, 0.0)	-0.5 (-1.3, 0.3)	-0.7 (-1.6, 0.1)
Utah	1995 - 2015		†		
Vermont	1996 - 2015		†		
Virginia#	1998 - 2015	1,381	-0.9* (-1.8, -0.0)	-1.2 (-2.4, 0.1)	-0.7 (-2.7, 1.3)
Washington	1995 - 2015	244	1.0 (-1.0, 3.0)	†	†
West Virginia	1995 - 2015	79	†	†	†
Wisconsin	1995 - 2015	404	0.0 (-1.6, 1.8)	†	†
Wyoming	1995 - 2015		†		
US	1995 - 2015	36,660	-0.4 (-1.2, 0.3)	-0.3* (-0.6, -0.1)	1.1* (0.6, 1.6)

*Indicates AAPC is statistically significantly different from zero ($P < 0.05$) using a 2-sided test based on the permutation method. AAPC = Average Annual Percent Change; CI = confidence interval.

† <6 cases in 1 or more years.

‡ Data unavailable for 2002; AAPC reflects data during 2005-2014.

§AAPC during 2001-2010.

¶AAPC during 2003-2012.

#Data unavailable for 2001.

Supplementary Table 6. Trend in colorectal cancer incidence rates among adults 20-49 years by state and subsite, Hispanic

State	Available years	Number of cases	AAPC 2006-2015 (95% CI)		
			CRC	Colon	Rectum
Alabama	1998 -2015	54	*	*	*
Alaska	1996 - 2015			*	
Arizona	1995 - 2015	969	-2.3 (-5.8, 1.3)	-4.1 (-9.6, 1.7)	*
Arkansas	2001 - 2015	67	*	*	*
California	1995 - 2015	7,399	2.0 [†] (1.7, 2.3)	1.8 [†] (1.4, 2.3)	2.3 [†] (1.6, 3.0)
Colorado	1995 - 2015	588	0.2 (-1.1, 1.5)	-0.8 (-2.3, 0.7)	*
Connecticut	1995 - 2015	337	0.1 (-1.6, 1.9)	*	*
Delaware	1995 - 2015	27	*	*	*
District of Columbia [‡]	1997 -2014	33	*	*	*
Florida	1995 - 2015	3,012	-0.8 [†] (-1.6, -0.1)	-1.2 [†] (-2.2, -0.3)	-0.2 (-1.3, 0.9)
Georgia	1997 - 2015	319	1.9 (-1.7, 5.7)	*	*
Hawaii	1995 - 2015	73	*	*	*
Idaho	1995 - 2015	60	*	*	*
Illinois	1995 - 2015	996	1.3 (-0.1, 2.8)	0.5 (-1.4, 2.4)	-2.3 (-6.8, 2.5)
Indiana	1998 - 2015	161	*	*	*
Iowa	1995 - 2015	50	*	*	*
Kentucky	1995 - 2015	52	*	*	*
Louisiana	1995 - 2015	86	*	*	*
Maine	1995 - 2015			*	
Massachusetts	1997- 2015	354	0.1 (-2.1, 2.3)	*	*
Michigan	1995 - 2015	226	*	*	*
Mississippi	2004 - 2015			*	
Missouri	1998 - 2015	83	*	*	*
Montana	1996 - 2015			*	
Nebraska	1995 - 2015	73	*	*	*
Nevada [§]	1997- 2010	188	*	*	*
New Hampshire	1999 - 2015			*	
New Jersey	1995 - 2015	1,109	-0.5 (-1.6, 0.7)	-0.7 (-1.8, 0.4)	-0.3 (-2.6, 2.1)
New Mexico [¶]	1995 - 2012	489	2.9 [†] (0.7, 5.1)	2.9 [†] (0.1, 5.8)	*
New York	1995 - 2015	2,459	0.9 [†] (0.1, 1.8)	0.7 (-0.4, 1.8)	1.2 [†] (0.1, 2.3)
North Carolina	1995 - 2015	292	*	*	*

North Dakota	1998 - 2015		*	*		
Ohio	1997 - 2015	142	*	*	*	*
Oklahoma	1997 - 2015	167	*	*	*	*
Oregon	1996 - 2015	205	*	*	*	*
Pennsylvania	1995 - 2015	412	*	*	*	*
Rhode Island	1995 - 2015	74	*	*	*	*
South Carolina	1997 - 2015	87	*	*	*	*
South Dakota	2001 - 2015			*		
Tennessee	2004 - 2015	71	*	*	*	*
Texas	1995 - 2015	5,654	0.0 (-0.5, 0.6)	-0.1(-0.8, 0.6)	0.2 (-0.5, 0.9)	
Utah	1995 - 2015	185	*	*	*	*
Vermont	1996 -2015			*		
Virginia#	1998 - 2015	216	-1.9 (-4.5, 0.8)	*	*	*
Washington	1995 - 2015	292	*	*	*	*
West Virginia	1995 - 2015			*		
Wisconsin	1995 - 2015	140	*	*	*	*
Wyoming	1995 - 2015			*		
US	1995 - 2015	27,313	0.1 (-0.4, 0.6)	-0.3 (-0.8, 0.3)	1.2 [†] (0.7, 1.6)	

*<6 cases in 1 or more years. AAPC = Average Annual Percent Change; CI = confidence interval.

[†]Indicates AAPC is statistically significantly different from zero (P < 0.05) using a 2-sided test based on the permutation method.

[‡]Data unavailable for 2002; AAPC reflects data during 2005-2014.

[§]AAPC during 2001-2010.

[¶]AAPC during 2003-2012.

[#]Data unavailable for 2001.

Supplementary Table 7. Obesity Prevalence among Adults aged 20-49 years by State, Behavioral Risk Factor Surveillance System 1995, 2000, 2005, and 2010*.

