Utah BRFSS Measures Small Area Findings 2001–2005

1. Fair or Poor Health

Measure Definition: "*Would you say that in general your health is excellent, very good, good, fair or poor?*" ***[Fair or poor health]***

Why is fair or poor health important to public health?

The general health status question, also referred to as self-rated health, is the first of a set of four health-related quality of life questions that have been used on the BRFSS since 1993 and on the National Health and Nutrition Examination Survey (NHANES) since 2000. The Centers for Disease Control and Prevention (CDC) developed this set of standard questions in the early 1990s at the request of state and local health departments and others in order to track health-related quality of life (HRQOL) in states and communities.

HRQOL complements mortality and morbidity as measures used for tracking changes and disparities in population health. Concerns about the aging of the population, the burden of chronic disease, environmental health threats, health behavior trends, and the health care system have lead to increased interest in monitoring overall population health. Population-based surveillance of HRQOL is used to monitor progress toward achieving the two overall national health goals for Healthy People 2010: (1) increase the quality and years of healthy life and (2) eliminate health disparities.[1]

The CDC HRQOL measures have demonstrated reliability for population health surveillance.[2] For this report, the self-rated health question was divided into two groups: fair or poor health and excellent, very good, or good health. For this analysis we looked at the percentage of adults reporting fair or poor health.

Risk factors for fair or poor health

According to a recent report using national BRFSS data from 1993–2002, self-rated health differed substantially among socioeconomic and demographic subgroups. A higher percentage of women reported fair or poor health compared with men. Older adults were more likely to report fair or poor health than younger adults. More Hispanic, American Indian/Alaska Native, and non-Hispanic Black persons reported fair or poor health than non-Hispanic White persons. A higher percentage of widowed, separated, and divorced persons reported fair or poor health compared with married persons. The percentage of adults with less than a high school education who reported fair or poor health was higher than that of adults with more education. The percentage of low-income adults who reported fair or poor health was significantly higher than adults with higher annual household incomes. Persons who were retired, unemployed, and unable to work more often reported fair or poor health than adults who were employed. Adults without health insurance more often reported fair or poor health than adults with health insurance. Compared with persons without any chronic medical conditions, persons with such conditions reported fair or poor health more often. Because the BRFSS is a cross-sectional survey, the characteristics studied were assessed at a single point in time. Thus, in some cases, it is not possible to determine whether the characteristic preceded or followed an individual's report of fair or poor health.[3]

Fair or poor health in Utah

The age-adjusted combined state percentage of adults reporting fair or poor health from 2001 to 2005 was 12.7%. This was substantially lower than the comparable rate of 15.9% for the U.S. adult population as a whole. Using the crude Utah rate of 11.5% and the midpoint population in 2003, this translates into approximately 190,000 Utah adults with self-rated fair or poor health in 2003. The age-adjusted prevalence of fair or

Utah Objective: No objective listed.
HP2010 Goal: Overarching – Improve the quality and years of healthy life and eliminate health disparities.

Fair or poor health in Utah (continued)

poor health varied by local health district, ranging from a low of 9.3% in Summit County to a high of 17.4% in Central Utah. Three local health districts, Central Utah, Southeastern Utah, and TriCounty, had age-adjusted rates higher than the state. Davis County and Summit County had rates lower than the state rate. The remaining seven local health districts had rates similar to the state rate.

The age-adjusted rate of fair or poor health varied greatly among Utah's small areas, from a low of 4.2% in Pleasant Grove/Lindon to a high of 34.0% in Glendale. There was substantial variation in this measure among small areas within some local health districts. For example, the age-adjusted rates varied in Davis County health district from a low of 4.8% in Farmington/Centerville to a high of 12.9% in Clearfield/Hill AFB. These rates were statistically significantly different. Please refer to the accompanying bar graph, table, and maps for more information about small areas and self-rated health. The shading on the maps indicates which small areas differed substantially from the state rate.

The Utah data also show that the percentage of people reporting fair or poor health increased with increasing age and decreased with increasing income as illustrated in the graphs below. This means that health districts and small areas with a higher percentage of people in older age groups or lower income categories would most likely have a greater percentage of adults reporting fair or poor health. Age-adjusted rates control for population age differences.

Figure 1.A: Fair or Poor Health by Age Group, Utah Adults, 2001-2005

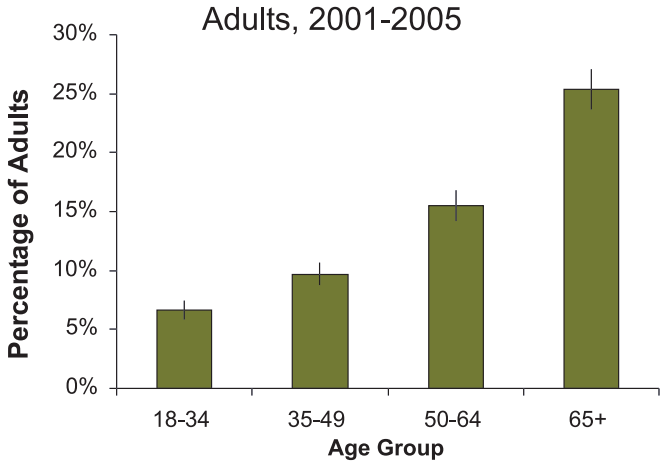
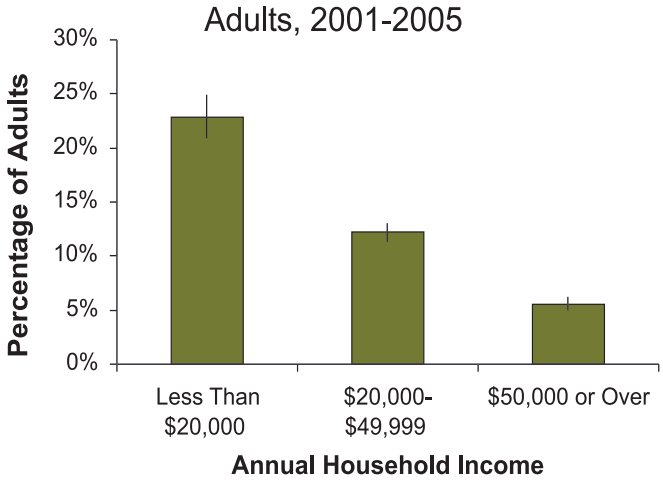


Figure 1.B: Fair or Poor Health by Income, Utah Adults, 2001-2005

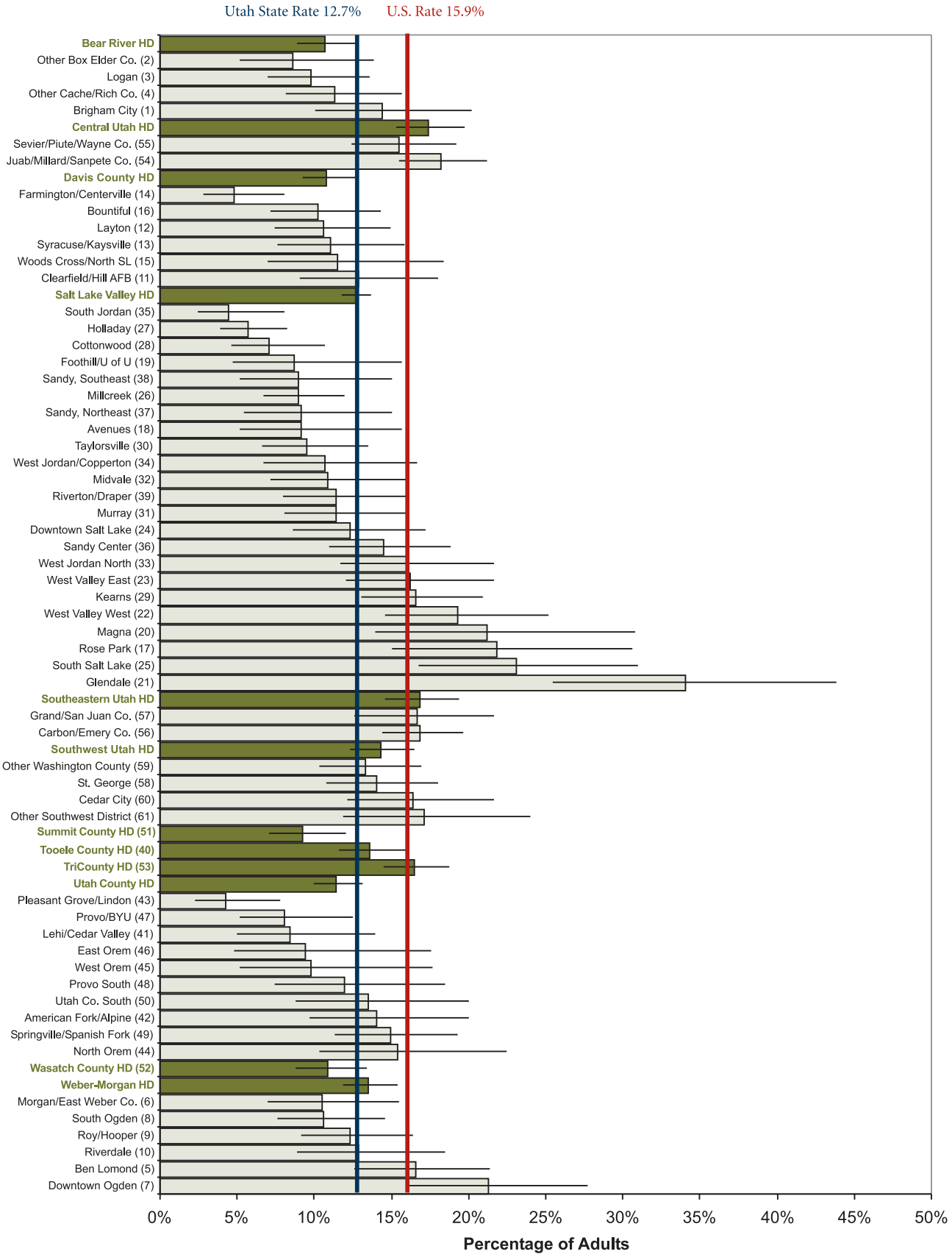


Prevention/Resources

The Utah Department of Health works collaboratively with Utah's local health districts and other public and private organizations through many programs in order to prevent avoidable illness, injury, disability, and premature death; assure access to affordable, quality health care; and to promote healthy lifestyles. Many of the specific programs are discussed in the context of other BRFSS measures included in this report, such as the current smoking and diabetes measures.

1. Fair or Poor Health

Figure 1.1: Percentage of Adults Who Reported Fair or Poor Health by Local Health District, Small Area, Utah, and U.S., Adults Aged 18+, 2001–2005 (Age-adjusted)



1. Fair or Poor Health

Table 1: Fair or Poor Health by Health District, Small Area, Utah, and U.S., 2001-2005

State Rank*	State, Health District, or Small Area	2003 Population 18+	Number of Adults Reporting Fair or Poor Health	Crude Rate	Age-adjusted Rate	95% Confidence Interval Lower	95% Confidence Interval Upper
	U.S.	217,803,051	34,804,928	16.0%	15.9%	15.8%	16.1%
	State of Utah	1,657,454	190,441	11.5%	12.7%	12.2%	13.3%
	Bear River HD	98,027	9,126	9.3%	10.7%	8.9%	12.8%
41	Brigham City (1)	14,566	2,068	14.2%	14.4%	10.0%	20.2%
17	Logan (3)	45,904	3,314	7.2%	9.8%	6.9%	13.6%
8	Other Box Elder Co. (2)	14,636	1,262	8.6%	8.6%	5.2%	13.9%
27	Other Cache/Rich Co. (4)	22,921	2,356	10.3%	11.4%	8.1%	15.6%
	Central Utah HD	47,558	8,151	17.1%	17.4%	15.3%	19.7%
55	Juab/Millard/Sanpete Co. (54)	31,637	5,682	18.0%	18.2%	15.5%	21.2%
45	Sevier/Piute/Wayne Co. (55)	15,921	2,496	15.7%	15.5%	12.4%	19.2%
	Davis County HD	175,027	16,383	9.4%	10.8%	9.2%	12.7%
19	Bountiful (16)	33,318	3,169	9.5%	10.2%	7.2%	14.4%
34	Clearfield/Hill AFB (11)	37,329	4,177	11.2%	12.9%	9.1%	18.0%
3	Farmington/Centerville (14)	19,034	683	3.6%	4.8%	2.8%	8.1%
21	Layton (12)	46,815	4,850	10.4%	10.6%	7.4%	15.0%
26	Syracuse/Kaysville (13)	24,542	2,123	8.7%	11.1%	7.6%	15.8%
30	Woods Cross/North SL (15)	13,989	1,437	10.3%	11.5%	6.9%	18.4%
	Salt Lake Valley HD	658,810	76,817	11.7%	12.7%	11.8%	13.7%
13	Avenues (18)	18,959	1,759	9.3%	9.2%	5.2%	15.7%
5	Cottonwood (28)	33,297	2,471	7.4%	7.1%	4.7%	10.7%
32	Downtown Salt Lake (24)	42,808	4,302	10.1%	12.3%	8.6%	17.2%
9	Foothill/U of U (19)	17,778	1,687	9.5%	8.7%	4.7%	15.6%
61	Glendale (21)	18,642	6,236	33.5%	34.0%	25.4%	43.9%
4	Holladay (27)	35,956	2,679	7.5%	5.7%	3.9%	8.2%
51	Kearns (29)	42,995	5,220	12.1%	16.6%	13.0%	20.9%
57	Magna (20)	15,623	2,445	15.7%	21.2%	14.0%	30.8%
24	Midvale (32)	21,672	2,052	9.5%	10.8%	7.2%	16.1%
11	Millcreek (26)	44,008	4,471	10.2%	9.0%	6.7%	11.9%
29	Murray (31)	24,072	2,930	12.2%	11.4%	8.1%	16.0%
28	Riverton/Draper (39)	41,391	3,228	7.8%	11.4%	8.0%	16.0%
59	Rose Park (17)	22,639	4,732	20.9%	21.8%	15.0%	30.6%
42	Sandy Center (36)	36,106	4,127	11.4%	14.5%	11.0%	18.9%
12	Sandy, Northeast (37)	18,245	1,569	8.6%	9.1%	5.4%	15.0%
10	Sandy, Southeast (38)	20,781	1,390	6.7%	9.0%	5.2%	15.1%
2	South Jordan (35)	20,931	873	4.2%	4.4%	2.4%	8.0%
60	South Salt Lake (25)	18,456	4,010	21.7%	23.1%	16.7%	31.0%
16	Taylorsville (30)	27,372	2,570	9.4%	9.5%	6.6%	13.5%
46	West Jordan North (33)	30,391	3,659	12.0%	16.1%	11.7%	21.6%
23	West Jordan/Copperton (34)	26,360	2,278	8.6%	10.7%	6.7%	16.6%
47	West Valley East (23)	35,527	5,446	15.3%	16.3%	12.0%	21.6%
56	West Valley West (22)	44,794	8,417	18.8%	19.3%	14.5%	25.2%
	Southeastern Utah HD	36,828	6,246	17.0%	16.9%	14.7%	19.5%
53	Carbon/Emery Co. (56)	21,451	3,690	17.2%	16.9%	14.4%	19.6%
52	Grand/San Juan Co. (57)	15,377	2,537	16.5%	16.6%	12.6%	21.7%
	Southwest Utah HD	116,150	16,888	14.5%	14.3%	12.3%	16.5%
48	Cedar City (60)	22,401	2,845	12.7%	16.4%	12.2%	21.7%
54	Other Southwest District (61)	15,384	2,712	17.6%	17.1%	11.9%	24.0%
36	Other Washington County (59)	32,503	4,469	13.8%	13.3%	10.4%	16.9%
39	St. George (58)	45,862	6,595	14.4%	14.0%	10.8%	18.0%
14	**Summit County HD (51)**	24,525	1,950	8.0%	9.3%	7.1%	12.0%
38	**Tooele County HD (40)**	32,458	3,824	11.8%	13.6%	11.6%	15.9%
49	**TriCounty HD (53)**	28,023	4,444	15.9%	16.5%	14.5%	18.7%
	Utah County HD	278,832	25,987	9.3%	11.5%	10.0%	13.2%
40	American Fork/Alpine (42)	26,819	3,374	12.6%	14.1%	9.7%	20.0%
15	East Orem (46)	14,955	989	6.6%	9.4%	4.8%	17.6%
7	Lehi/Cedar Valley (41)	18,752	1,172	6.3%	8.5%	5.0%	13.9%
44	North Orem (44)	25,965	3,575	13.8%	15.4%	10.3%	22.5%
1	Pleasant Grove/Lindon (43)	24,636	983	4.0%	4.2%	2.3%	7.8%
6	Provo/BYU (47)	39,401	2,691	6.8%	8.1%	5.1%	12.5%
31	Provo South (48)	48,138	2,003	4.2%	11.9%	7.5%	18.5%
43	Springville/Spanish Fork (49)	41,036	5,195	12.7%	14.9%	11.4%	19.3%
37	Utah Co. South (50)	17,363	2,158	12.4%	13.5%	8.8%	20.0%
18	West Orem (45)	21,774	2,450	11.3%	9.8%	5.2%	17.7%
25	**Wasatch County HD (52)**	12,514	1,295	10.4%	10.9%	8.8%	13.4%
	Weber-Morgan HD	148,702	18,989	12.8%	13.6%	11.9%	15.5%
50	Ben Lomond (5)	33,215	4,713	14.2%	16.5%	12.6%	21.4%
58	Downtown Ogden (7)	21,684	4,038	18.6%	21.3%	16.0%	27.8%
20	Morgan/East Weber Co. (6)	24,131	2,314	9.6%	10.5%	7.0%	15.5%
35	Riverdale (10)	15,522	2,091	13.5%	12.9%	8.8%	18.5%
33	Roy/Hooper (9)	27,898	2,885	10.3%	12.3%	9.2%	16.4%
22	South Ogden (8)	26,255	2,967	11.3%	10.6%	7.6%	14.6%

*State rank is by 61 small areas for age-adjusted rate; 1 is always the lowest rate in the state and 61 is always the highest rate in the state.