State	1995 (n=65,550)			2000 (n=98,562)			2005 (n=149,713)			2010 (n=132,467)			2010 vs 1995						2005 vs 1995			
											Absolute difference		Prevalence ratio			Absolute difference		Prevalence ratios				
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	P-value†	PR	95%CI	%	P-value†	PR	95%CI				
Total	14.9	14.4 15.3	19.8	19.4 20.3	24.0	23.6 24.5	28.0	27.6 28.5	13.1	<0.001	1.88	1.82 1.95	9.2	<0.001	1.62	1.56 1.67						
Alabama	17.3	14.9 20.1	24.4	21.6 27.5	30.4	27.4 33.7	33.2	30.5 36.0	15.9	<0.001	1.92	1.61 2.27	13.1	<0.001	1.76	1.46 2.11						
Alaska	18.5	15.4 22.2	19.1	16.4 22.1	26.1	23.1 29.4	23.7	19.7 28.3	5.2	0.03	1.28	0.99 1.66	7.6	0.001	1.41	1.13 1.76						
Arizona	14.5	11.6 18.0	19.3	16.1 23.1	20.8	17.5 24.5	25.5	22.2 29.1	11.0	<0.001	1.76	1.36 2.28	6.3	0.01	1.43	1.08 1.89						
Arkansas	16.1	13.5 19.0	24.6	22.1 27.3	29.9	27.6 32.3	33.8	29.9 37.9	17.8	<0.001	2.11	1.71 2.59	13.9	<0.001	1.86	1.55 2.24						
California	14.6	12.7 16.8	20.3	18.3 22.4	22.4	20.5 24.3	24.9	23.6 26.3	10.3	<0.001	1.70	1.46 1.98	7.7	<0.001	1.53	1.3 1.8						
Colorado	9.2	7.5 11.1	13.2	11.1 15.5	17.6	16.0 19.3	22.2	20.4 24.2	13.1	<0.001	2.43	1.97 3.01	8.5	<0.001	1.93	1.55 2.39						
Connecticut	11.8	9.8 14.1	15.7	14.0 17.5	19.8	17.8 22.0	22.6	20.2 25.2	10.8	<0.001	1.92	1.55 2.37	8.0	<0.001	1.68	1.36 2.07						
Delaware	14.9	12.8 17.3	15.2	13.1 17.6	24.0	21.5 26.7	27.6	24.5 31.0	12.7	<0.001	1.85	1.53 2.24	9.1	<0.001	1.61	1.34 1.93						
District of Columbia		‡	20.2	17.5 23.1	19.8	17.4 22.5	21.6	19.1 24.5		‡		‡		‡		‡						
Florida	17.5	15.5 19.8	18.7	17.0 20.6	21.9	19.9 24.1	28.9	26.9 30.9	11.3	<0.001	1.65	1.43 1.90	4.4	0.004	1.25	1.07 1.46						
Georgia	12.7	11.0 14.7	21.5	19.5 23.7	26.2	24.1 28.6	31.4	28.8 34.2	18.7	<0.001	2.47	2.08 2.93	13.5	<0.001	2.06	1.74 2.45						
Hawaii	11.7	9.8 13.8	16.1	14.5 17.9	21.3	19.2 23.4	26.1	23.5 28.9	14.4	<0.001	2.23	1.83 2.73	9.6	<0.001	1.82	1.49 2.21						
Idaho	13.8	12.0 15.8	17.8	16.2 19.5	23.2	21.2 25.4	27.4	24.8 30.1	13.5	<0.001	1.98	1.67 2.34	9.4	<0.001	1.68	1.43 1.98						
Illinois	15.3	13.5 17.3	19.8	17.9 21.8	23.8	21.8 26.0	28.5	25.7 31.5	13.2	<0.001	1.86	1.59 2.18	8.5	<0.001	1.55	1.33 1.81						
Indiana	18.7	16.7 20.9	19.9	17.8 22.1	26.4	24.5 28.4	29.4	27.2 31.7	10.7	<0.001	1.57	1.37 1.80	7.7	<0.001	1.41	1.23 1.62						
Iowa	16.7	15.0 18.6	19.8	17.7 22.0	23.7	21.6 25.9	28.3	25.7 31.1	11.6	<0.001	1.69	1.47 1.96	6.9	<0.001	1.42	1.23 1.63						
Kansas	16.0	13.8 18.4	20.0	18.2 21.9	24.1	22.5 25.7	30.8	28.6 33.1	14.9	<0.001	1.93	1.64 2.27	8.1	<0.001	1.51	1.28 1.77						
Kentucky	16.3	14.2 18.8	24.2	22.2 26.4	28.0	25.7 30.4	31.8	28.9 34.8	15.5	<0.001	1.95	1.64 2.30	11.6	<0.001	1.71	1.45 2.02						
Louisiana	15.9	13.7 18.5	22.7	20.9 24.6	30.6	27.8 33.5	31.4	29.0 34.0	15.5	<0.001	1.97	1.67 2.33	14.6	<0.001	1.92	1.61 2.28						
Maine	13.2	10.6 16.3	20.2	17.6 23.1	24.3	22.1 26.8	28.2	26.1 30.5	15.1	<0.001	2.14	1.71 2.70	11.2	<0.001	1.85	1.46 2.34						
Maryland	16.0	14.6 17.5	19.4	17.6 21.3	23.3	21.6 25.0	28.9	26.7 31.2	13.0	<0.001	1.81	1.61 2.04	7.3	<0.001	1.46	1.3 1.64						
Massachusetts	9.3	7.5 11.4	14.8	13.6 16.1	20.7	19.0 22.5	23.6	22.0 25.3	14.4	<0.001	2.55	2.05 3.17	11.4	<0.001	2.23	1.79 2.79						
Michigan	16.5	14.5 18.7	19.8	17.6 22.2	25.4	24.0 26.8	32.2	29.9 34.7	15.8	<0.001	1.95	1.69 2.26	8.9	<0.001	1.54	1.34 1.76						
Minnesota	15.3	13.8 17.0	16.0	14.1 18.1	22.6	19.9 25.4	24.4	21.7 27.3	9.1	<0.001	1.59	1.37 1.86	7.3	<0.001	1.47	1.26 1.73						
Mississippi	19.2	16.5 22.3	25.4	22.7 28.3	32.3	29.8 34.9	35.8	33.2 38.4	16.5	<0.001	1.86	1.57 2.20	13.1	<0.001	1.68	1.42 1.99						
Missouri	19.2	16.4 22.4	20.8	18.6 23.2	27.5	24.9 30.2	32.3	28.9 35.8	13.1	<0.001	1.68	1.39 2.03	8.3	<0.001	1.43	1.19 1.72						
Montana	13.8	11.2 16.8	15.6	13.5 18.1	19.0	16.9 21.4	22.7	20.2 25.5	9.0	<0.001	1.65	1.31 2.08	5.3	0.004	1.38	1.1 1.74						
Nebraska	15.7	13.4 18.3	20.7	18.4 23.1	25.2	23.3 27.2	27.5	25.1 30.0	11.8	<0.001	1.75	1.46 2.09	9.5	<0.001	1.61	1.35 1.91						
Nevada	12.6	10.4 15.3	17.7	14.7 21.1	22.2	19.1 25.6	22.3	18.9 26.0	9.7	<0.001	1.77	1.37 2.27	9.6	<0.001	1.76	1.38 2.24						

New Hampshire	13.9	11.5	16.6	16.6	14.0	19.5	22.0	20.2	24.0	26.2	23.7	28.8	12.3	<0.001	1.89	1.53	2.32	8.1	<0.001	1.59	1.29	1.94
New Jersey	12.1	9.5	15.3	16.7	14.8	18.7	20.3	19.0	21.8	23.3	21.5	25.3	11.2	<0.001	1.93	1.49	2.49	8.3	<0.001	1.68	1.31	2.16
New Mexico	12.4	9.9	15.4	19.7	17.7	21.8	23.6	21.4	25.8	28.2	25.5	31.1	15.9	<0.001	2.29	1.79	2.91	11.2	<0.001	1.91	1.5	2.42
New York	12.3	10.6	14.4	17.4	15.5	19.4	20.1	18.6	21.8	24.2	22.3	26.2	11.8	<0.001	1.96	1.65	2.33	7.8	<0.001	1.63	1.37	1.94
North Carolina	15.7	13.9	17.7	20.6	18.5	23.0	25.4	24.2	26.7	29.2	27.1	31.3	13.5	<0.001	1.86	1.62	2.13	9.7	<0.001	1.62	1.42	1.84
North Dakota	15.7	13.4	18.4	18.1	15.6	20.9	25.1	22.8	27.6	27.2	24.5	30.2	11.5	<0.001	1.73	1.43	2.10	9.4	<0.001	1.6	1.33	1.93
Ohio	14.9	12.0	18.4	21.6	19.0	24.4	24.3	22.0	26.8	28.2	26.1	30.5	13.3	<0.001	1.90	1.51	2.38	9.4	<0.001	1.63	1.29	2.06
Oklahoma	13.6	11.3	16.3	21.2	19.1	23.3	27.8	25.8	29.8	31.5	29.3	33.9	17.9	<0.001	2.32	1.91	2.82	14.2	<0.001	2.04	1.68	2.48
Oregon	13.9	12.2	15.8	20.6	18.6	22.8	23.5	22.2	25.0	27.5	24.4	30.8	13.6	<0.001	1.98	1.67	2.35	9.7	<0.001	1.69	1.47	1.95
Pennsylvania	14.7	13.0	16.5	20.4	18.4	22.6	23.7	22.0	25.5	27.3	25.5	29.3	12.6	<0.001	1.86	1.62	2.14	9.0	<0.001	1.62	1.4	1.86
Rhode Island	13.7	11.3	16.6	15.7	13.9	17.6	20.4	18.2	22.9	26.6	24.0	29.4	12.9	<0.001	1.94	1.56	2.41	6.7	<0.001	1.49	1.19	1.86
South Carolina	16.2	13.9	18.9	21.7	19.6	23.8	30.1	28.3	32.0	33.5	30.4	36.7	17.3	<0.001	2.06	1.72	2.47	13.9	<0.001	1.86	1.57	2.19
South Dakota	13.3	11.1	15.7	18.8	17.2	20.6	24.9	22.9	27.1	29.0	26.4	31.8	15.8	<0.001	2.19	1.80	2.67	11.7	<0.001	1.88	1.55	2.28
Tennessee	18.1	15.9	20.6	21.9	19.6	24.3	28.1	25.1	31.2	33.4	30.3	36.7	15.3	<0.001	1.84	1.57	2.17	10.0	<0.001	1.55	1.31	1.84
Texas	15.7	13.2	18.5	24.1	22.3	26.1	27.7	25.7	29.8	32.2	30.0	34.5	16.5	<0.001	2.06	1.71	2.47	12.1	<0.001	1.77	1.47	2.13
Utah	12.8	10.9	14.9	18.1	15.9	20.6	19.9	18.1	21.9	22.4	20.8	24.1	9.6	<0.001	1.75	1.47	2.09	7.1	<0.001	1.56	1.3	1.87
Vermont	13.9	12.0	16.0	15.4	13.7	17.2	20.4	18.7	22.1	24.5	22.3	26.9	10.6	<0.001	1.76	1.48	2.10	6.5	<0.001	1.46	1.24	1.73
Virginia	15.2	13.0	17.6	17.7	15.4	20.3	25.2	23.0	27.5	26.0	22.8	29.4	10.8	<0.001	1.71	1.40	2.09	10.0	<0.001	1.66	1.39	1.98
Washington	13.5	11.9	15.2	17.5	15.7	19.4	22.7	21.6	23.7	26.3	24.8	27.9	12.8	<0.001	1.95	1.70	2.23	9.2	<0.001	1.68	1.47	1.91
West Virginia	19.3	17.1	21.7	24.1	21.5	26.9	31.2	28.5	34.0	35.0	31.8	38.3	15.7	<0.001	1.81	1.56	2.11	11.9	<0.001	1.62	1.4	1.88
Wisconsin	14.0	11.9	16.5	17.4	15.4	19.6	22.7	20.6	24.9	26.6	23.4	30.0	12.6	<0.001	1.89	1.54	2.33	8.7	<0.001	1.62	1.34	1.96
Wyoming	13.3	11.5	15.3	16.5	14.3	18.9	24.1	22.0	26.2	26.5	23.9	29.4	13.3	<0.001	2.00	1.68	2.39	10.8	<0.001	1.81	1.53	2.14

CI = confidence interval

*Obesity was defined as body mass index ≥ 30 kg/m². Estimates were weighted to account for complex survey design and non-response.

†P-values were based on 2-sided Wald Chi-Squared test

‡Data are not available.

Supplementary Table 8. Obesity Prevalence among Non-Hispanic White Adults aged 20-49 years by State, Behavioral Risk Factor Surveillance System 1995, 2000, 2005, and 2010*