Figure 1.2: Fair or Poor Health by Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)

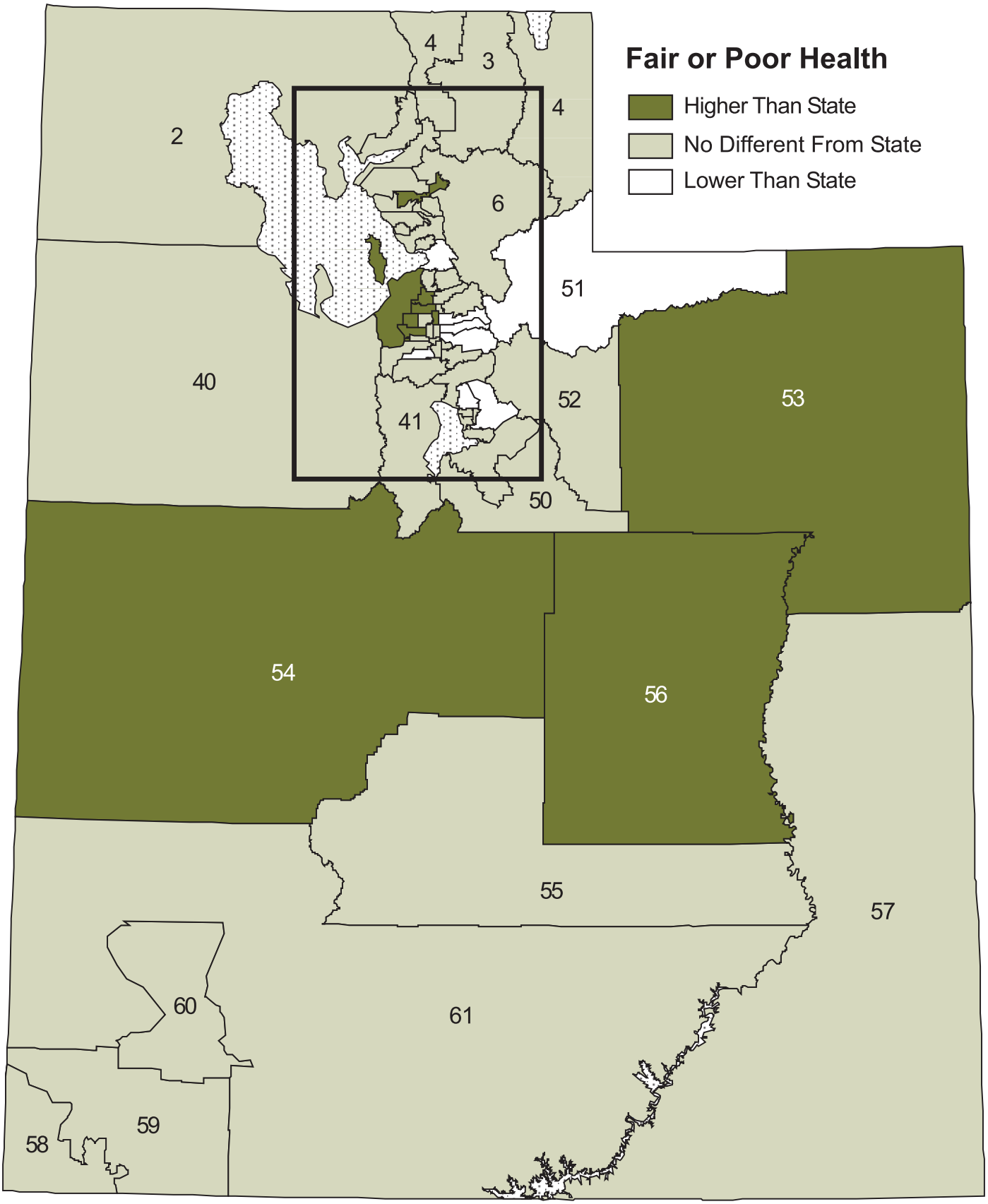
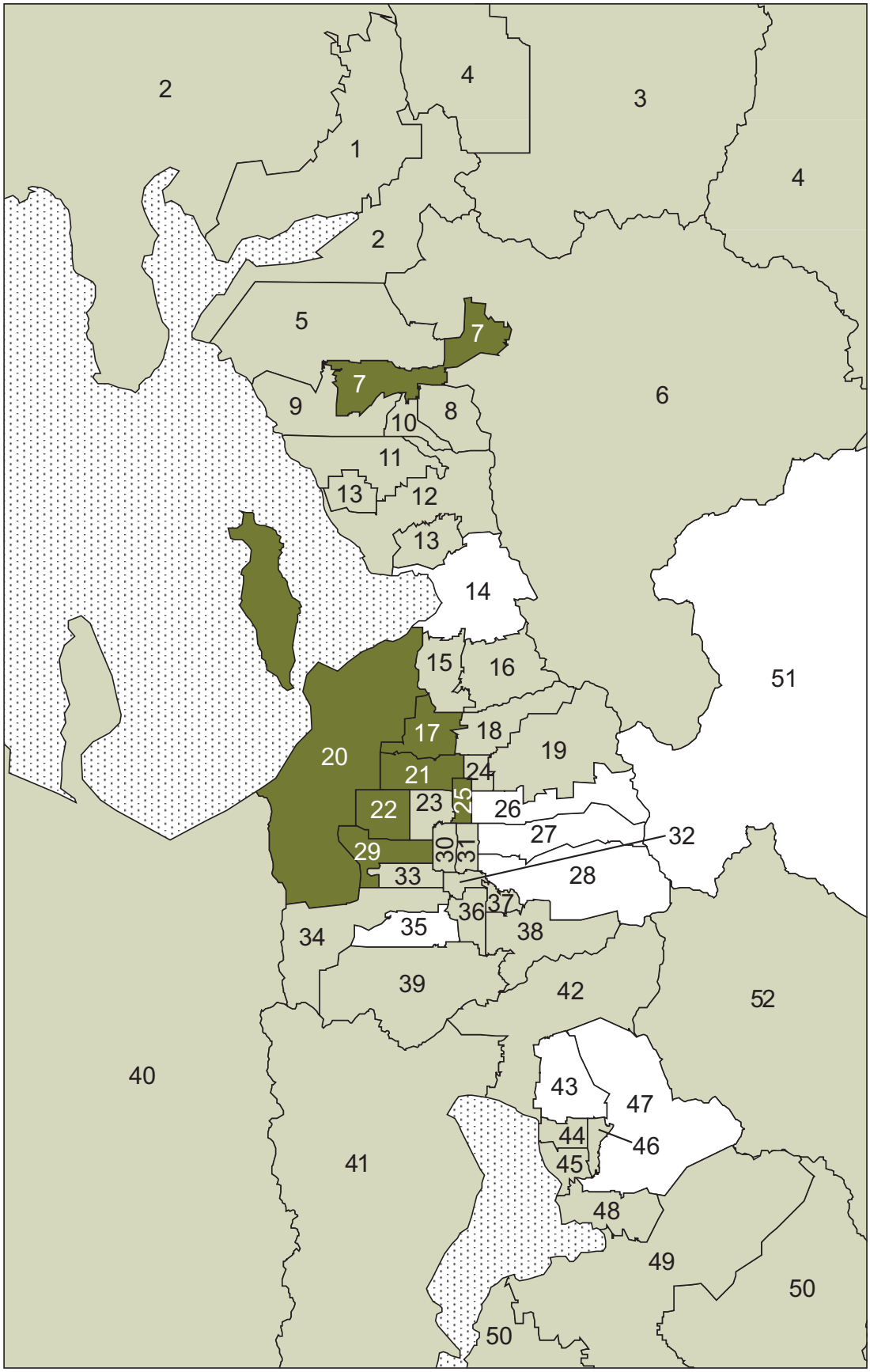


Figure 1.3: Fair or Poor Health by Small Area, Wasatch Front Adults Aged 18+, 2001–2005 (Age-adjusted)



2. Poor Physical Health

Measure Definition: *"Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?"* ***[Seven or more days of poor physical health]***

Why is recent poor physical health important to public health?

For this report, we analyzed the percentage of adults who reported seven or more days of poor physical health in the past 30 days. This indicator is one approach to measuring the overall health of a population. It is a global measure of recent physical symptoms that can be used to compare across populations. A person's self perception about his or her physical health is important in that it can serve as a proxy measure for the burden of both acute and chronic health conditions. And, because people generally seek health care only when they feel unhealthy, self-perceptions are also predictive of the burden on the health care delivery system.

Previous Utah Department of Health (UDOH) reports had used one or more days in the past 30 days as a measure of poor physical health. We became concerned that using "one or more days" identified many people with minor and transient illnesses or injuries that had little effect on their overall well being or on the health care system. In 2004, therefore, a number of UDOH staff met to decide on a number of days of poor physical health in the past 30 that could be used to identify a population experiencing substantial physical health problems. We wanted the measure to permit us to compare the burden of poor physical health across different populations and assess how chronic diseases and chronic disease risk factors related to overall physical health status. After looking at many of these factors, the group chose seven or more days of poor physical health in the past 30 days as the indicator of recent poor physical health. This measure was found to have good positive association with fair or poor health and a number of chronic health conditions and health risk factors. It also had an intuitive appeal, in that a week or more of poor physical health in the past month seemed to present a significant burden on an individual.

Risk factors for poor physical health

According to the analysis of the combined Utah BRFSS data from 2001–2005, this measure of poor physical health differed among socioeconomic and demographic subgroups in Utah. A higher percentage of women reported seven or more days of poor physical health compared with men. Older adults were more likely to report seven or more days of poor physical health than younger adults. A higher percentage of widowed, separated, or divorced persons reported seven or more days of poor physical health compared with married persons. The percentage of adults with less than a high school education who reported seven or more days of poor physical health was higher than that of adults with more education. The percentage of low-income adults who reported seven or more days of poor physical health was significantly higher than adults with higher annual household incomes. The percentage was higher for persons who were retired, unemployed, and unable to work than for adults who were employed. Compared with persons without any chronic medical conditions, persons with such conditions more often reported seven or more days of poor health.

It must be noted that since the BRFSS is a cross-sectional survey, the characteristics studied were assessed at a single point in time. Thus, in some cases, it is not possible to determine whether the characteristic preceded or followed an individual's response to this question.

Utah Objective: No objective listed.
HP2010 Goal: Overarching – Improve the quality and years of healthy life and eliminate health disparities.

2. Poor Physical Health

Poor physical health in Utah

Using the combined 2001–2005 data, the age-adjusted percentage of Utah adults reporting seven or more days of poor physical health was 14.6%. The age-adjusted percentage for the entire U.S. adult population was 15.1%. The corresponding crude rate in Utah was slightly lower at 13.8%, most likely due to the fact that Utah has a younger population than the U.S. and that poor physical health is less likely in younger adulthood. Using the overall crude percentage, this means that in 2003 approximately 229,000 Utah adults had seven or more days of poor physical health.

This percentage varied among Utah's local health districts, from a low of 12.3%, age-adjusted, in Davis County and Summit County to a high of 18.9% in Southeastern Utah. Central Utah and Southeastern Utah rates were higher than the overall state rate.

Overall, the small area percentages for this measure of physical health ranged from a low of 7.9%, age-adjusted, in Woods Cross/North SL to a high of 25.0% in Magna.

In Davis County health district, the rate in Woods Cross/North SL was lower than the state rate. In the Salt Lake Valley health district, Magna and West Jordan North had rates higher than the state rate. In Southeastern Utah health district, this measure in Carbon/Emery Co. was higher than the state rate.

Figure 2.A: 7+ Days of Poor Physical Health by Health Status, Utah Adults, 2001-2005

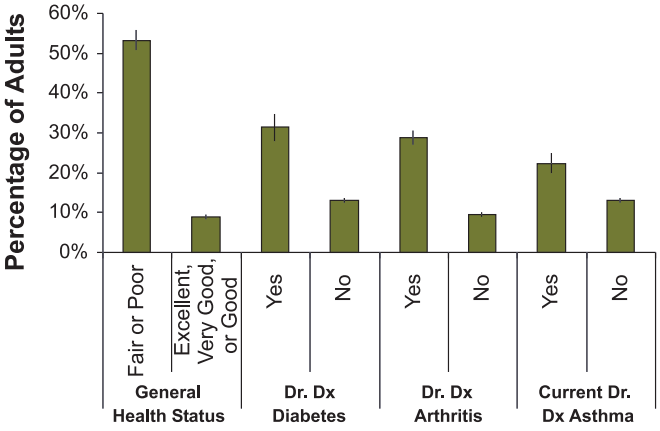
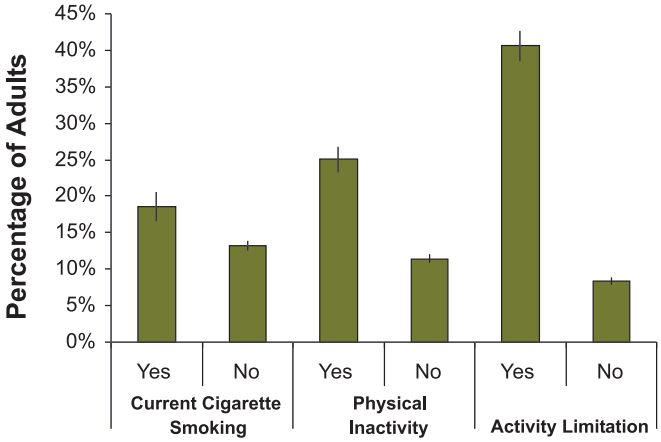


Figure 2.B: 7+ Days of Poor Physical Health by Risk Factor, Utah Adults, 2001-2005

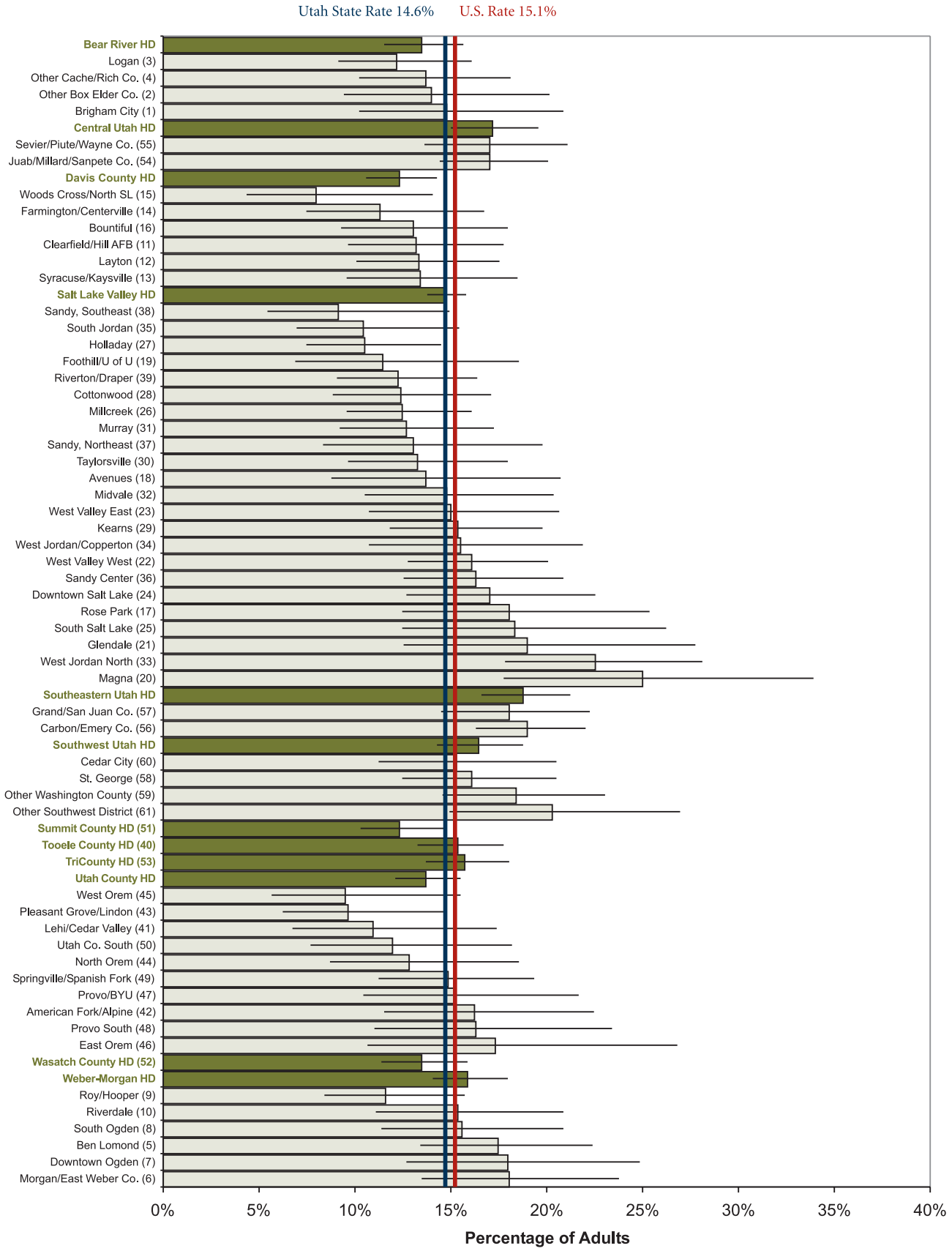


Prevention/Resources

The Utah Department of Health works collaboratively with Utah's local health districts and other public and private organizations through many programs in order to prevent avoidable illness, injury, disability, and premature death; assure access to affordable, quality health care; and to promote healthy lifestyles. There is a wealth of information about Utah resources on the UDOH website www.health.utah.gov.

2. Poor Physical Health

Figure 2.1: Percentage of Adults Who Reported Seven or More Days of Poor Physical Health by Local Health District, Small Area, Utah, and U.S., Adults Aged 18+, 2001–2005 (Age-adjusted)



2. Poor Physical Health

Table 2: 7+ Days Poor Physical Health by Health District, Small Area, Utah, and U.S., 2001-2005