State	1995 (n=52,431)				2000 (n=75,237)				2005 (n=112,510)				2010 (n=95,778)				2010 vs 1995			2005 vs 1995			
	%		95%CI		%		95%CI		%		95%CI		%		95%CI		Absolute difference	Prevalence ratio		Absolute difference	Prevalence ratio		
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	P-value†	PR	95%CI	%	P-value†	PR
Total	13.8	13.3 14.3	18.2	17.8 18.7	22.5	22.1 22.9	26.1	25.6 26.6	12.3	<0.001	1.89	1.82 1.97	8.7	<0.001	1.63	1.57 1.7							
Alabama	16.3	13.4 19.7	22.0	18.7 25.5	25.8	22.6 29.3	29.5	26.4 32.9	13.2	<0.001	1.81	1.45 2.25	9.5	<0.001	1.58	1.25 1.99							
Alaska	17.9	14.4 22.0	17.6	14.6 21.1	22.0	18.7 25.8	21.4	16.9 26.8	3.5	0.21	1.19	0.87 1.64	4.1	0.12	1.23	0.94 1.6							
Arizona	15.0	11.4 19.4	15.2	12.0 19.1	18.6	14.9 23.0	24.8	20.7 29.5	9.8	0.002	1.66	1.20 2.28	3.6	0.21	1.24	0.88 1.75							
Arkansas	14.3	11.9 17.1	23.4	20.6 26.4	28.6	26.1 31.2	33.1	28.7 37.8	18.8	<0.001	2.32	1.84 2.91	14.3	<0.001	2	1.63 2.46							
California	11.3	9.1 14.0	17.3	15.0 19.8	19.3	17.0 21.9	20.6	18.9 22.4	9.3	<0.001	1.82	1.44 2.29	8.0	<0.001	1.71	1.33 2.19							
Colorado	8.7	6.9 10.8	12.3	10.1 14.9	15.7	14.0 17.5	21.0	19.0 23.0	12.3	<0.001	2.42	1.89 3.08	7.0	<0.001	1.81	1.41 2.32							
Connecticut	11.0	8.9 13.5	14.4	12.6 16.4	18.1	15.9 20.4	20.8	18.2 23.7	9.9	<0.001	1.90	1.48 2.43	7.1	<0.001	1.65	1.29 2.1							
Delaware	13.9	11.6 16.6	13.4	11.1 16.0	22.6	19.8 25.7	24.8	21.4 28.5	10.9	<0.001	1.78	1.42 2.24	8.7	<0.001	1.63	1.3 2.03							
District of Columbia	‡	6.9	4.5	10.4	7.2	5.5	9.3	8.5	6.6	10.9	‡	‡	‡	‡	‡	‡							
Florida	15.7	13.5 18.2	17.8	15.8 20.1	19.4	17.0 22.0	26.4	24.4 28.6	10.7	<0.001	1.68	1.42 1.99	3.7	0.04	1.23	1.01 1.5							
Georgia	11.4	9.4 13.8	19.2	17.0 21.7	23.1	20.7 25.8	28.2	25.1 31.5	16.8	<0.001	2.47	1.97 3.09	11.7	<0.001	2.03	1.62 2.53							
Hawaii	7.3	5.0 10.6	12.0	9.6 15.0	15.2	12.1 18.9	19.0	15.1 23.6	11.7	<0.001	2.60	1.68 4.04	7.9	<0.001	2.09	1.35 3.23							
Idaho	13.1	11.3 15.2	17.3	15.7 19.1	22.2	20.1 24.5	26.3	23.6 29.1	13.2	<0.001	2.00	1.67 2.40	9.1	<0.001	1.69	1.42 2.02							
Illinois	14.2	12.1 16.5	17.1	15.2 19.2	21.9	19.8 24.2	23.9	21.0 27.2	9.8	<0.001	1.69	1.38 2.07	7.8	<0.001	1.55	1.29 1.86							
Indiana	18.9	16.8 21.3	20.0	17.7 22.4	25.6	23.6 27.8	28.3	26.0 30.6	9.4	<0.001	1.49	1.29 1.73	6.7	<0.001	1.36	1.17 1.57							
Iowa	16.7	14.9 18.6	19.7	17.6 22.0	23.8	21.7 26.1	28.8	26.0 31.8	12.1	<0.001	1.72	1.49 2.00	7.1	<0.001	1.43	1.23 1.65							
Kansas	15.0	12.8 17.6	19.9	18.0 21.9	23.2	21.5 25.0	29.8	27.5 32.3	14.8	<0.001	1.98	1.65 2.38	8.2	<0.001	1.54	1.29 1.85							
Kentucky	15.7	13.5 18.2	24.1	22.0 26.4	27.5	25.1 30.0	31.3	28.3 34.4	15.5	<0.001	1.99	1.66 2.38	11.7	<0.001	1.75	1.47 2.08							
Louisiana	14.4	11.9 17.4	18.6	16.6 20.7	25.9	22.7 29.3	25.3	22.6 28.3	10.9	<0.001	1.76	1.41 2.19	11.5	<0.001	1.79	1.43 2.26							
Maine	13.2	10.6 16.3	19.6	17.1 22.4	24.5	22.1 27.0	28.1	25.8 30.4	14.9	<0.001	2.13	1.69 2.69	11.3	<0.001	1.86	1.46 2.36							
Maryland	14.1	12.5 15.9	16.2	14.3 18.3	19.3	17.6 21.1	27.1	24.3 29.9	12.9	<0.001	1.92	1.64 2.24	5.2	<0.001	1.37	1.18 1.59							
Massachusetts	9.1	7.2 11.4	14.3	12.9 15.7	20.4	18.5 22.4	22.4	20.6 24.3	13.3	<0.001	2.47	1.92 3.17	11.3	<0.001	2.25	1.74 2.9							
Michigan	14.8	12.8 17.1	19.6	17.2 22.3	24.6	23.1 26.1	29.3	26.8 31.9	14.5	<0.001	1.98	1.67 2.34	9.8	<0.001	1.66	1.42 1.94							
Minnesota	15.1	13.5 16.8	16.1	14.1 18.3	22.0	19.3 25.0	23.5	20.8 26.5	8.4	<0.001	1.56	1.32 1.84	6.9	<0.001	1.46	1.23 1.73							
Mississippi	16.7	13.6 20.3	21.2	18.2 24.7	27.7	24.6 31.0	32.3	29.0 35.7	15.6	<0.001	1.93	1.54 2.42	11.0	<0.001	1.66	1.32 2.09							
Missouri	19.2	16.2 22.6	20.5	18.1 23.1	27.3	24.5 30.3	31.7	28.0 35.6	12.5	<0.001	1.65	1.34 2.03	8.1	<0.001	1.42	1.17 1.73							
Montana	12.8	10.2 15.9	14.3	12.1 16.9	17.2	15.1 19.5	22.1	19.3 25.2	9.3	<0.001	1.72	1.33 2.23	4.4	0.02	1.34	1.04 1.73							
Nebraska	14.8	12.5 17.5	20.5	18.2 23.1	25.0	22.9 27.1	27.1	24.6 29.6	12.2	<0.001	1.82	1.51 2.21	10.2	<0.001	1.68	1.4 2.03							
Nevada	12.4	10.0 15.3	16.8	13.7 20.4	22.1	18.2 26.5	20.2	16.7 24.1	7.7	<0.001	1.62	1.22 2.15	9.6	<0.001	1.78	1.33 2.36							

New Hampshire	14.1	11.7	17.0	16.2	13.7	19.1	21.9	20.0	23.9	26.5	23.9	29.2	12.3	<0.001	1.87	1.51	2.32	7.7	<0.001	1.55	1.26	1.9
New Jersey	10.7	7.9	14.3	16.4	14.3	18.8	19.6	18.0	21.3	21.7	19.6	24.0	11.0	<0.001	2.04	1.48	2.79	8.9	<0.001	1.84	1.34	2.51
New Mexico	12.0	9.0	15.9	15.0	12.5	17.8	19.5	16.9	22.4	21.0	17.4	25.1	9.0	<0.001	1.75	1.25	2.46	7.5	0.001	1.63	1.18	2.24
New York	11.6	9.6	14.1	16.3	14.1	18.7	19.9	18.1	21.8	23.3	21.1	25.6	11.7	<0.001	2.00	1.61	2.48	8.3	<0.001	1.71	1.38	2.12
North Carolina	12.8	10.9	14.9	18.3	15.9	21.1	22.9	21.5	24.4	26.0	23.7	28.5	13.3	<0.001	2.04	1.70	2.44	10.2	<0.001	1.79	1.52	2.12
North Dakota	15.3	12.9	18.0	17.4	14.9	20.2	23.6	21.2	26.1	26.6	23.7	29.7	11.3	<0.001	1.74	1.42	2.12	8.3	<0.001	1.54	1.27	1.87
Ohio	14.9	11.7	18.8	20.9	18.1	23.9	23.6	21.1	26.3	27.4	25.0	29.9	12.5	<0.001	1.84	1.43	2.36	8.7	<0.001	1.58	1.22	2.05
Oklahoma	13.4	10.9	16.3	19.7	17.5	22.1	27.1	24.9	29.4	29.0	26.3	31.8	15.6	<0.001	2.17	1.74	2.71	13.7	<0.001	2.03	1.63	2.52
Oregon	13.5	11.8	15.4	20.4	18.2	22.8	22.5	21.1	24.1	27.9	24.5	31.6	14.5	<0.001	2.08	1.73	2.50	9.1	<0.001	1.68	1.44	1.95
Pennsylvania	13.7	11.9	15.6	18.8	16.7	21.0	22.5	20.8	24.3	26.4	24.5	28.5	12.8	<0.001	1.94	1.66	2.26	8.8	<0.001	1.65	1.41	1.92
Rhode Island	13.7	11.0	16.8	15.6	13.7	17.8	21.0	18.4	23.9	25.2	22.4	28.2	11.5	<0.001	1.84	1.44	2.35	7.3	<0.001	1.54	1.2	1.97
South Carolina	14.6	12.1	17.6	17.5	15.4	19.8	26.4	24.4	28.4	29.6	26.1	33.3	15.0	<0.001	2.03	1.62	2.53	11.8	<0.001	1.8	1.47	2.21
South Dakota	12.8	10.6	15.3	18.2	16.5	20.0	24.3	22.1	26.6	27.7	24.9	30.7	15.0	<0.001	2.17	1.76	2.69	11.5	<0.001	1.9	1.55	2.34
Tennessee	17.7	15.3	20.3	20.6	18.2	23.3	25.8	23.2	28.6	32.9	29.4	36.5	15.2	<0.001	1.86	1.55	2.22	8.1	<0.001	1.46	1.22	1.74
Texas	13.8	11.0	17.2	20.6	18.5	22.9	25.4	22.7	28.2	27.6	24.8	30.5	13.7	<0.001	2.00	1.56	2.55	11.6	<0.001	1.84	1.43	2.35
Utah	12.1	10.2	14.3	17.3	15.0	19.9	18.8	17.0	20.8	21.3	19.6	23.1	9.2	<0.001	1.76	1.46	2.11	6.7	<0.001	1.56	1.28	1.89
Vermont	13.3	11.4	15.5	15.9	14.2	17.8	20.2	18.6	22.0	24.6	22.2	27.1	11.3	<0.001	1.85	1.54	2.22	6.9	<0.001	1.52	1.28	1.81
Virginia	14.9	12.4	17.8	16.1	13.5	19.1	23.1	20.6	25.7	25.9	22.5	29.6	11.0	<0.001	1.74	1.39	2.18	8.2	<0.001	1.55	1.25	1.91
Washington	13.3	11.7	15.2	17.2	15.3	19.3	22.0	20.9	23.2	25.4	23.7	27.1	12.0	<0.001	1.90	1.64	2.20	8.7	<0.001	1.65	1.43	1.9
West Virginia	19.2	16.9	21.7	24.0	21.3	26.9	31.4	28.6	34.3	34.9	31.6	38.3	15.7	<0.001	1.82	1.56	2.13	12.2	<0.001	1.64	1.4	1.91
Wisconsin	13.9	11.6	16.6	16.3	14.2	18.7	22.2	20.0	24.6	25.6	22.4	29.1	11.7	<0.001	1.85	1.48	2.31	8.3	<0.001	1.6	1.3	1.97
Wyoming	13.5	11.6	15.7	15.8	13.6	18.2	23.1	21.0	25.3	25.1	22.4	27.9	11.5	<0.001	1.85	1.54	2.23	9.6	<0.001	1.71	1.43	2.04

CI = confidence interval

*Obesity was defined as body mass index ≥ 30 kg/m². Estimates were weighted to account for complex survey design and non-response.

†P-values were based on 2-sided Wald Chi-Squared test

‡Data are not available.

Supplementary Table 9. Prevalence of Heavy Alcohol Use among Adults aged 20-49 years by State, Behavioral Risk Factor Surveillance System 1995, 2005, and 2010*