State Rank*	State, Health District, or Small Area	2003 Population 18+	Number of Adults Reporting 7+ Days Poor Physical Health	Crude Rate	Age-adjusted Rate	95% Confidence Interval Lower	95% Confidence Interval Upper
	U.S.	217,803,051	32,779,359	15.1%	15.1%	15.0%	15.2%
	State of Utah	1,657,454	229,060	13.8%	14.6%	14.1%	15.2%
	Bear River HD	98,027	12,851	13.1%	13.4%	11.5%	15.7%
30	Brigham City (1)	14,566	2,125	14.6%	14.8%	10.2%	20.9%
12	Logan (3)	45,904	5,637	12.3%	12.2%	9.1%	16.1%
28	Other Box Elder Co. (2)	14,636	2,090	14.3%	14.0%	9.4%	20.1%
27	Other Cache/Rich Co. (4)	22,921	2,966	12.9%	13.7%	10.2%	18.1%
	Central Utah HD	47,558	7,904	16.6%	17.1%	15.0%	19.5%
47	Juab/Millard/Sanpete Co. (54)	31,637	5,154	16.3%	17.0%	14.4%	20.1%
46	Sevier/Piute/Wayne Co. (55)	15,921	2,738	17.2%	17.0%	13.6%	21.1%
	Davis County HD	175,027	19,165	11.0%	12.3%	10.6%	14.3%
20	Bountiful (16)	33,318	4,268	12.8%	13.0%	9.3%	18.0%
21	Clearfield/Hill AFB (11)	37,329	3,584	9.6%	13.2%	9.7%	17.8%
8	Farmington/Centerville (14)	19,034	1,905	10.0%	11.3%	7.5%	16.7%
23	Layton (12)	46,815	5,669	12.1%	13.4%	10.1%	17.6%
24	Syracuse/Kaysville (13)	24,542	2,570	10.5%	13.4%	9.6%	18.5%
1	Woods Cross/North SL (15)	13,989	1,192	8.5%	7.9%	4.4%	14.0%
	Salt Lake Valley HD	658,810	92,168	14.0%	14.7%	13.8%	15.8%
26	Avenues (18)	18,959	2,406	12.7%	13.7%	8.8%	20.7%
15	Cottonwood (28)	33,297	4,076	12.2%	12.4%	8.9%	17.1%
48	Downtown Salt Lake (24)	42,808	6,973	16.3%	17.0%	12.7%	22.6%
9	Foothill/U of U (19)	17,778	2,229	12.5%	11.5%	6.9%	18.5%
58	Glendale (21)	18,642	3,292	17.7%	19.0%	12.6%	27.7%
6	Holladay (27)	35,956	4,293	11.9%	10.5%	7.5%	14.5%
37	Kearns (29)	42,995	6,402	14.9%	15.4%	11.8%	19.8%
61	Magna (20)	15,623	3,398	21.8%	25.0%	17.7%	33.9%
29	Midvale (32)	21,672	3,320	15.3%	14.8%	10.5%	20.4%
16	Millcreek (26)	44,008	6,016	13.7%	12.5%	9.6%	16.1%
17	Murray (31)	24,072	3,214	13.4%	12.7%	9.2%	17.2%
13	Riverton/Draper (39)	41,391	4,541	11.0%	12.3%	9.1%	16.4%
54	Rose Park (17)	22,639	3,907	17.3%	18.0%	12.5%	25.3%
44	Sandy Center (36)	36,106	5,528	15.3%	16.3%	12.6%	20.9%
19	Sandy, Northeast (37)	18,245	2,199	12.1%	13.0%	8.3%	19.8%
2	Sandy, Southeast (38)	20,781	1,532	7.4%	9.1%	5.4%	14.9%
5	South Jordan (35)	20,931	2,332	11.1%	10.5%	7.0%	15.5%
55	South Salt Lake (25)	18,456	3,150	17.1%	18.3%	12.4%	26.2%
22	Taylorsville (30)	27,372	3,334	12.2%	13.2%	9.6%	18.0%
60	West Jordan North (33)	30,391	5,255	17.3%	22.5%	17.8%	28.2%
38	West Jordan/Copperton (34)	26,360	3,959	15.0%	15.5%	10.8%	21.9%
32	West Valley East (23)	35,527	4,889	13.8%	15.0%	10.7%	20.7%
41	West Valley West (22)	44,794	6,365	14.2%	16.1%	12.8%	20.1%
	Southeastern Utah HD	36,828	6,758	18.4%	18.9%	16.7%	21.3%
57	Carbon/Emery Co. (56)	21,451	4,037	18.8%	19.0%	16.3%	22.0%
53	Grand/San Juan Co. (57)	15,377	2,686	17.5%	18.0%	14.5%	22.3%
	Southwest Utah HD	116,150	19,467	16.8%	16.4%	14.3%	18.7%
34	Cedar City (60)	22,401	3,004	13.4%	15.3%	11.3%	20.5%
59	Other Southwest District (61)	15,384	2,988	19.4%	20.3%	14.9%	26.9%
56	Other Washington County (59)	32,503	6,000	18.5%	18.4%	14.6%	23.0%
42	St. George (58)	45,862	7,517	16.4%	16.1%	12.5%	20.5%
14	**Summit County HD (51)**	24,525	2,776	11.3%	12.3%	10.3%	14.7%
36	**Tooele County HD (40)**	32,458	4,648	14.3%	15.4%	13.3%	17.7%
40	**TriCounty HD (53)**	28,023	4,338	15.5%	15.7%	13.7%	18.0%
	Utah County HD	278,832	34,268	12.3%	13.8%	12.2%	15.6%
43	American Fork/Alpine (42)	26,819	4,291	16.0%	16.2%	11.5%	22.4%
49	East Orem (46)	14,955	2,336	15.6%	17.3%	10.7%	26.8%
7	Lehi/Cedar Valley (41)	18,752	1,890	10.1%	11.0%	6.7%	17.4%
18	North Orem (44)	25,965	3,053	11.8%	12.8%	8.7%	18.6%
4	Pleasant Grove/Lindon (43)	24,636	2,042	8.3%	9.7%	6.2%	14.7%
33	Provo/BYU (47)	39,401	5,902	15.0%	15.2%	10.4%	21.7%
45	Provo South (48)	48,138	4,053	8.4%	16.3%	11.0%	23.4%
31	Springville/Spanish Fork (49)	41,036	5,585	13.6%	14.9%	11.3%	19.4%
11	Utah Co. South (50)	17,363	1,839	10.6%	12.0%	7.7%	18.2%
3	West Orem (45)	21,774	2,868	13.2%	9.5%	5.6%	15.5%
25	**Wasatch County HD (52)**	12,514	1,651	13.2%	13.5%	11.4%	15.9%
	Weber-Morgan HD	148,702	22,900	15.4%	15.9%	14.0%	17.9%
50	Ben Lomond (5)	33,215	5,142	15.5%	17.4%	13.4%	22.4%
51	Downtown Ogden (7)	21,684	3,675	17.0%	18.0%	12.7%	24.8%
52	Morgan/East Weber Co. (6)	24,131	4,158	17.2%	18.0%	13.4%	23.8%
35	Riverdale (10)	15,522	2,636	17.0%	15.4%	11.1%	20.9%
10	Roy/Hooper (9)	27,898	3,122	11.2%	11.6%	8.4%	15.7%
39	South Ogden (8)	26,255	4,125	15.7%	15.5%	11.4%	20.8%

*State rank is by 61 small areas for age-adjusted rate; 1 is always the lowest rate in the state and 61 is always the highest rate in the state.

Figure 2.2: 7+ Days of Poor Physical Health by Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)

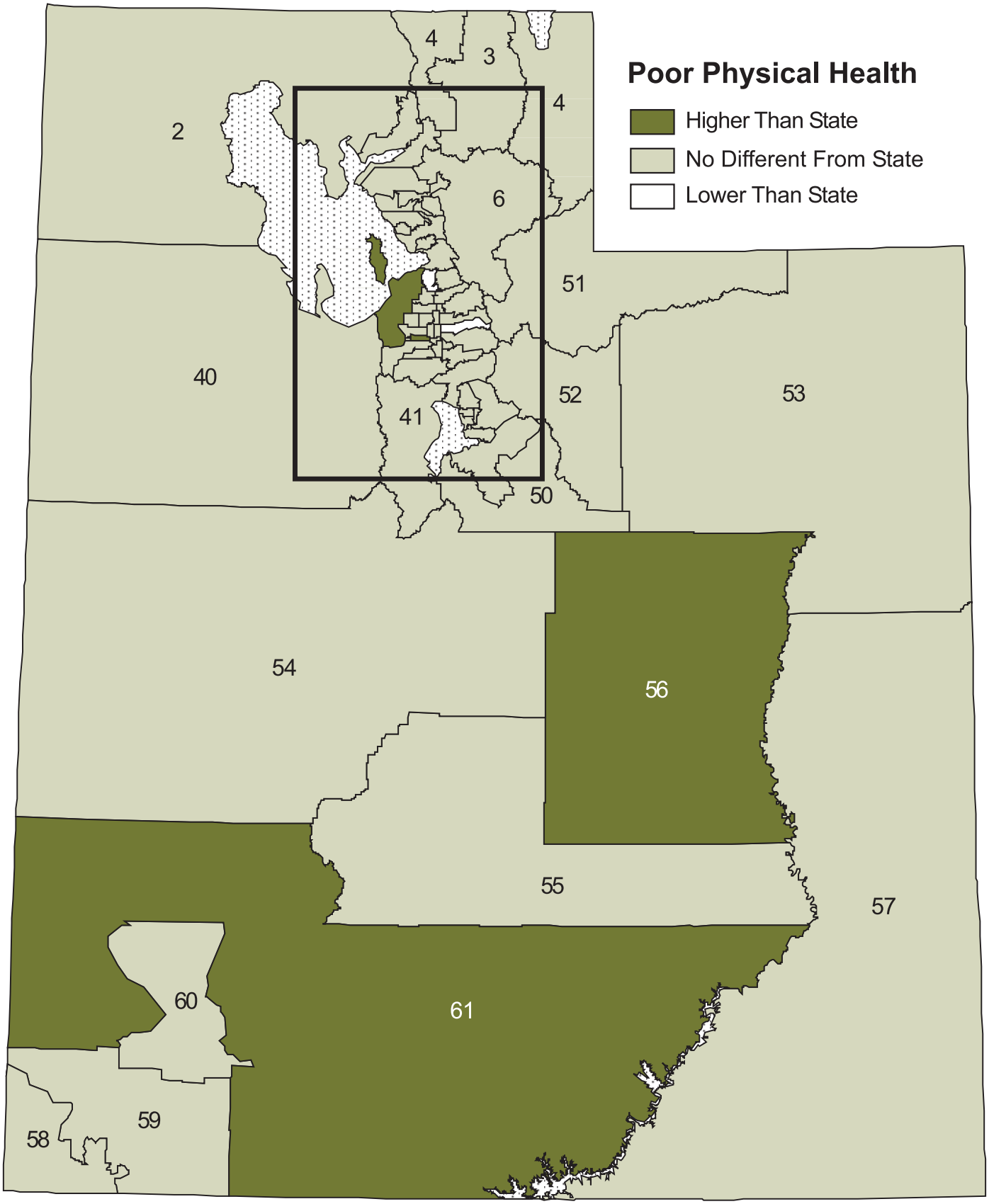
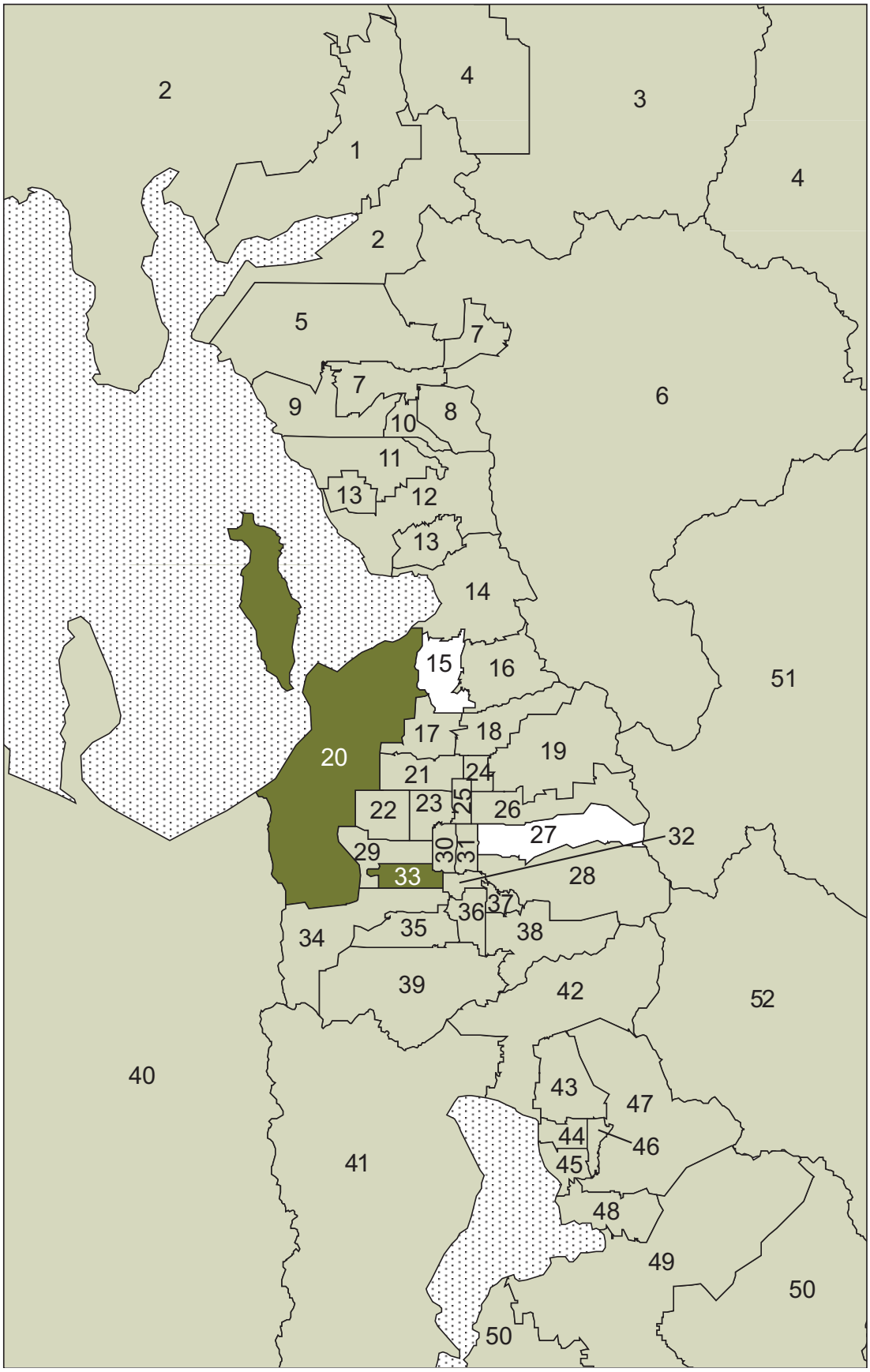


Figure 2.3: 7+ Days of Poor Physical Health by Small Area, Wasatch Front Adults 18+, 2001–2005 (Age-adjusted)



3. Poor Mental Health

Measure Definition: *"Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?"* ***[Seven or more days of poor mental health]***

Why is poor mental health important to public health?

Mental health is a state of successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and to cope with adversity.[4] Mental health is one of the Healthy People 2010 Leading Health Indicators that reflect the major health concerns in the U.S. at the beginning of the 21st century. The Global Burden of Disease study conducted by the World Health Organization, the World Bank, and Harvard University, revealed that mental illness ranks second in the burden of disease in established market economies such as the U.S.[5] Approximately 20% of the U.S. population is affected by mental illness in any given year.[6] The BRFSS mental health question is an attempt to obtain a global measure of recent mental and emotional distress.[7] It is one of a set of four health-related quality of life (HRQOL) questions developed by the Centers for Disease Control and Prevention (CDC) and included on the BRFSS since 1993.

For this report, we looked at the percentage of adults who reported seven or more days of poor mental health in the past 30 days. Previous Utah Department of Health (UDOH) reports have used one or more days in the past 30 days as a measure of poor mental health. This previous measure generally identified a greater percentage of the population than the known prevalence of depression. This measure identified too many people with moderate or low risk. UDOH staff met in 2004 to select a number of days in the past 30 days that could be used to identify a population at risk, compare the burden of poor mental health across different populations, and assess how chronic diseases and chronic disease risk factors affected mental health. Taking all of these factors into consideration, the group chose seven or more days of poor mental health in the past 30 days as the UDOH BRFSS indicator of recent poor mental health. That measure identified a percentage of the population similar to the known prevalence of depression and had good positive association with fair or poor health. It also had an intuitive appeal in that a week or more of poor mental health each month seemed like a significant burden on an individual.

Risk factors for poor mental health

Risk factors that are common to many mental disorders include individual factors such as neurophysiological deficits, difficult temperament, chronic physical illness, and below-average intelligence; family factors such as severe marital discord, social disadvantage, overcrowding or large family size, paternal criminality, maternal mental disorder, and admission into foster care; and community factors such as living in an area with a high rate of disorganization and inadequate schools.[4]

Poor mental health in Utah

Using the combined 2001–2005 data, the age-adjusted percentage of Utah adults reporting seven or more days of poor mental health was 15.0%. This percentage for the entire U.S. adult population was 15.1%. The corresponding crude rate in Utah was slightly higher at 15.6%, most likely due to the fact that Utah has a younger population than the U.S., and poor mental health is more likely in younger adulthood. Using the overall crude percentage, this means that in 2003 approximately 257,900 Utah adults had seven or more days of poor men-

Utah Objective: No objective listed.
HP2010 Goal: Overarching – Improve the quality and years of healthy life and eliminate health disparities.

Poor mental health in Utah (continued)

tal health. This percentage varied among Utah's local health districts, from a low of 11.2%, age-adjusted, in Summit County to a high of 18.0% in Southwest Utah. The Summit County rate was lower than the state rate. Southwest Utah was the only local health district higher than the state rate.

Overall, the small area percentages for this poor mental health measure ranged from a low of 7.2%, age-adjusted, in American Fork/Alpine to a high of 24.6% in Magna.

Within the Davis County health district, Farmington/Centerville and Woods Cross/North SL had rates lower than the state rate. In the Salt Lake Valley health district, South Jordan's rate was less than the state rate, and Glendale and Magna had higher rates than the state rate. In the Southwest Utah health district, St. George had a higher rate than the state rate. In the Utah County health district, the American Fork/Alpine small area rate was lower than the state rate. In the Weber-Morgan health district, the Ben Lomond small area rate was higher than the state rate.

The percentage of adults reporting seven or more days of poor mental health varied by health status and risk factors as illustrated in the graphs below.

Figure 3.A: 7+ Days of Poor Mental Health by Health Status, Utah Adults, 2001-2005

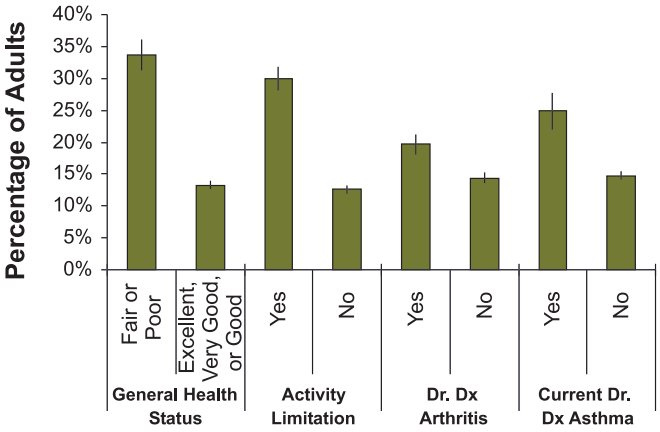
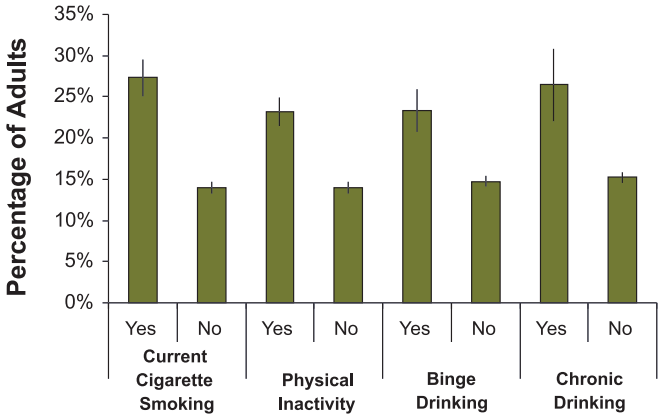


Figure 3.B: 7+ Days of Poor Mental Health by Selected Risk Factors, Utah Adults, 2001-2005

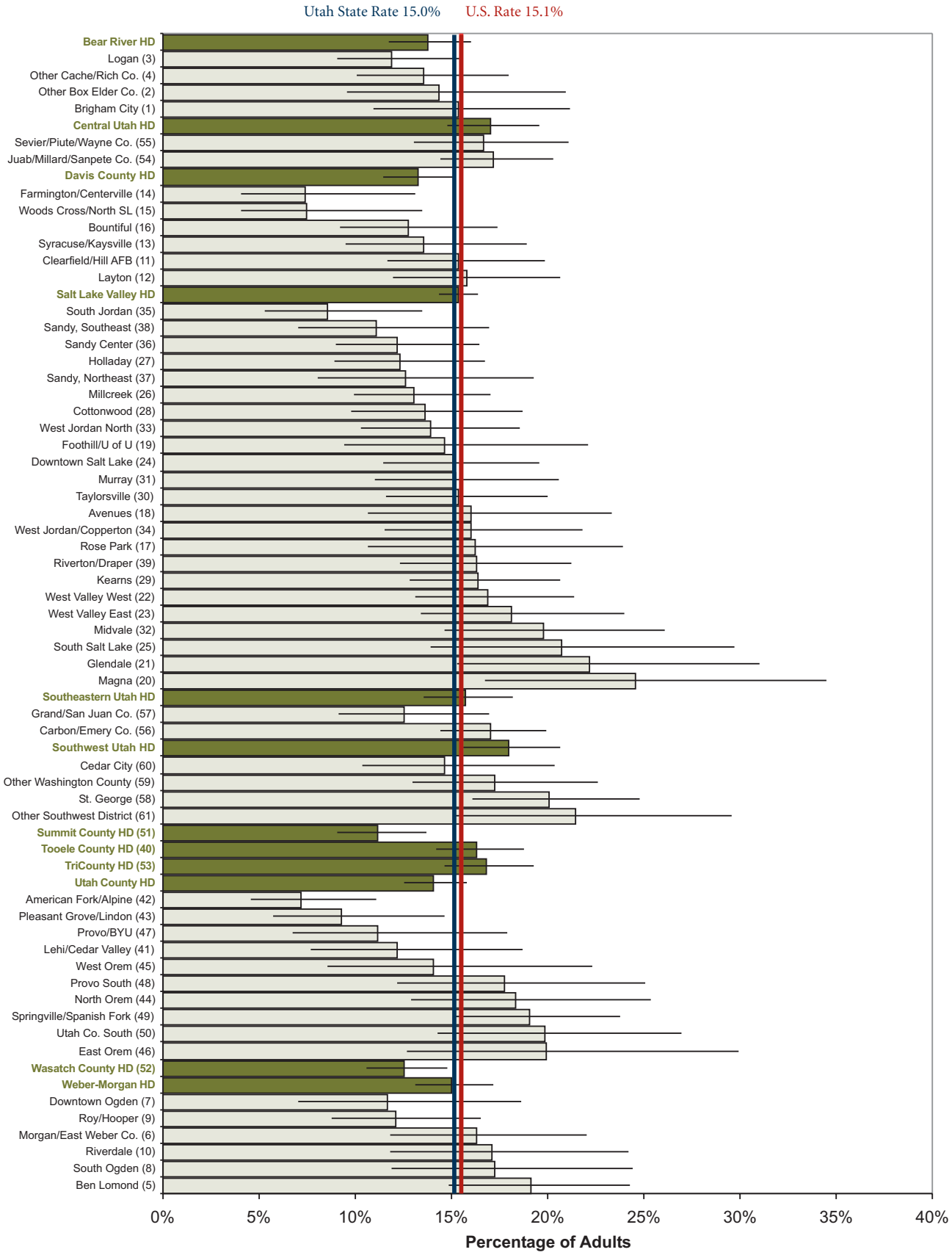


Prevention/Resources

The Utah Division of Substance Abuse and Mental Health is the state agency responsible for ensuring that prevention and treatment services for substance abuse and mental health are available statewide. The Division also acts as a resource by providing general information, research results, and statistics to the public regarding substances of abuse and mental health services. The Division contracts with community mental health centers to provide these services and monitors these centers through site visits, a year-end review process, and a peer review process. More information is available, including help in locating prevention and treatment services, on the Division's website at http://www.dsamh.utah.gov. The U.S. Substance Abuse and Mental Health Services Administration has information on its website at http://www.samhsa.gov.