State	1995 (n=63,967)			2005 (n=157,350)			2010 (n=137,311)			Absolute difference 2005 vs 1995		Prevalence ratios comparing 2005 vs 1995		
	%	95%CI		%	95%CI		%	95%CI		%	P-value†	PR	95%CI	
Total	4.5	4.2	4.7	5.9	5.7	6.2	5.4	5.2	5.6	1.5	<0.001	1.32	1.23	1.43
Alabama	3.6	2.6	5.0	5.9	4.3	7.9	5.5	4.2	7.2	2.3	0.04	1.63	1.05	2.53
Alaska	5.1	3.6	7.1	5.7	4.2	7.8	6.6	4.4	9.8	0.6	0.63	1.12	0.71	1.78
Arizona	3.7	2.5	5.4	7.2	5.3	9.9	5.0	3.7	6.8	3.6	0.01	1.97	1.19	3.26
Arkansas	2.9	2.0	4.3	3.5	2.6	4.6	3.4	2.3	5.2	0.6	0.45	1.20	0.74	1.92
California		‡		6.9	5.7	8.3	6.1	5.3	7.0				‡	
Colorado	6.4	4.9	8.2	5.4	4.4	6.5	5.2	4.3	6.2	-1.0	0.33	0.85	0.61	1.17
Connecticut	5.7	4.5	7.4	6.1	4.9	7.6	5.7	4.3	7.5	0.4	0.69	1.07	0.77	1.49
Delaware	3.9	2.8	5.3	5.6	4.3	7.2	6.6	4.9	8.9	1.7	0.08	1.43	0.95	2.16
District of Columbia		‡		6.5	5.2	8.0	6.8	5.3	8.6		‡		‡	
Florida	6.6	5.4	8.0	7.6	6.4	9.1	5.3	4.4	6.2	1.1	0.26	1.16	0.89	1.50
Georgia	4.5	3.5	5.8	4.5	3.5	5.7	3.9	2.9	5.1	0.0	0.98	1.00	0.70	1.41
Hawaii	4.0	3.0	5.3	8.4	7.1	9.9	7.0	5.6	8.6	4.4	<0.001	2.09	1.50	2.91
Idaho	3.9	3.0	5.2	4.8	3.8	5.9	4.0	3.1	5.3	0.8	0.27	1.22	0.86	1.73
Illinois	4.8	3.2	7.1	7.5	6.3	9.0	6.4	5.0	8.1	2.8	0.02	1.59	1.02	2.46
Indiana	4.6	3.4	6.0	5.2	4.2	6.4	4.1	3.3	5.3	0.6	0.48	1.13	0.79	1.62
Iowa	6.6	5.4	8.0	6.8	5.6	8.3	6.4	4.9	8.3	0.3	0.77	1.04	0.79	1.38
Kansas	5.2	3.9	7.0	4.0	3.3	4.9	4.4	3.5	5.5	-1.2	0.19	0.77	0.54	1.11
Kentucky	2.1	1.4	3.3	3.3	2.3	4.6	4.3	3.3	5.6	1.1	0.13	1.52	0.88	2.63
Louisiana	4.6	3.4	6.2	6.0	4.7	7.7	6.6	5.3	8.2	1.4	0.17	1.31	0.89	1.95
Maine	2.6	1.7	4.0	6.8	5.5	8.5	5.1	4.0	6.3	4.2	<0.001	2.62	1.61	4.28
Maryland	3.1	2.5	3.9	4.8	4.0	5.7	5.7	4.5	7.4	1.7	0.003	1.54	1.15	2.07
Massachusetts	5.0	3.7	6.8	7.4	6.3	8.8	7.3	6.3	8.4	2.4	0.02	1.48	1.04	2.09
Michigan	4.7	3.6	6.2	6.8	6.0	7.8	6.1	5.0	7.4	2.1	0.009	1.44	1.07	1.93
Minnesota	6.1	5.1	7.3	5.5	4.1	7.3	5.3	3.9	7.1	-0.6	0.53	0.90	0.63	1.27
Mississippi	3.3	2.2	5.0	4.4	3.3	5.9	3.6	2.7	4.7	1.1	0.24	1.33	0.81	2.19
Missouri	4.6	3.1	6.7	6.1	4.4	8.2	7.8	6.0	10.2	1.5	0.26	1.32	0.81	2.16
Montana	3.0	2.0	4.7	7.1	5.6	9.0	5.6	4.4	7.1	4.1	<0.001	2.35	1.43	3.85
Nebraska	3.0	2.1	4.3	5.5	4.4	6.8	6.9	5.5	8.6	2.4	0.004	1.79	1.17	2.74
Nevada	6.6	5.0	8.5	8.4	6.6	10.6	6.1	4.6	8.0	1.8	0.18	1.28	0.89	1.82
New Hampshire	4.8	3.6	6.5	6.1	5.1	7.2	7.4	6.0	9.1	1.2	0.18	1.26	0.89	1.78
New Jersey	4.9	3.2	7.5	4.4	3.7	5.1	4.8	3.9	5.9	-0.6	0.62	0.89	0.56	1.40

New Mexico	4.8	3.3	6.9	4.3	3.4	5.5	5.1	3.9	6.6	-0.5	0.65	0.90	0.59	1.39
New York	3.8	2.8	5.2	5.1	4.3	6.1	4.4	3.6	5.3	1.3	0.09	1.34	0.94	1.91
North Carolina	2.9	2.1	4.0	3.3	2.8	3.9	4.1	3.2	5.2	0.4	0.44	1.15	0.80	1.64
North Dakota	3.8	2.8	5.2	6.2	4.7	8.1	5.6	4.2	7.4	2.4	0.02	1.62	1.07	2.46
Ohio	3.0	1.9	4.7	5.8	4.6	7.4	6.2	5.1	7.7	2.8	0.005	1.95	1.16	3.29
Oklahoma	2.2	1.4	3.4	3.8	3.0	4.8	4.5	3.4	5.8	1.6	0.02	1.75	1.04	2.94
Oregon	5.5	4.4	6.8	6.5	5.7	7.4	5.9	4.5	7.7	1.0	0.19	1.18	0.92	1.52
Pennsylvania	6.6	5.3	8.3	5.9	5.0	7.0	4.6	3.8	5.6	-0.8	0.42	0.89	0.67	1.18
Rhode Island	6.5	4.7	8.9	6.1	4.7	7.9	5.6	4.4	7.0	-0.4	0.78	0.94	0.62	1.43
South Carolina	3.8	2.8	5.1	5.9	4.9	7.1	5.3	4.0	6.9	2.2	0.008	1.57	1.10	2.24
South Dakota	4.2	3.0	5.8	5.7	4.4	7.3	5.6	4.3	7.3	1.5	0.15	1.35	0.89	2.04
Tennessee	1.7	1.1	2.7	4.1	3.0	5.5	2.5	1.6	3.7	2.4	0.002	2.39	1.38	4.11
Texas	6.7	5.1	8.6	6.0	4.9	7.2	4.9	4.0	6.0	-0.7	0.51	0.89	0.65	1.24
Utah	1.9	1.3	2.9	3.5	2.7	4.4	3.3	2.6	4.2	1.5	0.01	1.79	1.10	2.92
Vermont	7.2	5.8	8.8	7.6	6.4	8.9	8.5	7.0	10.3	0.4	0.68	1.06	0.81	1.39
Virginia	5.5	4.1	7.2	5.2	4.1	6.7	6.9	5.2	9.1	-0.2	0.83	0.96	0.66	1.39
Washington	3.9	3.0	4.9	5.5	4.9	6.2	5.5	4.8	6.3	1.6	0.003	1.43	1.10	1.85
West Virginia	2.3	1.5	3.5	4.1	3.0	5.6	3.6	2.6	5.1	1.8	0.03	1.78	1.06	2.97
Wisconsin	7.5	5.8	9.6	9.2	7.8	11.0	7.2	5.6	9.2	1.8	0.17	1.23	0.91	1.68
Wyoming	3.4	2.4	4.6	5.1	4.1	6.4	5.0	3.8	6.4	1.8	0.02	1.53	1.04	2.27

CI = confidence interval

*Heavy alcohol use defined as >14 drinks per week for males and >7 drinks per week for females. Respondents missing data on alcohol were excluded.

†P-values were based on 2-sided Wald Chi-Squared test

‡Data are not available.

Supplementary Table 10. Prevalence of Heavy Alcohol Use among Non-Hispanic White Adults aged 20-49 years by State, Behavioral Risk Factor Surveillance System 1995, 2005, and 2010*

State	1995 (n=51,475)			2005 (n=115,360)			2010 (n=97,391)			Absolute difference 2005 vs 1995		Prevalence ratios comparing 2005 vs 1995		
	%	95%CI		%	95%CI		%	95%CI		%	P-value†	PR	95%CI	
Total	4.7	4.4	5.0	6.3	6.0	6.5	6.2	5.9	6.5	1.6	<0.001	1.33	1.23	1.44
Alabama	3.5	2.4	5.1	5.2	3.7	7.4	4.7	3.2	6.7	1.8	0.13	1.50	0.89	2.53
Alaska	5.5	3.8	8.1	5.6	3.8	8.4	7.4	4.5	12.0	0.1	0.96	1.02	0.58	1.77
Arizona	3.8	2.3	6.0	8.0	5.6	11.5	6.0	4.1	8.6	4.3	0.02	2.14	1.18	3.88
Arkansas	2.6	1.6	4.0	3.4	2.5	4.5	3.7	2.3	5.9	0.8	0.28	1.32	0.77	2.26
California		‡		7.4	5.9	9.4	8.5	7.4	9.9		‡		‡	
Colorado	7.0	5.3	9.2	6.2	5.0	7.6	5.6	4.6	6.7	-0.8	0.50	0.89	0.63	1.25
Connecticut	5.8	4.3	7.6	6.8	5.3	8.6	7.0	5.2	9.3	1.0	0.37	1.18	0.82	1.70
Delaware	4.2	2.9	5.9	7.3	5.6	9.4	8.0	5.9	10.9	3.1	0.01	1.74	1.12	2.71
District of Columbia		‡		10.1	7.8	13.0	10.6	8.2	13.8		‡		‡	
Florida	7.3	5.9	9.0	9.2	7.5	11.2	7.2	6.0	8.6	1.9	0.12	1.26	0.94	1.67
Georgia	5.1	3.8	6.7	4.4	3.3	5.9	4.6	3.3	6.3	-0.7	0.50	0.87	0.58	1.31
Hawaii	6.8	4.6	10.1	9.7	7.4	12.6	9.1	6.3	13.0	2.9	0.13	1.42	0.88	2.30
Idaho	3.7	2.8	5.0	4.8	3.8	6.0	4.2	3.2	5.5	1.1	0.17	1.29	0.89	1.87
Illinois	4.3	2.7	6.9	9.0	7.5	10.8	7.5	5.8	9.8	4.7	0.001	2.08	1.25	3.45
Indiana	4.5	3.3	6.1	5.1	4.0	6.4	4.3	3.4	5.5	0.5	0.56	1.12	0.76	1.63
Iowa	6.6	5.4	8.1	6.8	5.5	8.3	6.5	4.9	8.5	0.2	0.88	1.02	0.76	1.37
Kansas	5.0	3.6	6.9	4.4	3.6	5.5	4.7	3.7	5.9	-0.6	0.54	0.88	0.60	1.31
Kentucky	2.1	1.4	3.2	3.1	2.1	4.5	4.4	3.3	5.8	1.0	0.18	1.48	0.83	2.64
Louisiana	5.5	4.0	7.6	7.6	5.7	10.1	7.8	6.1	9.9	2.1	0.15	1.38	0.89	2.13
Maine	2.5	1.6	4.0	6.6	5.3	8.3	5.2	4.1	6.5	4.1	<0.001	2.61	1.58	4.33
Maryland	3.7	2.9	4.8	6.3	5.1	7.6	6.8	5.3	8.6	2.5	0.002	1.68	1.22	2.33
Massachusetts	5.1	3.7	7.1	8.0	6.7	9.6	8.1	6.9	9.4	2.9	0.01	1.57	1.07	2.29
Michigan	4.7	3.5	6.3	7.3	6.3	8.4	6.5	5.2	8.1	2.6	0.003	1.56	1.12	2.17
Minnesota	6.0	5.0	7.3	5.6	4.1	7.6	5.9	4.3	8.1	-0.4	0.68	0.93	0.64	1.34
Mississippi	3.6	2.3	5.6	4.5	3.0	6.5	3.6	2.5	5.0	0.9	0.45	1.26	0.69	2.28
Missouri	5.1	3.4	7.5	5.6	4.3	7.4	8.7	6.5	11.4	0.6	0.67	1.11	0.68	1.81
Montana	3.0	1.9	4.6	6.5	5.1	8.3	5.6	4.4	7.2	3.5	0.001	2.20	1.31	3.69
Nebraska	3.0	2.1	4.4	5.7	4.5	7.2	7.4	5.8	9.4	2.7	0.003	1.88	1.21	2.93
Nevada	6.7	5.0	8.9	8.0	5.8	10.9	8.3	6.1	11.2	1.3	0.42	1.20	0.78	1.84
New Hampshire	4.9	3.6	6.6	6.2	5.2	7.3	7.6	6.2	9.4	1.3	0.16	1.27	0.89	1.82
New Jersey	5.4	3.3	8.6	4.9	4.1	5.8	6.2	4.8	7.8	-0.5	0.73	0.91	0.55	1.51