3. Poor Mental Health

Figure 3.1: Seven or More Days of Poor Mental Health by Local Health District and Small Area, Utah, 2001–2005 (Age-adjusted)



3. Poor Mental Health

Table 3: 7+ Days Poor Mental Health by Health District, Small Area, Utah, and U.S., 2001-2005

State Rank*	State, Health District, or Small Area	2003 Population 18+	Number of Adults Reporting 7+ Days Poor Mental Health	Crude Rate	Age-adjusted Rate	95% Confidence Interval Lower	95% Confidence Interval Upper
	U.S.	217,803,051	32,801,139	15.1%	15.1%	15.0%	15.2%
	State of Utah	1,657,454	257,900	15.6%	15.0%	14.4%	15.6%
	Bear River HD	98,027	14,528	14.8%	13.7%	11.7%	16.0%
32	Brigham City (1)	14,566	2,679	18.4%	15.4%	11.0%	21.1%
10	Logan (3)	45,904	6,688	14.6%	11.9%	9.0%	15.5%
25	Other Box Elder Co. (2)	14,636	2,021	13.8%	14.3%	9.6%	21.0%
20	Other Cache/Rich Co. (4)	22,921	3,149	13.7%	13.5%	10.1%	18.0%
	Central Utah HD	47,558	8,018	16.9%	17.0%	14.8%	19.5%
46	Juab/Millard/Sanpete Co. (54)	31,637	5,378	17.0%	17.2%	14.5%	20.3%
41	Sevier/Piute/Wayne Co. (55)	15,921	2,646	16.6%	16.7%	13.0%	21.1%
	Davis County HD	175,027	24,329	13.9%	13.2%	11.5%	15.2%
18	Bountiful (16)	33,318	4,661	14.0%	12.7%	9.2%	17.4%
31	Clearfield/Hill AFB (11)	37,329	6,365	17.1%	15.3%	11.7%	19.9%
2	Farmington/Centerville (14)	19,034	1,391	7.3%	7.4%	4.1%	13.1%
33	Layton (12)	46,815	7,668	16.4%	15.8%	11.9%	20.7%
21	Syracuse/Kaysville (13)	24,542	3,159	12.9%	13.6%	9.5%	19.0%
3	Woods Cross/North SL (15)	13,989	1,121	8.0%	7.5%	4.0%	13.5%
	Salt Lake Valley HD	658,810	104,487	15.9%	15.3%	14.3%	16.4%
34	Avenues (18)	18,959	3,030	16.0%	16.0%	10.6%	23.3%
22	Cottonwood (28)	33,297	4,821	14.5%	13.6%	9.8%	18.7%
28	Downtown Salt Lake (24)	42,808	6,879	16.1%	15.1%	11.4%	19.6%
27	Foothill/U of U (19)	17,778	2,844	16.0%	14.7%	9.4%	22.1%
60	Glendale (21)	18,642	4,239	22.7%	22.2%	15.3%	31.0%
14	Holladay (27)	35,956	4,480	12.5%	12.3%	8.9%	16.7%
40	Kearns (29)	42,995	7,541	17.5%	16.4%	12.8%	20.7%
61	Magna (20)	15,623	3,450	22.1%	24.6%	16.8%	34.5%
54	Midvale (32)	21,672	4,449	20.5%	19.7%	14.6%	26.1%
19	Millcreek (26)	44,008	5,589	12.7%	13.1%	9.9%	17.0%
29	Murray (31)	24,072	3,878	16.1%	15.2%	11.0%	20.6%
37	Riverton/Draper (39)	41,391	6,854	16.6%	16.3%	12.3%	21.2%
36	Rose Park (17)	22,639	4,086	18.1%	16.2%	10.7%	23.9%
13	Sandy Center (36)	36,106	4,539	12.6%	12.2%	9.0%	16.4%
17	Sandy, Northeast (37)	18,245	2,284	12.5%	12.6%	8.0%	19.3%
6	Sandy, Southeast (38)	20,781	2,465	11.9%	11.1%	7.0%	17.0%
4	South Jordan (35)	20,931	2,028	9.7%	8.5%	5.3%	13.5%
58	South Salt Lake (25)	18,456	3,793	20.6%	20.7%	13.9%	29.7%
30	Taylorsville (30)	27,372	4,727	17.3%	15.3%	11.6%	20.0%
23	West Jordan North (33)	30,391	4,513	14.9%	13.9%	10.3%	18.6%
35	West Jordan/Copperton (34)	26,360	4,104	15.6%	16.0%	11.5%	21.8%
50	West Valley East (23)	35,527	6,818	19.2%	18.1%	13.4%	24.0%
43	West Valley West (22)	44,794	8,363	18.7%	16.9%	13.2%	21.4%
	Southeastern Utah HD	36,828	5,804	15.8%	15.7%	13.5%	18.1%
44	Carbon/Emery Co. (56)	21,451	3,645	17.0%	17.0%	14.5%	20.0%
15	Grand/San Juan Co. (57)	15,377	2,062	13.4%	12.6%	9.2%	17.0%
	Southwest Utah HD	116,150	20,663	17.8%	18.0%	15.6%	20.6%
26	Cedar City (60)	22,401	3,609	16.1%	14.7%	10.4%	20.3%
59	Other Southwest District (61)	15,384	2,795	18.2%	21.5%	15.1%	29.6%
47	Other Washington County (59)	32,503	5,652	17.4%	17.3%	13.0%	22.6%
57	St. George (58)	45,862	8,608	18.8%	20.1%	16.1%	24.8%
8	**Summit County HD (51)**	24,525	2,752	11.2%	11.2%	9.1%	13.7%
39	**Tooele County HD (40)**	32,458	5,291	16.3%	16.3%	14.2%	18.7%
42	**TriCounty HD (53)**	28,023	4,845	17.3%	16.8%	14.6%	19.3%
	Utah County HD	278,832	42,717	15.3%	14.1%	12.6%	15.9%
1	American Fork/Alpine (42)	26,819	1,853	6.9%	7.2%	4.6%	11.1%
56	East Orem (46)	14,955	2,916	19.5%	19.9%	12.7%	29.9%
12	Lehi/Cedar Valley (41)	18,752	2,449	13.1%	12.1%	7.7%	18.7%
51	North Orem (44)	25,965	4,295	16.5%	18.3%	12.9%	25.4%
5	Pleasant Grove/Lindon (43)	24,636	2,501	10.2%	9.3%	5.7%	14.6%
7	Provo/BYU (47)	39,401	5,725	14.5%	11.1%	6.7%	17.9%
49	Provo South (48)	48,138	7,009	14.6%	17.7%	12.2%	25.0%
52	Springville/Spanish Fork (49)	41,036	8,261	20.1%	19.0%	15.1%	23.8%
55	Utah Co. South (50)	17,363	3,664	21.1%	19.8%	14.3%	26.9%
24	West Orem (45)	21,774	3,712	17.1%	14.1%	8.6%	22.3%
16	**Wasatch County HD (52)**	12,514	1,638	13.1%	12.6%	10.6%	14.8%
	Weber-Morgan HD	148,702	22,855	15.4%	15.1%	13.2%	17.2%
53	Ben Lomond (5)	33,215	6,112	18.4%	19.1%	14.9%	24.3%
9	Downtown Ogden (7)	21,684	2,301	10.6%	11.6%	7.1%	18.6%
38	Morgan/East Weber Co. (6)	24,131	4,020	16.7%	16.3%	11.8%	22.0%
45	Riverdale (10)	15,522	2,715	17.5%	17.1%	11.8%	24.2%
11	Roy/Hooper (9)	27,898	3,507	12.6%	12.1%	8.8%	16.5%
48	South Ogden (8)	26,255	4,455	17.0%	17.3%	11.9%	24.4%

*State rank is by 61 small areas for age-adjusted rate; 1 is always the lowest rate in the state and 61 is always the highest rate in the state.

Figure 3.2: 7+ Days of Poor Mental Health by Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)

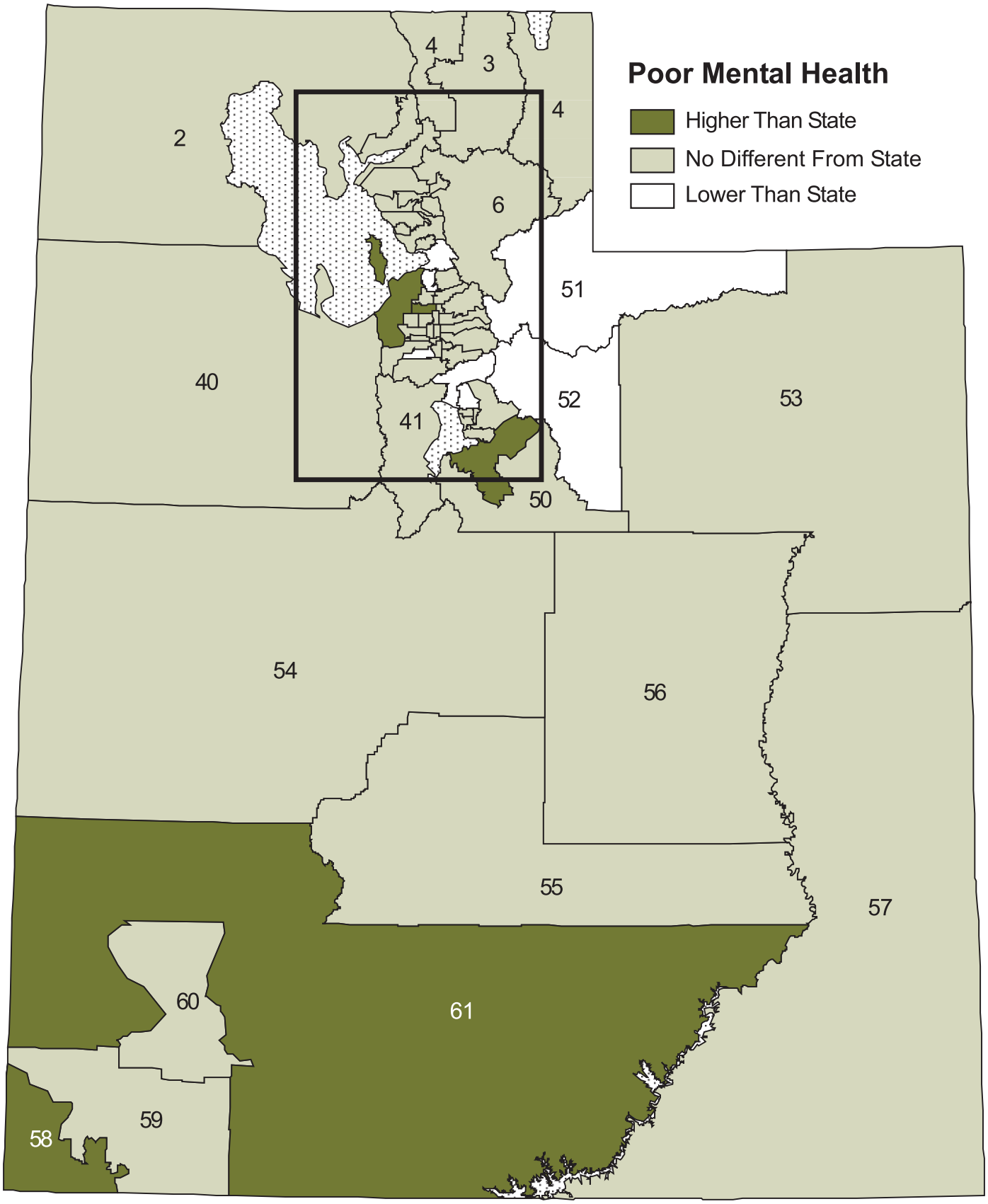
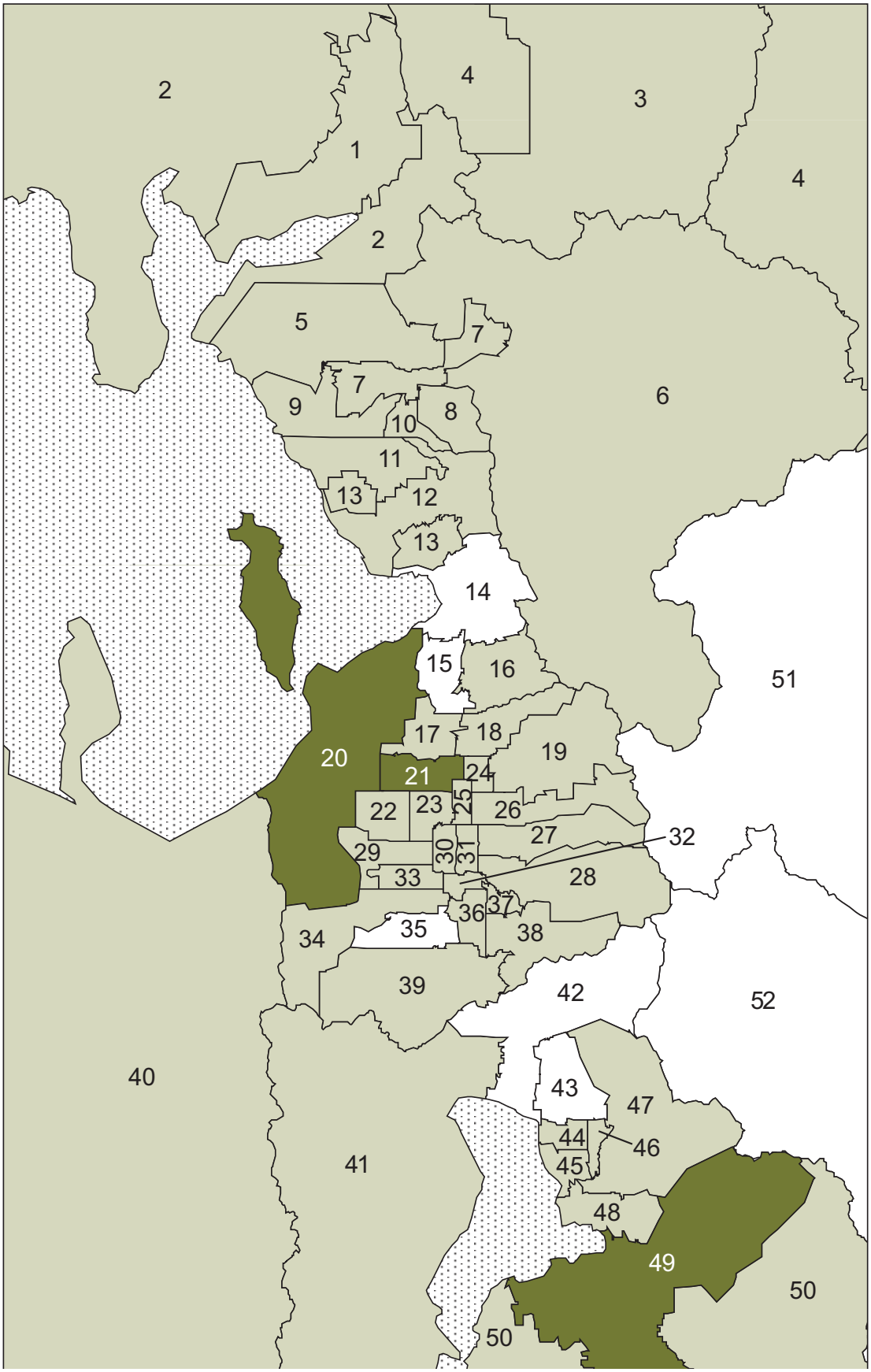


Figure 3.3: 7+ Days of Poor Mental Health by Small Area, Wasatch Front Adults 18+, 2001–2005 (Age-adjusted)



4. Doctor-diagnosed Diabetes

Measure Definition: *"Have you ever been told by a doctor that you have diabetes?"* ***[Yes, excluding females told only during pregnancy or people told they have pre-diabetes or borderline diabetes]***

Why is diabetes important to public health?

Diabetes is a serious disease that can have devastating consequences. Each year in the U.S., between 12,000 and 24,000 people with diabetes become blind, more than 42,800 develop kidney failure, and about 82,000 experience leg, foot, or toe amputations. Nerve damage brought on by diabetes can create severe pain and impaired sensation in hands and feet. Most notably, diabetes increases the risk of heart disease and stroke by two to four times. Diabetes is one of the most costly of all chronic diseases. Nationally, more than one in every ten health care dollars (10.6%), about $92 billion a year, is spent on direct health care costs for people with diabetes.[8]

Additionally, indirect costs, such as lost productivity, disability, and premature mortality, bring the total estimated costs to $132 billion a year.[8]

Many interventions, while shown to be effective at the state level, may have little influence in some communities. Examining prevalence of diabetes by small area is a first step toward identifying and addressing the needs that may be unique to a specific geographical area.

Risk factors for diabetes

There are two primary types of diabetes: (1) type 1 diabetes, an autoimmune disease that develops when the pancreas fails to produce insulin, and (2) type 2, which results from an inability of the body to use insulin, too little insulin production, or a combination of both. The risk factors for type 1 diabetes are not well understood, but family history appears to be a predominant risk factor.

Type 2 diabetes, on the other hand, appears to be closely linked to lifestyle. In particular, overweight and obesity are the predominant modifiable risk factors for diabetes. The Diabetes Prevention Program (DPP), a clinical trial of more than 3,000 adults at high risk for type 2 diabetes, clearly demonstrated that even moderate weight loss achieved through diet and exercise can delay or prevent diabetes onset. There is some evidence that increasing physical activity, even without weight loss, may have an effect on preventing type 2 diabetes by increasing a person's sensitivity to insulin.[9] Family history also appears to play a role in the risk of type 2 diabetes, although to a lesser extent than it does for type 1 diabetes.

Type 2 diabetes is a condition for which demographics appears to have a strong impact. Prevalence of type 2 diabetes is higher among middle-aged and elderly populations, members of certain racial/ethnic minority groups, and low income populations.

Diabetes in Utah

Approximately 82,324 Utah adults have been diagnosed with diabetes, representing (for 2003) 5.0% of the adult population. Rates are shown by health district and small areas within each health district (Table 4). In some instances, the population for a health district is small enough to be considered a small area on its own. Crude rates are used to show the true prevalence of a condition in a population. Crude rates of diabetes ranged

Utah Objective: Same as HP2010 objective.
HP2010 Objective (related) 5-3: Reduce the overall rate of diabetes that is clinically diagnosed to 25 overall cases per 1,000 population (age-adjusted to U.S. 2000 standard population).

Diabetes in Utah (continued)

from a low of 1.7% for the Avenues to a high of 9.8% for South Salt Lake. Because diabetes is so closely linked to age, age-adjusted rates are commonly used to compare prevalence rates across populations. Age-adjusted rates are artificial rates that are calculated as though the age compositions for each area are identical. The standard population used for age adjustment is the 2000 U.S. population.

After adjusting for the differences in age compositions, five small areas were observed to have a lower-than-state prevalence. The lower age-adjusted rate was seen in the Avenues at 1.5%, followed by Roy/Hooper at 2.7%, Northeast Sandy at 2.8%, Foothill/U of U at 2.8%, and Summit County at 3.1%.

A number of small areas had prevalence rates that were higher than the state rate. The highest age-adjusted prevalence was seen for Pleasant Grove/Lindon with a rate that approaches double that for the state at 10.5%. This small area was followed closely by Downtown Ogden, with 10.2%; West Jordan North, Cedar City, West Valley West, Woods Cross/North SL, and Other Cache/Rich County also had rates that were higher than the state rate. Higher-than-state rates were also noted for two local health districts: Tooele County and Utah County.

As the population of Utah becomes increasingly diversified, it is important to recognize the considerable community variations that may affect the prevalence of chronic conditions. For example, the high prevalence of diabetes in the Downtown Ogden area likely reflects the high percentage of minority members living in this community. Downtown Ogden has the highest concentration of Black persons (3.2%) of all small areas, and one of the highest concentrations of Hispanic/Latino population (29.4%). The higher-than-state concentration of Hispanic/Latino population in West Jordan North (11.0%) and the high concentration of Pacific Islander persons in West Valley West (2.4%) may help to account for some of the higher prevalence in these areas. West Jordan North also had the highest rate of obesity of all small areas (30.5%), and the third highest prevalence of diabetes.

An important note is that rates of diabetes, particularly in those populations with limited access to health care, are likely to be underestimated. Approximately 28% of people with diabetes have not been diagnosed. Therefore, the rates in some small areas may be substantially higher than depicted in this report.[10]

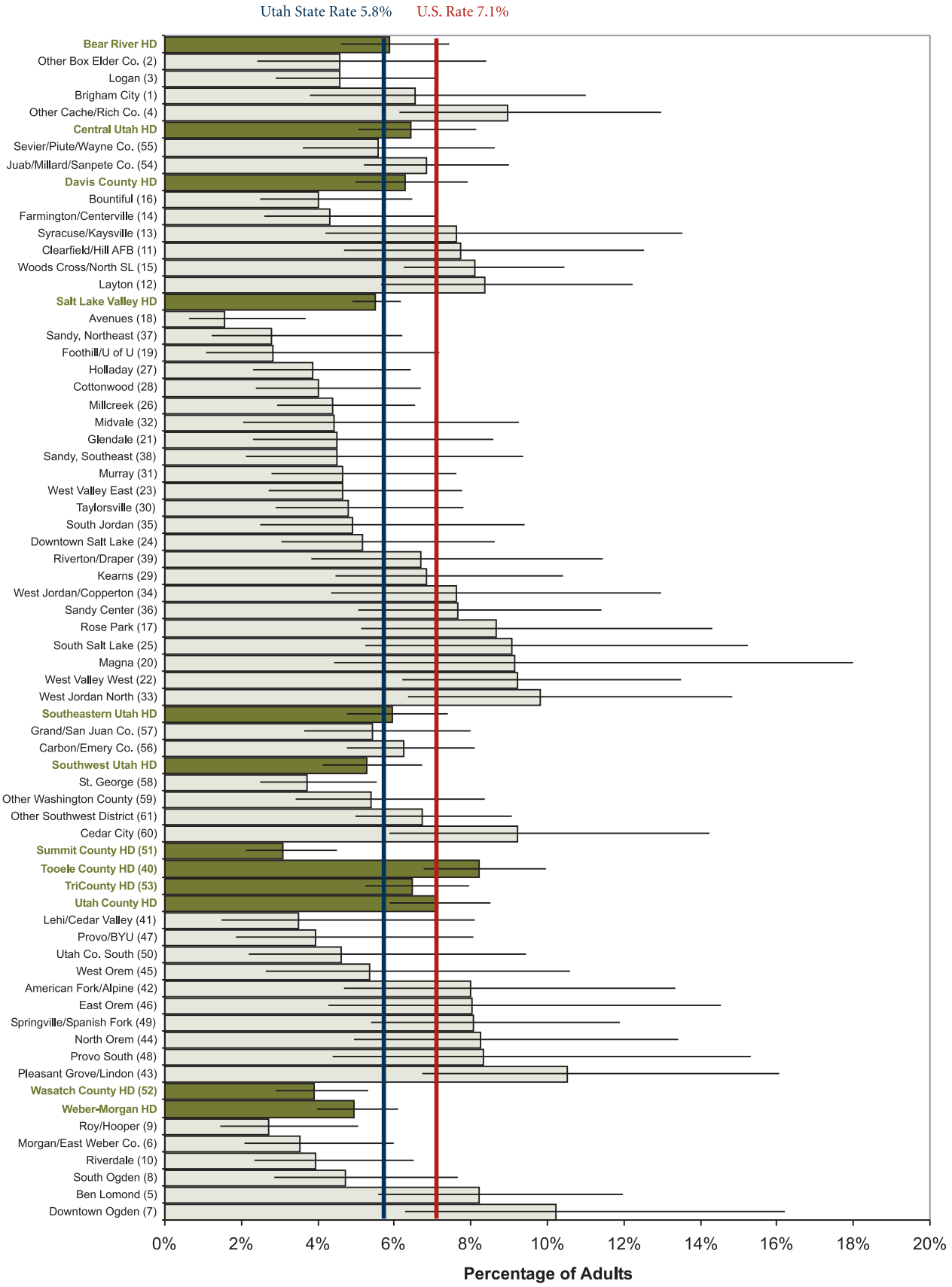
Prevention/Resources

The Utah Diabetes Prevention and Control Program (DPCP), Bureau of Health Promotion at the Utah Department of Health recognizes the importance of promoting resources and building capacity at the community level. The program provides information on diabetes awareness and management to health care providers and to the general public. Self-care manuals in eleven languages are available through the program and may be downloaded from its website, http://health.utah.gov/diabetes. The site also offers a number of links with resources for clinicians and provides links to patient assistance programs.

The DPCP certifies diabetes education programs, a good proportion providing services in rural areas where no other programs are available. The DPCP also sponsors monthly telehealth programs for health care professionals, covering such topics as foot care, insulin use, and aggressive treatment. The DPCP uses the media extensively to promote awareness of the risk factors and warning signs of diabetes. Those interested in obtaining more information on diabetes control may call the Health Resource Line, 1-800-222-2542.

4. Doctor-diagnosed Diabetes

Figure 4.1: Percentage of Adults Who Reported Doctor-diagnosed Diabetes by Local Health District and Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)



4. Doctor-diagnosed Diabetes

Table 4: Dr. Dx Diabetes by Health District, Small Area, Utah, and U.S., 2001-2005

State Rank*	State, Health District, or Small Area	2003 Population 18+	Number of Adults With Dr. Dx Diabetes	Crude Rate	Age-adjusted Rate	95% Confidence Interval Lower	95% Confidence Interval Upper
	U.S.	217,803,051	15,725,380	7.2%	7.1%	7.0%	7.2%
	State of Utah	1,657,454	82,375	5.0%	5.8%	5.4%	6.2%
	Bear River HD	98,027	4,990	5.1%	5.9%	4.6%	7.4%
35	Brigham City (1)	14,566	954	6.6%	6.5%	3.8%	11.0%
21	Logan (3)	45,904	1,189	2.6%	4.6%	2.9%	7.2%
20	Other Box Elder Co. (2)	14,636	688	4.7%	4.6%	2.4%	8.4%
54	Other Cache/Rich Co. (4)	22,921	2,012	8.8%	9.0%	6.1%	13.0%
	Central Utah HD	47,558	2,972	6.3%	6.4%	5.1%	8.1%
39	Juab/Millard/Sanpete Co. (54)	31,637	2,072	6.6%	6.9%	5.2%	9.0%
32	Sevier/Piute/Wayne Co. (55)	15,921	907	5.7%	5.6%	3.6%	8.6%
	Davis County HD	175,027	9,171	5.2%	6.3%	5.0%	7.9%
14	Bountiful (16)	33,318	1,646	4.9%	4.0%	2.5%	6.5%
43	Clearfield/Hill AFB (11)	37,329	2,128	5.7%	7.7%	4.7%	12.5%
15	Farmington/Centerville (14)	19,034	773	4.1%	4.3%	2.6%	7.1%
52	Layton (12)	46,815	2,856	6.1%	8.4%	5.6%	12.2%
41	Syracuse/Kaysville (13)	24,542	1,517	6.2%	7.6%	4.2%	13.5%
47	Woods Cross/North SL (15)	13,989	442	3.2%	8.1%	6.3%	10.5%
	Salt Lake Valley HD	658,810	31,293	4.8%	5.5%	4.9%	6.2%
1	Avenues (18)	18,959	320	1.7%	1.5%	0.6%	3.7%
13	Cottonwood (28)	33,297	1,578	4.7%	4.0%	2.4%	6.7%
28	Downtown Salt Lake (24)	42,808	1,704	4.0%	5.2%	3.0%	8.6%
4	Foothill/U of U (19)	17,778	418	2.4%	2.8%	1.1%	7.2%
18	Glendale (21)	18,642	913	4.9%	4.5%	2.3%	8.6%
9	Holladay (27)	35,956	1,773	4.9%	3.9%	2.3%	6.4%
38	Kearns (29)	42,995	2,348	5.5%	6.9%	4.5%	10.4%
56	Magna (20)	15,623	789	5.1%	9.1%	4.4%	18.0%
17	Midvale (32)	21,672	802	3.7%	4.4%	2.1%	9.3%
16	Millcreek (26)	44,008	2,016	4.6%	4.4%	2.9%	6.6%
23	Murray (31)	24,072	1,064	4.4%	4.6%	2.8%	7.6%
36	Riverton/Draper (39)	41,391	1,519	3.7%	6.7%	3.8%	11.5%
53	Rose Park (17)	22,639	1,422	6.3%	8.7%	5.1%	14.3%
42	Sandy Center (36)	36,106	2,018	5.6%	7.7%	5.1%	11.4%
3	Sandy, Northeast (37)	18,245	483	2.7%	2.8%	1.2%	6.2%
19	Sandy, Southeast (38)	20,781	584	2.8%	4.5%	2.1%	9.4%
27	South Jordan (35)	20,931	588	2.8%	4.9%	2.5%	9.4%
55	South Salt Lake (25)	18,456	1,811	9.8%	9.1%	5.2%	15.2%
26	Taylorsville (30)	27,372	1,196	4.4%	4.8%	2.9%	7.8%
59	West Jordan North (33)	30,391	1,684	5.5%	9.8%	6.4%	14.9%
40	West Jordan/Copperton (34)	26,360	1,392	5.3%	7.6%	4.3%	13.0%
24	West Valley East (23)	35,527	1,542	4.3%	4.6%	2.7%	7.8%
57	West Valley West (22)	44,794	3,449	7.7%	9.2%	6.2%	13.5%
	Southeastern Utah HD	36,828	2,202	6.0%	5.9%	4.8%	7.4%
33	Carbon/Emery Co. (56)	21,451	1,349	6.3%	6.2%	4.8%	8.1%
31	Grand/San Juan Co. (57)	15,377	829	5.4%	5.4%	3.7%	8.0%
	Southwest Utah HD	116,150	6,202	5.3%	5.3%	4.1%	6.7%
58	Cedar City (60)	22,401	1,261	5.6%	9.2%	5.9%	14.2%
37	Other Southwest District (61)	15,384	1,008	6.6%	6.7%	5.0%	9.1%
30	Other Washington County (59)	32,503	1,807	5.6%	5.4%	3.4%	8.4%
8	St. George (58)	45,862	1,899	4.1%	3.7%	2.5%	5.6%
5	**Summit County HD (51)**	24,525	564	2.3%	3.1%	2.1%	4.5%
48	**Tooele County HD (40)**	32,458	2,298	7.1%	8.2%	6.8%	10.0%
34	**TriCounty HD (53)**	28,023	1,813	6.5%	6.5%	5.2%	8.0%
	Utah County HD	278,832	13,691	4.9%	7.1%	5.9%	8.5%
44	American Fork/Alpine (42)	26,819	1,896	7.1%	8.0%	4.7%	13.4%
45	East Orem (46)	14,955	1,053	7.0%	8.0%	4.3%	14.5%
6	Lehi/Cedar Valley (41)	18,752	411	2.2%	3.5%	1.5%	8.1%
50	North Orem (44)	25,965	1,690	6.5%	8.2%	5.0%	13.4%
61	Pleasant Grove/Lindon (43)	24,636	1,877	7.6%	10.5%	6.7%	16.1%
12	Provo/BYU (47)	39,401	985	2.5%	3.9%	1.9%	8.1%
51	Provo South (48)	48,138	1,218	2.5%	8.3%	4.4%	15.3%
46	Springville/Spanish Fork (49)	41,036	2,602	6.3%	8.1%	5.4%	11.9%
22	Utah Co. South (50)	17,363	599	3.5%	4.6%	2.2%	9.4%
29	West Orem (45)	21,774	945	4.3%	5.4%	2.6%	10.6%
10	**Wasatch County HD (52)**	12,514	443	3.5%	3.9%	2.9%	5.3%
	Weber-Morgan HD	148,702	6,781	4.6%	5.0%	4.1%	6.2%
49	Ben Lomond (5)	33,215	2,186	6.6%	8.2%	5.6%	12.0%
60	Downtown Ogden (7)	21,684	1,926	8.9%	10.2%	6.3%	16.2%
7	Morgan/East Weber Co. (6)	24,131	818	3.4%	3.5%	2.1%	6.0%
11	Riverdale (10)	15,522	582	3.8%	3.9%	2.3%	6.5%
2	Roy/Hooper (9)	27,898	617	2.2%	2.7%	1.5%	5.1%
25	South Ogden (8)	26,255	1,160	4.4%	4.7%	2.9%	7.7%

*State rank is by 61 small areas for age-adjusted rate; 1 is always the lowest rate in the state and 61 is always the highest rate in the state.

Figure 4.2: Dr. Dx Diabetes by Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)