New Mexico	4.6	2.7	7.7	4.1	2.9	5.9	5.5	3.9	7.7	-0.4	0.76	0.91	0.48	1.71
New York	3.9	2.7	5.6	6.0	4.9	7.3	5.4	4.3	6.7	2.0	0.03	1.52	1.01	2.29
North Carolina	3.3	2.3	4.6	4.2	3.5	5.0	5.0	3.7	6.6	0.9	0.18	1.29	0.87	1.92
North Dakota	3.6	2.5	5.0	6.7	5.1	8.7	5.7	4.2	7.7	3.1	0.005	1.87	1.21	2.89
Ohio	2.7	1.6	4.5	5.9	4.5	7.6	6.6	5.2	8.2	3.2	0.004	2.17	1.21	3.90
Oklahoma	1.9	1.2	3.1	3.1	2.3	4.1	4.4	3.2	6.0	1.2	0.07	1.63	0.92	2.87
Oregon	5.2	4.2	6.5	6.6	5.8	7.5	6.2	4.8	8.0	1.4	0.07	1.26	0.97	1.63
Pennsylvania	6.3	4.9	8.1	6.2	5.2	7.3	4.7	3.9	5.7	-0.1	0.89	0.98	0.72	1.33
Rhode Island	6.8	4.8	9.6	6.6	4.9	8.8	6.4	5.0	8.2	-0.2	0.87	0.96	0.61	1.52
South Carolina	4.4	3.0	6.2	7.1	5.9	8.5	6.3	4.5	8.6	2.7	0.009	1.62	1.08	2.43
South Dakota	4.2	3.0	5.8	5.9	4.4	7.7	5.6	4.2	7.4	1.7	0.12	1.40	0.92	2.15
Tennessee	1.9	1.2	3.1	3.9	3.0	5.2	2.6	1.6	4.1	2.0	0.007	2.04	1.17	3.55
Texas	6.4	4.6	8.8	5.8	4.6	7.4	6.0	4.6	7.7	-0.5	0.68	0.92	0.61	1.37
Utah	1.8	1.1	2.8	3.1	2.4	4.1	3.4	2.6	4.3	1.4	0.02	1.77	1.05	2.98
Vermont	7.1	5.7	8.8	7.3	6.2	8.7	8.5	6.9	10.3	0.3	0.79	1.04	0.78	1.37
Virginia	6.5	4.9	8.7	5.5	4.3	7.0	8.8	6.5	11.7	-1.0	0.38	0.84	0.58	1.23
Washington	4.2	3.3	5.4	6.1	5.4	6.9	6.0	5.2	7.0	1.9	0.003	1.46	1.11	1.92
West Virginia	2.5	1.6	3.7	4.4	3.2	6.0	3.4	2.4	4.8	1.9	0.03	1.79	1.07	3.00
Wisconsin	7.0	5.3	9.2	9.2	7.6	11.1	6.9	5.2	9.1	2.2	0.09	1.32	0.94	1.84
Wyoming	3.1	2.2	4.4	4.7	3.7	5.9	5.4	4.1	7.1	1.5	0.05	1.49	0.98	2.26

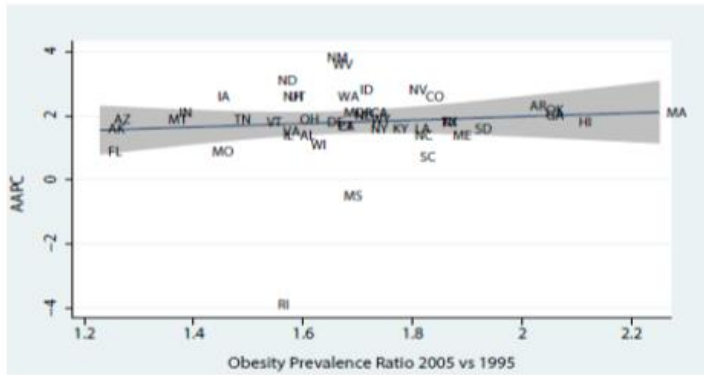
CI = confidence interval

*Heavy alcohol use defined as >14 drinks per week for males and >7 drinks per week for females. Respondents missing data on alcohol were excluded.

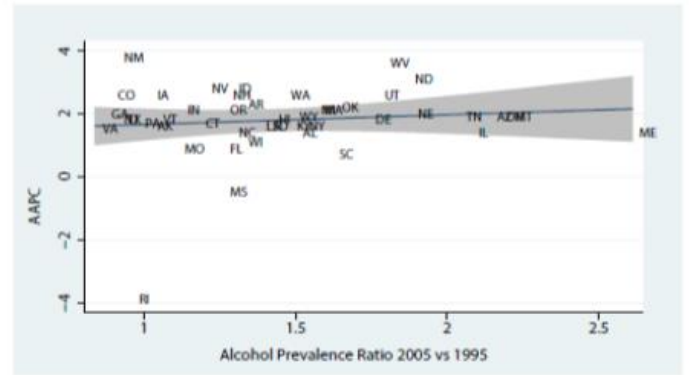
†P-values were based on 2-sided Wald Chi-Squared test

‡Data are not available.

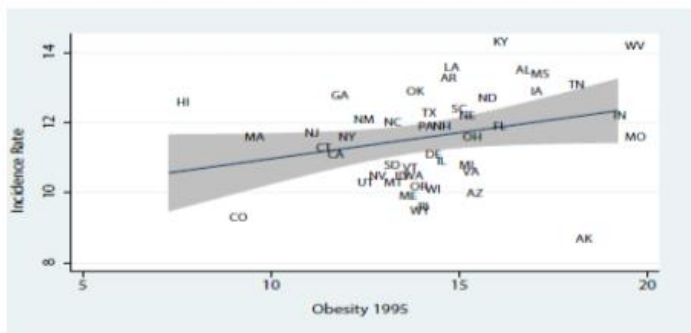
Supplementary Figure



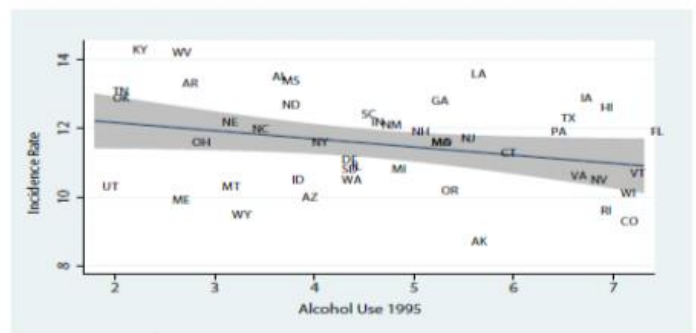
$r = 0.1, P = 0.47$



$r = 0.1, P = 0.45$



$r = 0.3, P = 0.06$



$r = -0.3, P = 0.06$

— Fitted values
 ■ 95% Confidence interval

Supplementary Figure 1. Correlation between colorectal cancer incidence and obesity prevalence (left) and heavy alcohol consumption (right) among non-Hispanic white adults aged 20-49 years. AAPC = Average Annual Percent Change in colorectal cancer incidence rates during 2006-2015. Pearson correlation coefficient with corresponding two-sided P-values were calculated using STATA version 14.1.