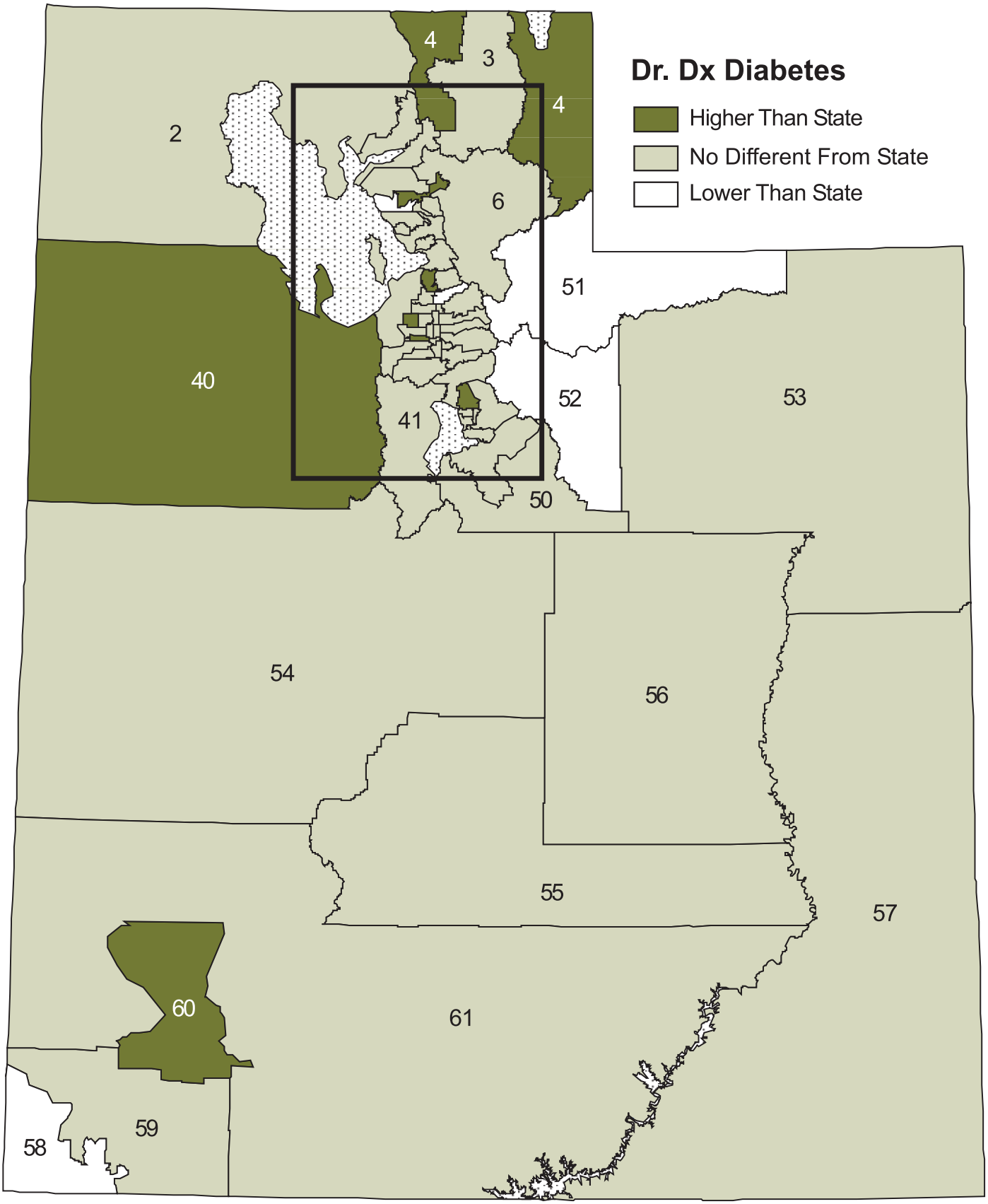
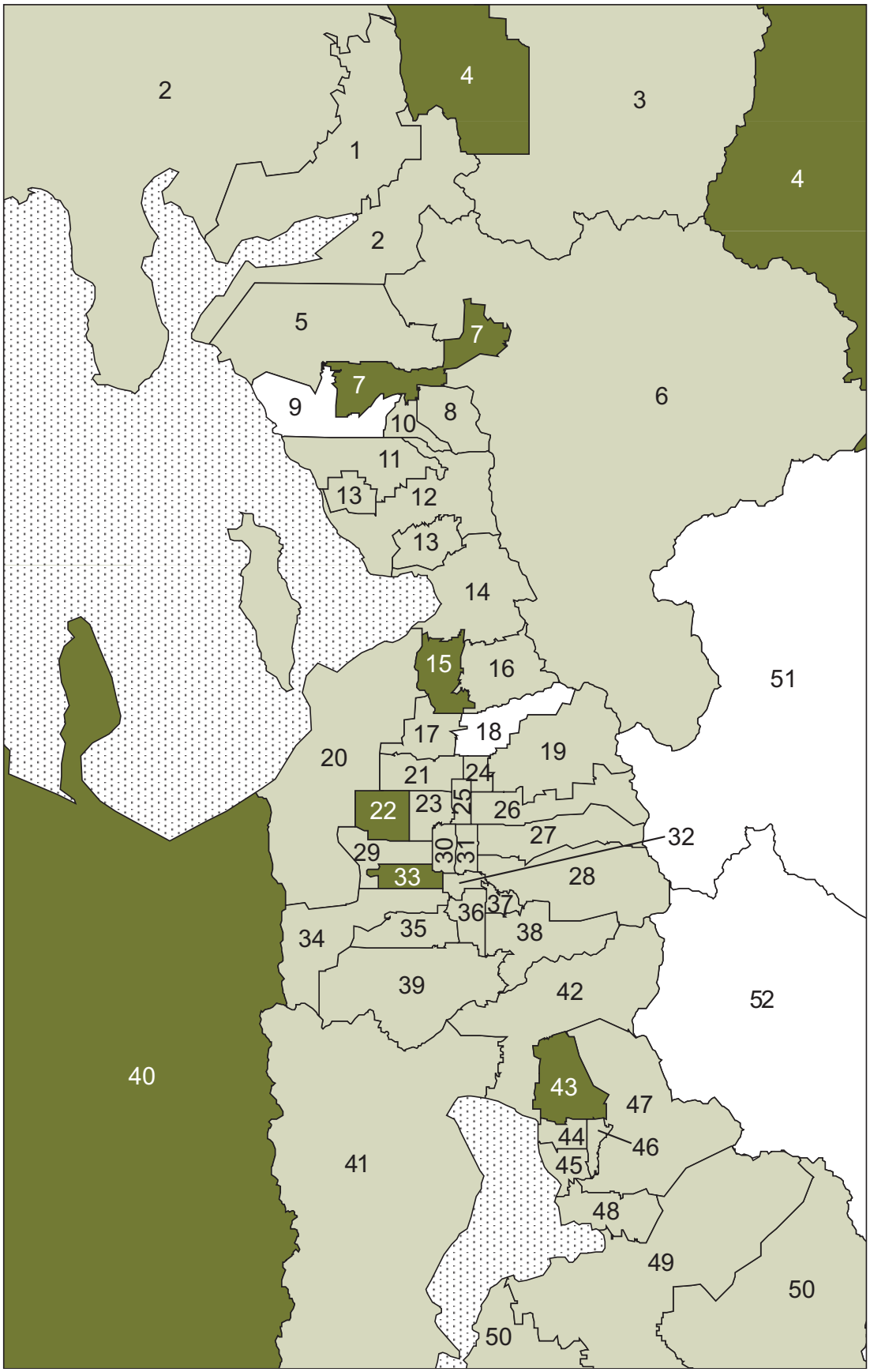


Figure 4.3: Dr. Dx Diabetes by Small Area, Wasatch Front Adults Aged 18+, 2001–2005 (Age-adjusted)



5. Current Doctor-diagnosed Asthma

Measure Definition: *"Have you ever been told by a doctor, nurse, or other health professional that you had asthma? Do you still have asthma?"* ***[Yes to both questions]***

Why is asthma important to public health?

Asthma is a chronic lung disease caused by airway inflammation that leads to reversible airflow obstruction. Asthma is one of the ten leading chronic conditions that restrict activity. In 2004, it was estimated that 20.5 million Americans currently have asthma. Of these, 11.7 million Americans, including 4 million children under 18, had an asthma attack.[11] Asthma is a serious personal and public health issue that has far-reaching medical, economic, and psychosocial implications. The burden of asthma can be seen in the number of asthma-related medical events, including emergency department visits, hospitalizations, and deaths. Although not much is known about asthma prevention, effective asthma management by patients, their family members, and their health care providers can reduce or prevent many problems caused by the disease.

Risk factors for asthma

According to BRFSS data 2001–2005, many factors are associated with the likelihood of an individual having asthma. Some of these factors include gender, age, ethnicity, and household income. Adult asthma rates were higher for women than men at every age category. For men, rates were highest in the 18–34 year age group. For women, rates were highest in the 50–64 year age group. Additionally, White, non-Hispanic persons and those with a lower household income were more likely to have asthma.

Asthma in Utah

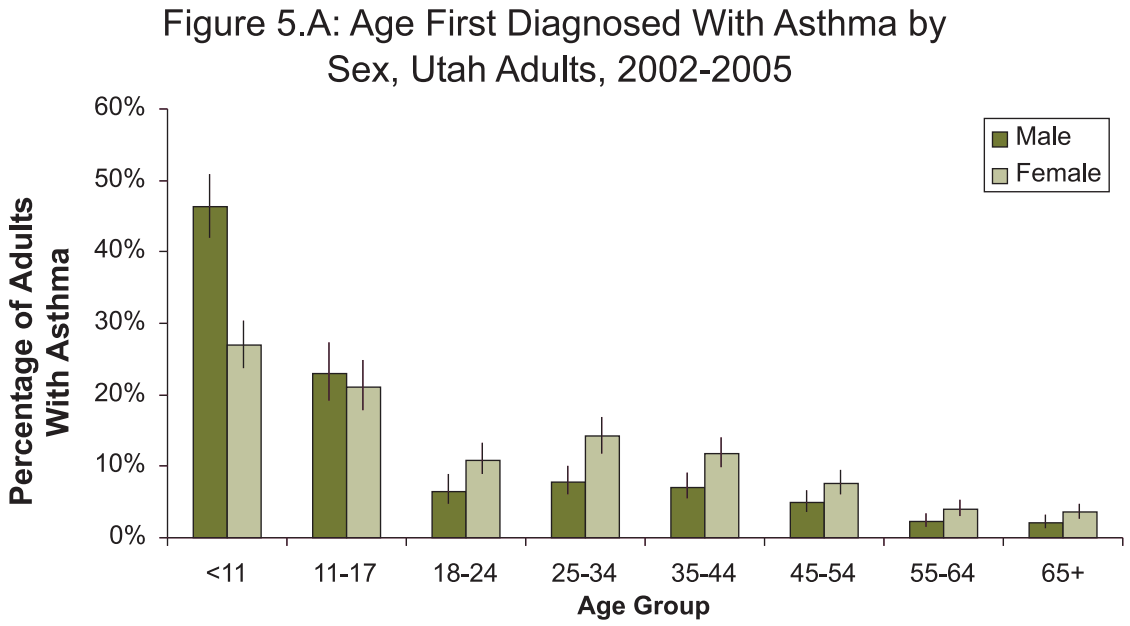
The age-adjusted aggregated state asthma prevalence rate for 2001–2005 was 7.5%. The corresponding crude rate was 7.7%. This means that approximately 127,000 adult Utahns had asthma in 2003. The age-adjusted prevalence of asthma varied by local health district and ranged from a low of 6.1% in Utah County to a high of 10.4% in Central Utah. These were the only two health districts where asthma prevalence differed significantly from the state rate, with Central Utah's rate being higher than the state and the Utah County rate being lower than the state.

When the local health districts were separated into their pre-determined small areas, it showed that within a local health district there were many small areas with higher or lower prevalence relative to the district's prevalence. For example, in Salt Lake Valley (overall prevalence 7.9%) the small area prevalence ranged from a low of 4.9% (age-adjusted) in Sandy Center to a high of 14.2% in Murray; the difference between these small areas was statistically significant.

Overall, the small area with the highest rate of asthma was Murray, with a rate of 14.2% and the small area with the lowest rate was North Orem, with a rate of 3.3%. Nearly half (44.1%) of adults with asthma have had it for more than 10 years. Males tended to be diagnosed with asthma in childhood, with about 70% of males diagnosed before age 18. Females, however, were split about 50/50, with half being diagnosed with asthma before age 18 and the other half after age 18 (Figure 5.A).

Utah Objective: No objective listed.
HP2010 Objective: No objective listed.

Asthma in Utah (continued)



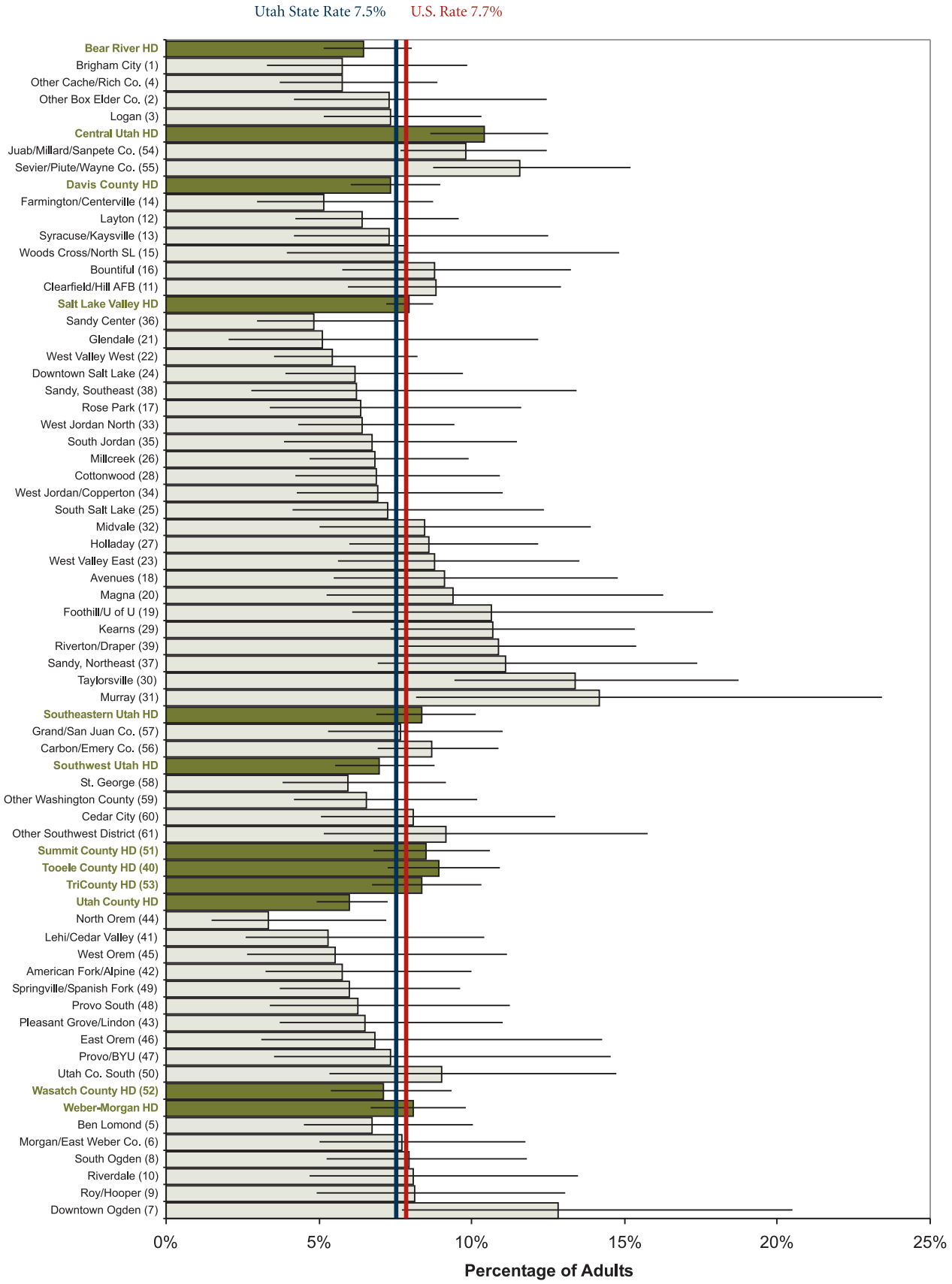
Prevention/Resources

The Utah Asthma Program, Bureau of Health Promotion at the Utah Department of Health recognizes the importance of promoting resources and building capacity at the community level. The program provides information on asthma awareness and management to health care providers and to the general public. The program provides health care professionals with resources to assist them with asthma management for their patients. It also works with high-risk occupations to help reduce asthma in the workplace. Information on air quality, pollen counts, and other resources are available at the program's website, http://health.utah.gov/asthma.

The Asthma Program and the American Lung Association of Utah offer several programs to schools to assist faculty, staff, and students with managing asthma in the classroom and other school activities. The Utah Asthma School Resource Manual and Training offers training to faculty and staff and provides them with a manual to help inform them about asthma. The Winning With Asthma online tutorial provides information to coaches and physical education teachers about how to manage asthma in athletes. The Open Airways for Schools teaches students with asthma how to manage their symptoms. More information on this program is available at http://www.lungusa2.org/utah/index.html. Those interested in obtaining more information on asthma control may call the Health Resource Line, 1-800-222-2542.

5. Current Doctor-diagnosed Asthma

Figure 5.1: Percentage of Adults Reporting Current Doctor-diagnosed Asthma by Local Health District and Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)



5. Current Doctor-diagnosed Asthma

Table 5: Current Dr. Dx Asthma by Health District, Small Area, Utah, and U.S., 2001-2005

State Rank*	State, Health District, or Small Area	2003 Population 18+	Number of Adults With Current Dr. Dx Asthma	Crude Rate	Age-adjusted Rate	95% Confidence Interval Lower	95% Confidence Interval Upper
	U.S.	217,803,051	16,705,494	7.7%	7.7%	7.6%	7.7%
	State of Utah	1,657,454	127,458	7.7%	7.5%	7.1%	8.0%
	Bear River HD	98,027	6,382	6.5%	6.5%	5.2%	8.0%
8	Brigham City (1)	14,566	830	5.7%	5.7%	3.3%	9.9%
31	Logan (3)	45,904	3,250	7.1%	7.3%	5.1%	10.3%
29	Other Box Elder Co. (2)	14,636	1,052	7.2%	7.3%	4.2%	12.5%
10	Other Cache/Rich Co. (4)	22,921	1,235	5.4%	5.8%	3.7%	8.9%
	Central Utah HD	47,558	4,946	10.4%	10.4%	8.7%	12.5%
53	Juab/Millard/Sanpete Co. (54)	31,637	3,031	9.6%	9.8%	7.7%	12.4%
58	Sevier/Piute/Wayne Co. (55)	15,921	1,887	11.9%	11.6%	8.7%	15.2%
	Davis County HD	175,027	13,197	7.5%	7.4%	6.1%	9.0%
46	Bountiful (16)	33,318	2,722	8.2%	8.8%	5.8%	13.2%
47	Clearfield/Hill AFB (11)	37,329	3,737	10.0%	8.8%	6.0%	12.9%
4	Farmington/Centerville (14)	19,034	716	3.8%	5.1%	3.0%	8.7%
17	Layton (12)	46,815	3,399	7.3%	6.4%	4.3%	9.6%
30	Syracuse/Kaysville (13)	24,542	1,377	5.6%	7.3%	4.2%	12.5%
35	Woods Cross/North SL (15)	13,989	1,086	7.8%	7.8%	4.0%	14.8%
	Salt Lake Valley HD	658,810	53,693	8.2%	7.9%	7.2%	8.8%
50	Avenues (18)	18,959	1,623	8.6%	9.1%	5.5%	14.8%
25	Cottonwood (28)	33,297	2,647	8.0%	6.9%	4.3%	10.9%
13	Downtown Salt Lake (24)	42,808	2,470	5.8%	6.2%	3.9%	9.7%
54	Foothill/U of U (19)	17,778	1,806	10.2%	10.6%	6.1%	17.9%
3	Glendale (21)	18,642	1,258	6.8%	5.1%	2.1%	12.2%
43	Holladay (27)	35,956	3,333	9.3%	8.6%	6.0%	12.2%
55	Kearns (29)	42,995	4,368	10.2%	10.7%	7.3%	15.4%
52	Magna (20)	15,623	1,248	8.0%	9.4%	5.2%	16.3%
41	Midvale (32)	21,672	2,076	9.6%	8.5%	5.0%	13.9%
24	Millcreek (26)	44,008	3,072	7.0%	6.8%	4.7%	9.9%
61	Murray (31)	24,072	3,134	13.0%	14.2%	8.2%	23.4%
56	Riverton/Draper (39)	41,391	4,305	10.4%	10.9%	7.6%	15.4%
16	Rose Park (17)	22,639	1,442	6.4%	6.4%	3.4%	11.6%
2	Sandy Center (36)	36,106	1,708	4.7%	4.9%	3.0%	7.8%
57	Sandy, Northeast (37)	18,245	2,025	11.1%	11.1%	6.9%	17.4%
14	Sandy, Southeast (38)	20,781	1,085	5.2%	6.2%	2.8%	13.5%
21	South Jordan (35)	20,931	1,463	7.0%	6.7%	3.9%	11.5%
28	South Salt Lake (25)	18,456	1,261	6.8%	7.2%	4.2%	12.4%
60	Taylorsville (30)	27,372	3,920	14.3%	13.4%	9.4%	18.7%
18	West Jordan North (33)	30,391	2,033	6.7%	6.4%	4.3%	9.4%
26	West Jordan/Copperton (34)	26,360	1,792	6.8%	6.9%	4.3%	11.0%
45	West Valley East (23)	35,527	3,023	8.5%	8.8%	5.6%	13.5%
6	West Valley West (22)	44,794	2,746	6.1%	5.4%	3.5%	8.2%
	Southeastern Utah HD	36,828	3,090	8.4%	8.3%	6.9%	10.1%
44	Carbon/Emery Co. (56)	21,451	1,864	8.7%	8.7%	6.9%	10.9%
33	Grand/San Juan Co. (57)	15,377	1,201	7.8%	7.7%	5.3%	11.0%
	Southwest Utah HD	116,150	8,479	7.3%	7.0%	5.5%	8.8%
38	Cedar City (60)	22,401	1,940	8.7%	8.1%	5.1%	12.7%
51	Other Southwest District (61)	15,384	1,283	8.3%	9.1%	5.1%	15.8%
20	Other Washington County (59)	32,503	2,171	6.7%	6.6%	4.2%	10.2%
11	St. George (58)	45,862	3,018	6.6%	5.9%	3.8%	9.2%
42	**Summit County HD (51)**	24,525	1,960	8.0%	8.5%	6.8%	10.6%
48	**Tooele County HD (40)**	32,458	2,886	8.9%	8.9%	7.3%	10.9%
40	**TriCounty HD (53)**	28,023	2,430	8.7%	8.4%	6.7%	10.3%
	Utah County HD	278,832	17,176	6.2%	6.1%	5.0%	7.4%
9	American Fork/Alpine (42)	26,819	1,824	6.8%	5.7%	3.3%	10.0%
23	East Orem (46)	14,955	812	5.4%	6.8%	3.1%	14.3%
5	Lehi/Cedar Valley (41)	18,752	911	4.9%	5.3%	2.6%	10.4%
1	North Orem (44)	25,965	862	3.3%	3.3%	1.5%	7.2%
19	Pleasant Grove/Lindon (43)	24,636	1,616	6.6%	6.5%	3.7%	11.0%
32	Provo/BYU (47)	39,401	3,345	8.5%	7.3%	3.5%	14.6%
15	Provo South (48)	48,138	2,768	5.8%	6.3%	3.4%	11.3%
12	Springville/Spanish Fork (49)	41,036	2,462	6.0%	6.0%	3.7%	9.6%
49	Utah Co. South (50)	17,363	1,455	8.4%	9.0%	5.4%	14.7%
7	West Orem (45)	21,774	1,487	6.8%	5.5%	2.6%	11.1%
27	**Wasatch County HD (52)**	12,514	875	7.0%	7.1%	5.4%	9.4%
	Weber-Morgan HD	148,702	12,000	8.1%	8.1%	6.7%	9.8%
22	Ben Lomond (5)	33,215	2,338	7.0%	6.8%	4.5%	10.0%
59	Downtown Ogden (7)	21,684	2,728	12.6%	12.8%	7.7%	20.5%
34	Morgan/East Weber Co. (6)	24,131	1,834	7.6%	7.7%	5.0%	11.8%
37	Riverdale (10)	15,522	1,349	8.7%	8.1%	4.7%	13.5%
39	Roy/Hooper (9)	27,898	1,958	7.0%	8.1%	5.0%	13.0%
36	South Ogden (8)	26,255	2,240	8.5%	7.9%	5.3%	11.8%

*State rank is by 61 small areas for age-adjusted rate; 1 is always the lowest rate in the state and 61 is always the highest rate in the state.

Figure 5.2: Current Dr. Dx Asthma by Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)

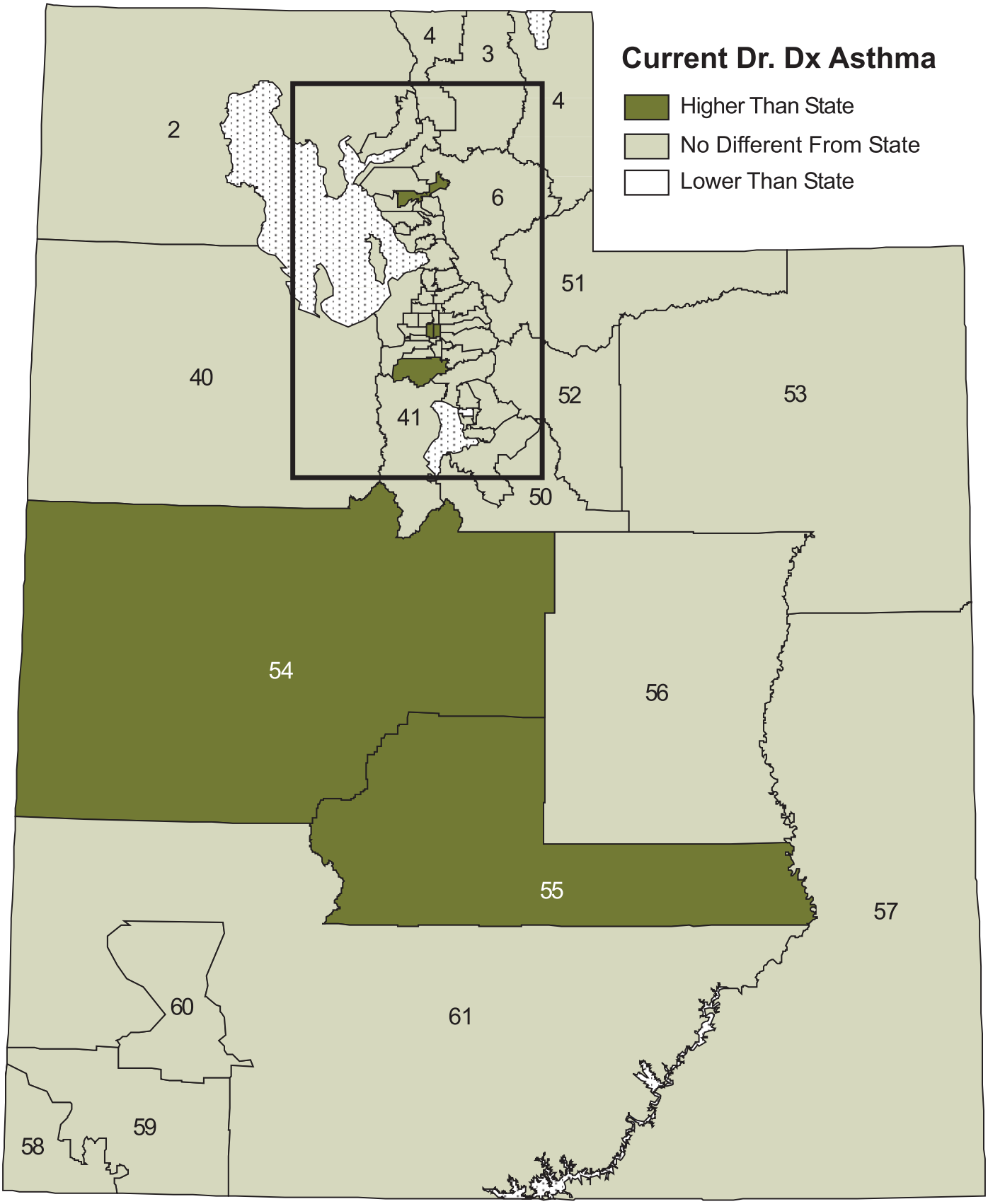
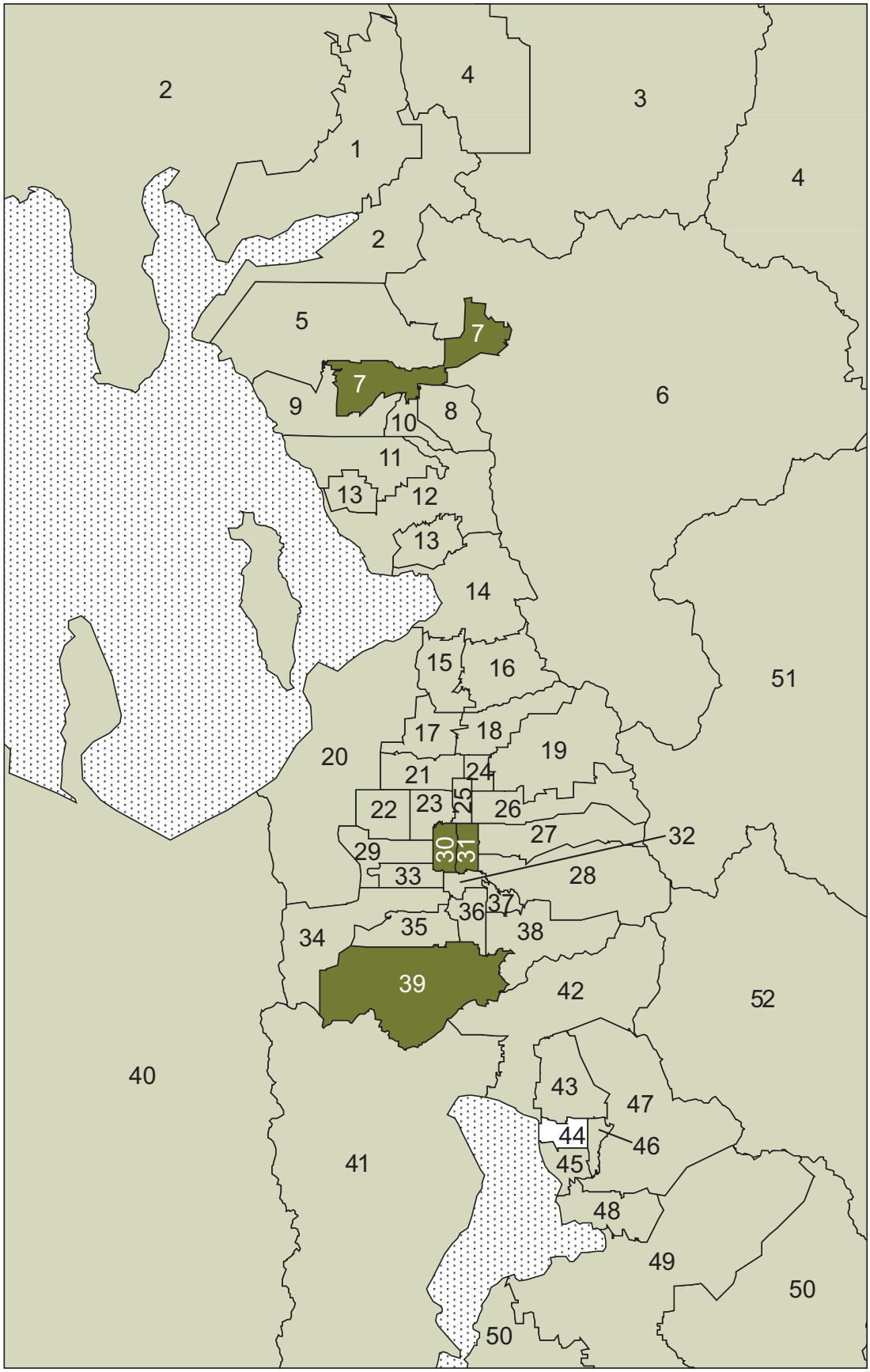


Figure 5.3: Current Dr. Dx Asthma by Small Area, Wasatch Front Adults Aged 18+, 2001–2005 (Age-adjusted)



6. Doctor-diagnosed Arthritis

Measure Definition: *"Have you ever been told by a doctor or other health professional that you have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?"* ***[Yes]***

Why is arthritis important to public health?

In 2002, an estimated 42.7 million, or 20.8% of U.S. adults aged 18 years and older reported arthritis. Women had a higher prevalence of arthritis (24.3%) than men (17.1%). Prevalence among all respondents increased with age. One in three U.S. adults with arthritis (37.6%) reported activity limitations caused by arthritis or joint symptoms, which equals 7.8% or 16 million U.S. adults. Nearly one in four adults with arthritis (24.6%) reported severe joint pain during the preceding 30 days. Among persons 18–64 years of age with arthritis, 30.6% or 8.2 million adults reported limitations at work which were caused by arthritis.[12]

Arthritis also results in a substantial burden to the U.S. health care system. Each year, arthritis results in 750,000 hospitalizations and 36 million outpatient visits. The total cost of arthritis and other related conditions in the United States in 1997 was $86.2 billion (including $51.1 billion in direct costs and $35.1 billion in indirect costs), which was approximately 1% of the 1997 U.S. gross domestic product.[13]

Risk factors for arthritis

Certain factors have been shown to be associated with a greater risk of arthritis. Some of these risk factors are modifiable while others are not. Non-modifiable risk factors include age, gender, and genetics. The risk of developing arthritis increases with age. Most types of arthritis are more common in women. Genes have been identified that are associated with a higher risk of certain types of arthritis, such as rheumatoid arthritis and systemic lupus erythematosus. Modifiable risk factors include overweight or obesity, joint injuries, infection, and occupation. Excess weight can contribute to both the onset and progression of knee osteoarthritis. Damage to a joint can contribute to the development of osteoarthritis of that joint. Many microbial agents can infect joints and may cause various forms of arthritis. Certain occupations involving repetitive knee bending are associated with osteoarthritis of the knee.

Arthritis in Utah

The age-adjusted prevalence rate of arthritis in Utah using the aggregated 2001–2005 data was 24.8% of the population aged 18 and older. The crude rate was 21.8%, meaning that in 2003, approximately 361,000 Utah adults reported arthritis. The age-adjusted U.S. rate of 25.6% was slightly higher than the Utah rate.

After adjusting for age, Central Utah and Weber-Morgan health districts had a higher prevalence of arthritis (30.6% and 27.7% respectively) compared to the state rate. The age-adjusted prevalence of arthritis in Utah's local health districts ranged from a low of 20.6% in Summit County to a high of 30.6% in Central Utah.

Within the local health districts there were small areas with higher and lower prevalence rates of arthritis relative to the age-adjusted state rate. For example, adults living in Juab, Millard, and Sanpete Counties, North Orem, and Ben Lomond reported a higher prevalence of arthritis than the state rate. Adults living in Southeast Sandy and Alpine/American Fork reported a lower prevalence of arthritis compared to the state rate. Overall, the small area with the highest prevalence of arthritis was North Orem (36.1%), and the small area with the lowest prevalence of arthritis was Alpine/American Fork, with a rate of 15.1%.

Utah Objective: Same as HP2010 objective.
HP2010 Objective (related) 2-7: (Developmental) Increase the proportion of adults who have seen a health care provider for their chronic joint symptoms.

Prevention/Resources

The Utah/Idaho Chapter of the Arthritis Foundation offers the following programs to improve quality of life and general health status:

Arthritis Foundation Aquatics Program – This program uses exercises that are performed while standing in a warm water pool. The water provides resistance to build muscle strength and supports joints to encourage free movement.

Arthritis Foundation Exercise Program – This program uses low-impact exercises created by physical therapists that can be performed while standing or sitting. The exercises use gentle range-of-motion movements suitable for any fitness level.

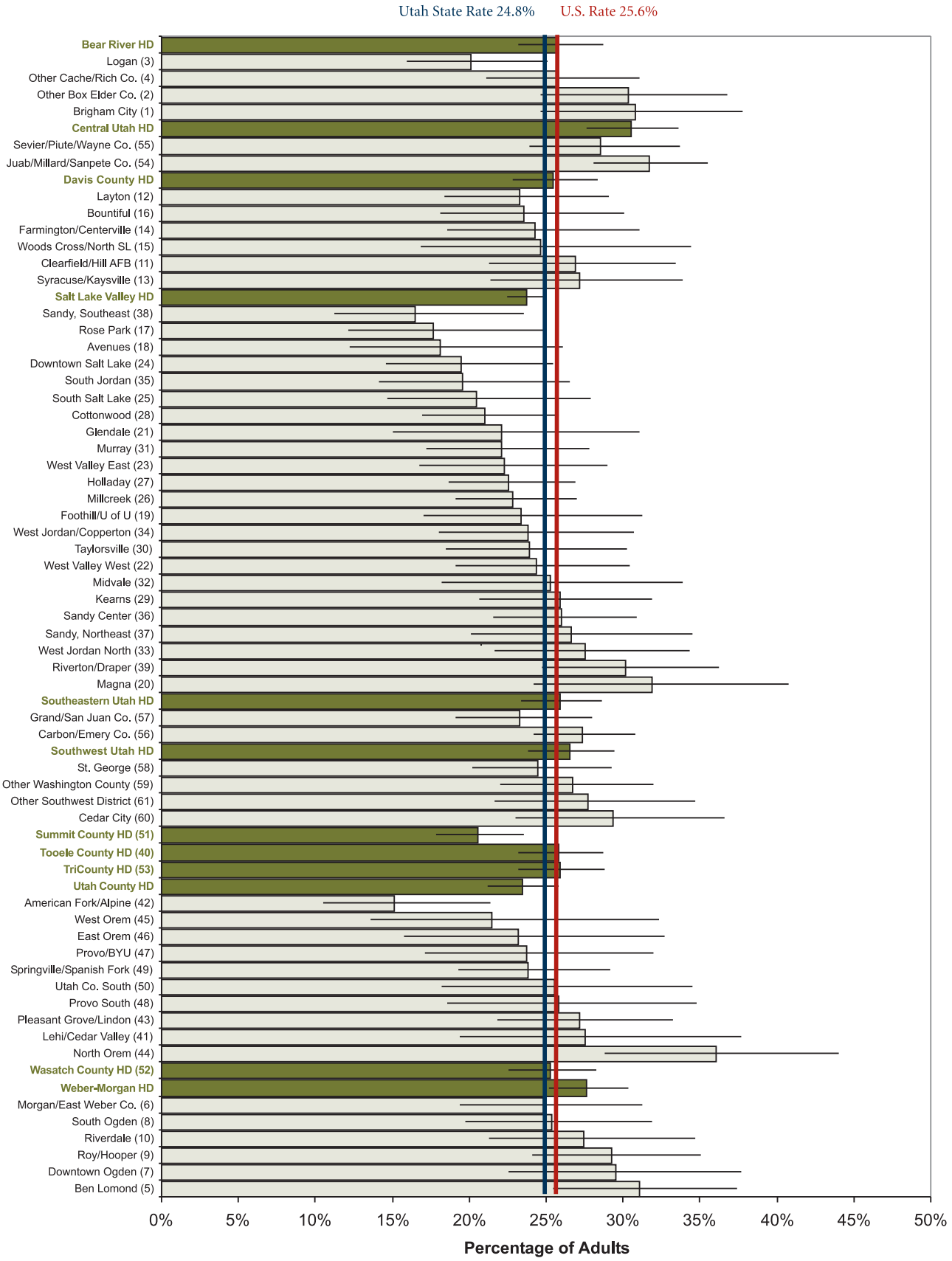
Arthritis Foundation Self-Help Program – This six-week program teaches participants about joint anatomy and protecting joints, the importance of exercise and nutrition, how to take medications properly, and to communicate better with their doctor.

Other resources include local orthopedic clinics, local health departments, Salt Lake County Aging Services, the Utah Division of Aging and Adult Services, the Department of Veterans Affairs Medical Center, the Department of Rheumatology at the University of Utah School of Medicine, and the Centers for Disease Control and Prevention.

For more information about arthritis contact the Utah Department of Health Arthritis Program at (801) 538-9458 or http://health.utah.gov/arthritis/.

6. Doctor-diagnosed Arthritis

Figure 6.1: Percentage of Adults Reporting Doctor-diagnosed Arthritis by Local Health District and Small Area, Utah Adults Aged 18+, 2001–2003, 2005 (Age-adjusted)



6. Doctor-diagnosed Arthritis

Table 6: Dr. Dx Arthritis by Health District, Small Area, Utah, and U.S., 2001-2003, 2005

State Rank*	State, Health District, or Small Area	2003 Population 18+	Number of Adults With Dr. Dx Arthritis	Crude Rate	Age-adjusted Rate	95% Confidence Interval Lower	95% Confidence Interval Upper
	U.S.	217,803,051	56,672,354	26.0%	25.6%	25.5%	25.8%
	State of Utah	1,657,454	361,656	21.8%	24.8%	24.1%	25.6%
	Bear River HD	98,027	20,919	21.3%	25.9%	23.2%	28.7%
57	Brigham City (1)	14,566	4,100	28.2%	30.8%	24.7%	37.8%
7	Logan (3)	45,904	6,165	13.4%	20.1%	15.9%	25.1%
56	Other Box Elder Co. (2)	14,636	4,482	30.6%	30.4%	24.6%	36.8%
35	Other Cache/Rich Co. (4)	22,921	5,437	23.7%	25.8%	21.1%	31.1%
	Central Utah HD	47,558	14,377	30.2%	30.6%	27.7%	33.7%
59	Juab/Millard/Sanpete Co. (54)	31,637	9,640	30.5%	31.7%	28.1%	35.5%
51	Sevier/Piute/Wayne Co. (55)	15,921	4,744	29.8%	28.6%	23.9%	33.7%
	Davis County HD	175,027	39,609	22.6%	25.4%	22.8%	28.3%
21	Bountiful (16)	33,318	7,760	23.3%	23.5%	18.1%	30.0%
43	Clearfield/Hill AFB (11)	37,329	7,959	21.3%	26.9%	21.3%	33.4%
26	Farmington/Centerville (14)	19,034	4,608	24.2%	24.3%	18.6%	31.1%
19	Layton (12)	46,815	9,794	20.9%	23.3%	18.4%	29.1%
44	Syracuse/Kaysville (13)	24,542	5,686	23.2%	27.2%	21.4%	33.9%
29	Woods Cross/North SL (15)	13,989	3,480	24.9%	24.6%	16.9%	34.4%
	Salt Lake Valley HD	658,810	137,098	20.8%	23.7%	22.5%	25.0%
4	Avenues (18)	18,959	3,181	16.8%	18.1%	12.2%	26.1%
10	Cottonwood (28)	33,297	7,695	23.1%	21.0%	16.9%	25.8%
5	Downtown Salt Lake (24)	42,808	6,781	15.8%	19.4%	14.6%	25.4%
20	Foothill/U of U (19)	17,778	3,975	22.4%	23.4%	17.0%	31.3%
12	Glendale (21)	18,642	2,999	16.1%	22.1%	15.1%	31.1%
15	Holladay (27)	35,956	10,258	28.5%	22.5%	18.6%	26.9%
38	Kearns (29)	42,995	8,307	19.3%	25.9%	20.6%	31.9%
60	Magna (20)	15,623	4,243	27.2%	31.9%	24.2%	40.8%
31	Midvale (32)	21,672	4,129	19.1%	25.2%	18.2%	33.9%
16	Millcreek (26)	44,008	10,989	25.0%	22.8%	19.2%	27.0%
13	Murray (31)	24,072	5,455	22.7%	22.1%	17.2%	27.8%
55	Riverton/Draper (39)	41,391	9,032	21.8%	30.2%	24.7%	36.3%
3	Rose Park (17)	22,639	3,663	16.2%	17.7%	12.2%	25.0%
40	Sandy Center (36)	36,106	7,066	19.6%	26.0%	21.6%	30.9%
41	Sandy, Northeast (37)	18,245	4,766	26.1%	26.7%	20.1%	34.5%
2	Sandy, Southeast (38)	20,781	3,157	15.2%	16.5%	11.3%	23.5%
6	South Jordan (35)	20,931	3,196	15.3%	19.6%	14.1%	26.5%
8	South Salt Lake (25)	18,456	3,700	20.1%	20.5%	14.7%	27.9%
25	Taylorsville (30)	27,372	5,729	20.9%	23.9%	18.5%	30.3%
48	West Jordan North (33)	30,391	6,051	19.9%	27.5%	21.6%	34.3%
23	West Jordan/Copperton (34)	26,360	4,827	18.3%	23.8%	18.0%	30.7%
14	West Valley East (23)	35,527	7,599	21.4%	22.3%	16.8%	29.0%
27	West Valley West (22)	44,794	9,165	20.5%	24.3%	19.1%	30.4%
	Southeastern Utah HD	36,828	9,336	25.4%	25.9%	23.3%	28.6%
46	Carbon/Emery Co. (56)	21,451	5,813	27.1%	27.4%	24.2%	30.8%
18	Grand/San Juan Co. (57)	15,377	3,364	21.9%	23.2%	19.1%	28.0%
	Southwest Utah HD	116,150	31,593	27.2%	26.5%	23.9%	29.4%
53	Cedar City (60)	22,401	5,038	22.5%	29.3%	23.0%	36.6%
50	Other Southwest District (61)	15,384	5,101	33.2%	27.7%	21.6%	34.7%
42	Other Washington County (59)	32,503	8,532	26.3%	26.7%	22.0%	32.0%
28	St. George (58)	45,862	12,337	26.9%	24.4%	20.2%	29.2%
9	**Summit County HD (51)**	24,525	4,449	18.1%	20.6%	17.9%	23.5%
37	**Tooele County HD (40)**	32,458	7,342	22.6%	25.9%	23.2%	28.7%
39	**TriCounty HD (53)**	28,023	7,042	25.1%	25.9%	23.2%	28.8%
	Utah County HD	278,832	48,489	17.4%	23.6%	21.4%	26.0%
1	American Fork/Alpine (42)	26,819	3,427	12.8%	15.1%	10.5%	21.4%
17	East Orem (46)	14,955	2,665	17.8%	23.2%	15.8%	32.7%
49	Lehi/Cedar Valley (41)	18,752	3,298	17.6%	27.6%	19.3%	37.7%
61	North Orem (44)	25,965	6,733	25.9%	36.1%	28.8%	44.0%
45	Pleasant Grove/Lindon (43)	24,636	4,654	18.9%	27.2%	21.9%	33.3%
22	Provo/BYU (47)	39,401	6,434	16.3%	23.7%	17.1%	32.0%
36	Provo South (48)	48,138	4,718	9.8%	25.8%	18.5%	34.8%
24	Springville/Spanish Fork (49)	41,036	8,654	21.1%	23.9%	19.3%	29.2%
34	Utah Co. South (50)	17,363	3,306	19.0%	25.5%	18.2%	34.5%
11	West Orem (45)	21,774	4,091	18.8%	21.5%	13.6%	32.3%
32	**Wasatch County HD (52)**	12,514	2,922	23.4%	25.3%	22.5%	28.3%
	Weber-Morgan HD	148,702	38,187	25.7%	27.7%	25.2%	30.4%
58	Ben Lomond (5)	33,215	9,134	27.5%	31.1%	25.5%	37.4%
54	Downtown Ogden (7)	21,684	6,067	28.0%	29.5%	22.5%	37.7%
30	Morgan/East Weber Co. (6)	24,131	5,799	24.0%	24.8%	19.4%	31.3%
47	Riverdale (10)	15,522	4,092	26.4%	27.5%	21.3%	34.7%
52	Roy/Hooper (9)	27,898	6,799	24.4%	29.2%	24.1%	35.0%
33	South Ogden (8)	26,255	6,440	24.5%	25.4%	19.8%	31.9%

*State rank is by 61 small areas for age-adjusted rate; 1 is always the lowest rate in the state and 61 is always the highest rate in the state.

Figure 6.2: Dr. Dx Arthritis by Small Area, Utah Adults Aged 18+, 2001–2003, 2005 (Age-adjusted)

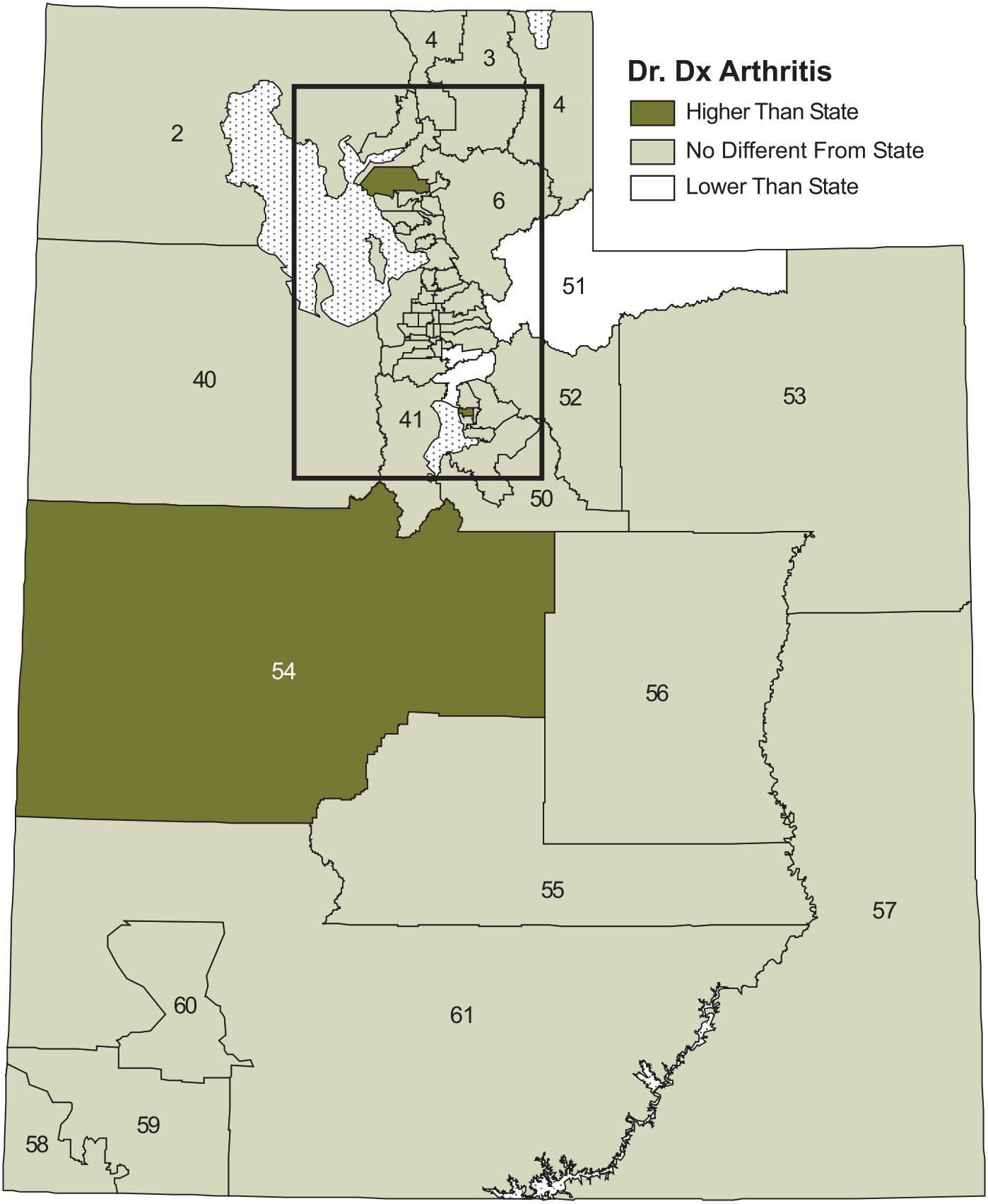
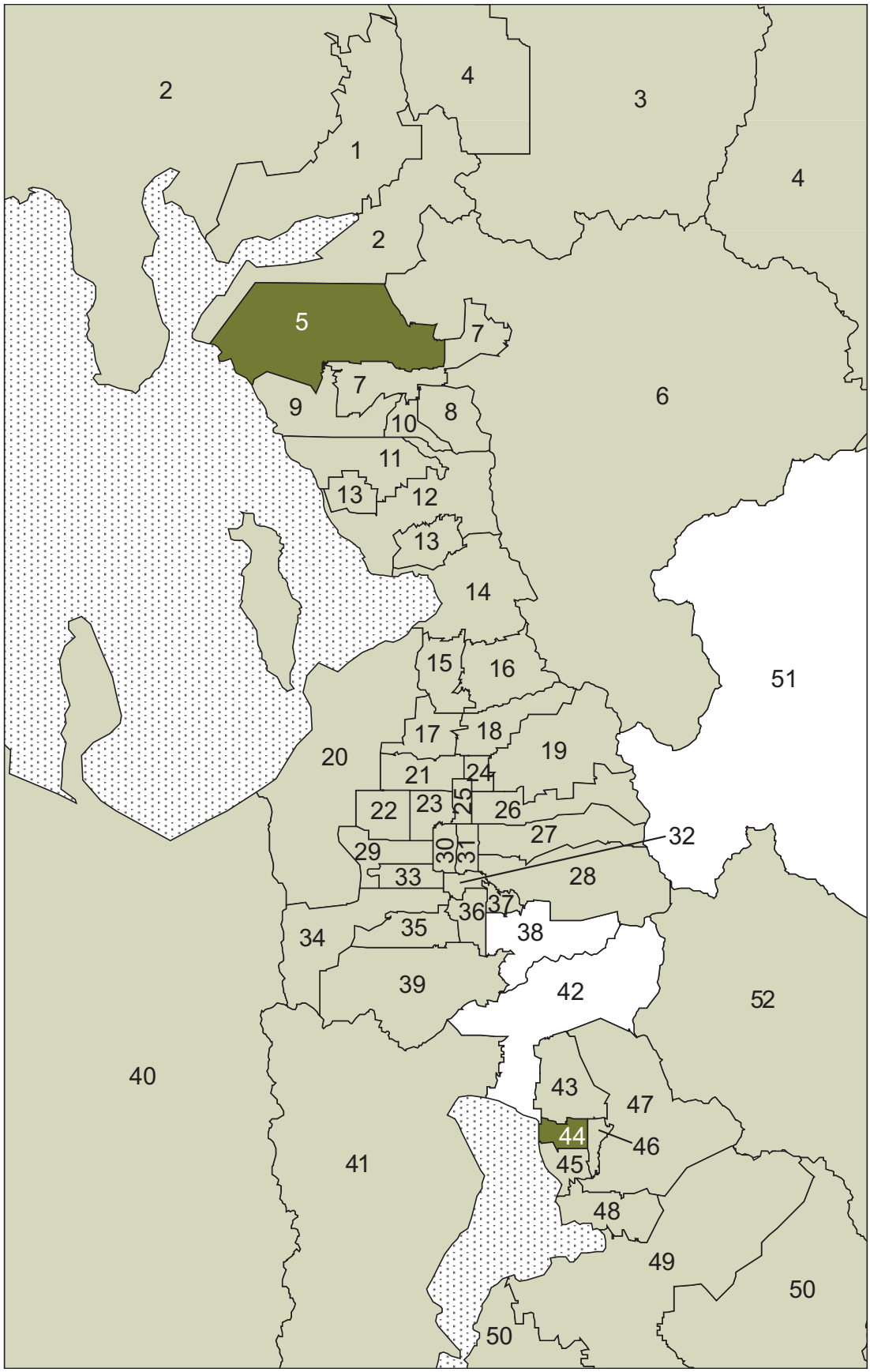


Figure 6.3: Dr. Dx Arthritis by Small Area, Wasatch Front Adults Aged 18+, 2001–2003, 2005 (Age-adjusted)



7. Doctor-diagnosed High Blood Pressure

Measure Definition: *"Have you ever been told by a doctor, nurse, or other health professional that you have high blood pressure?"* ***[Yes, excluding females told during pregnancy or people told they have borderline high blood pressure or are pre-hypertensive]***

Why is high blood pressure important to public health?

Heart disease and stroke are the number one and number three causes of death, respectively, in the United States and Utah. Approximately 4,000 people die of one of these two diseases in Utah each year. High blood pressure is a leading cause for these two diseases. Hypertension, often called high blood pressure, is defined as a systolic blood pressure of 140mm Hg or higher or a diastolic blood pressure of 90mm Hg or higher. Through regular blood pressure measurement, a doctor can diagnose high blood pressure. According to the American Heart Association, blood pressure measurement should be performed at least every two years after a normal reading. Hypertension is related to an increased incidence of heart disease, which includes heart attack, stroke, atherosclerosis (hardening of the arteries), and coronary artery disease (narrowing of the blood vessels that supply blood and oxygen to the heart). Individuals with high blood pressure should take steps to reduce and control their blood pressure.[14]

Risk factors for high blood pressure

Everyone has blood pressure, it is a sign that the heart is working and pumping blood through the body. Blood pressure varies throughout the day based on activities, emotions, stress, drug use (including prescriptions), time of day, alcohol use, smoking, diet, and many other factors. Prolonged elevated blood pressure can be dangerous because it means the heart is working too hard to pump the blood throughout the body. This can lead to weakening of the arteries and veins, which can cause a heart attack or stroke. People can lower their blood pressure by being physically active and eating a diet low in salt and high in fruits and vegetables. If this does not work, there are many types of medications that can lower a person's blood pressure.

Some women develop high blood pressure during pregnancy. This is known as gestational hypertension. Approximately 6% to 8% of pregnant women will develop high blood pressure.[15] Usually blood pressure returns to normal following pregnancy.

High blood pressure in Utah

Rates for high blood pressure have remained relatively unchanged over the past decade in Utah. Between 2001–2005, the age-adjusted percentage of adults with high blood pressure was 22.4%. The age-adjusted rate varied by local health district from a low of 17.7% (Summit Co.) to a high of 29.5% (Tooele Co.). Three health districts had rates higher than the state, and one had rates lower than the state rate. Four of Utah's 61 small areas had age-adjusted rates that were significantly lower than the state, and eight small areas had rates that were significantly higher than the state rate. Eight small areas had rates that were significantly lower than the U.S. rate.

In 2005, respondents with high blood pressure were asked if they were taking steps to reduce their blood pressure, and 96.5% said they were taking some form of action to control their blood pressure, including taking medication, reducing alcohol intake, eating better, exercising more, and reducing salt intake. Of those taking

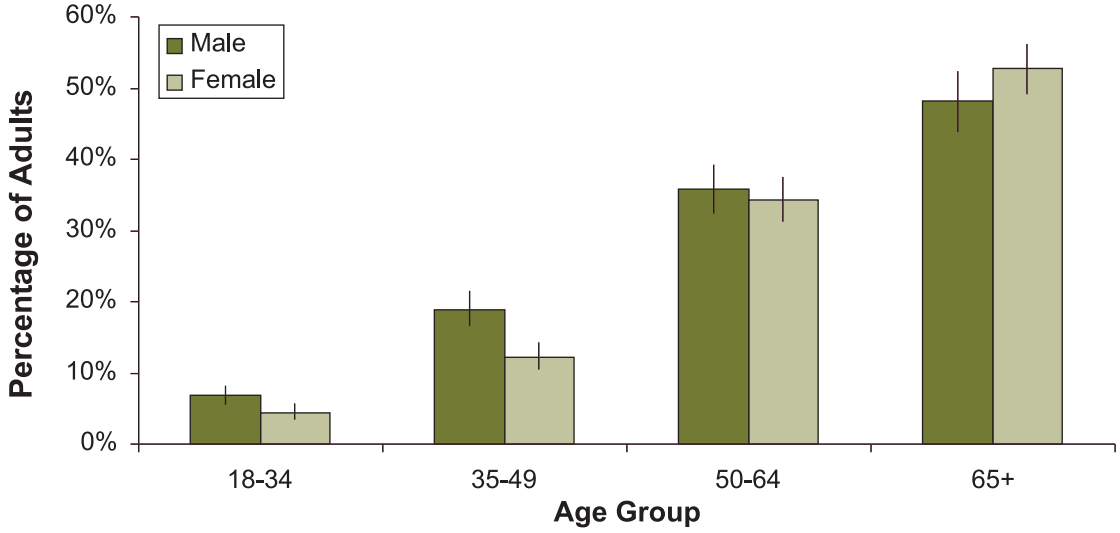
Utah Objective: Same as HP2010 objective.
HP2010 Objective (related) 12-9: Reduce the proportion of adults aged 20 years and older with high blood pressure to 16% (age-adjusted to the U.S. 2000 standard population).

High blood pressure in Utah (continued)

action, 1.5% were taking medication alone, 53.6% were taking medication and doing at least one other thing, and 44.9% were doing something other than taking medication.

Men aged 18–34 and 35–49 were significantly more likely to be told they had high blood pressure than women of the same age group ($p=0.01$ and $p<0.001$, respectively). Significant differences between sexes were not observed in other age groups. Chances of a respondent having high blood pressure increased with age.

Figure 7.A: Doctor-diagnosed High Blood Pressure by Age and Sex, Utah Adults, 2001, 2003, 2005

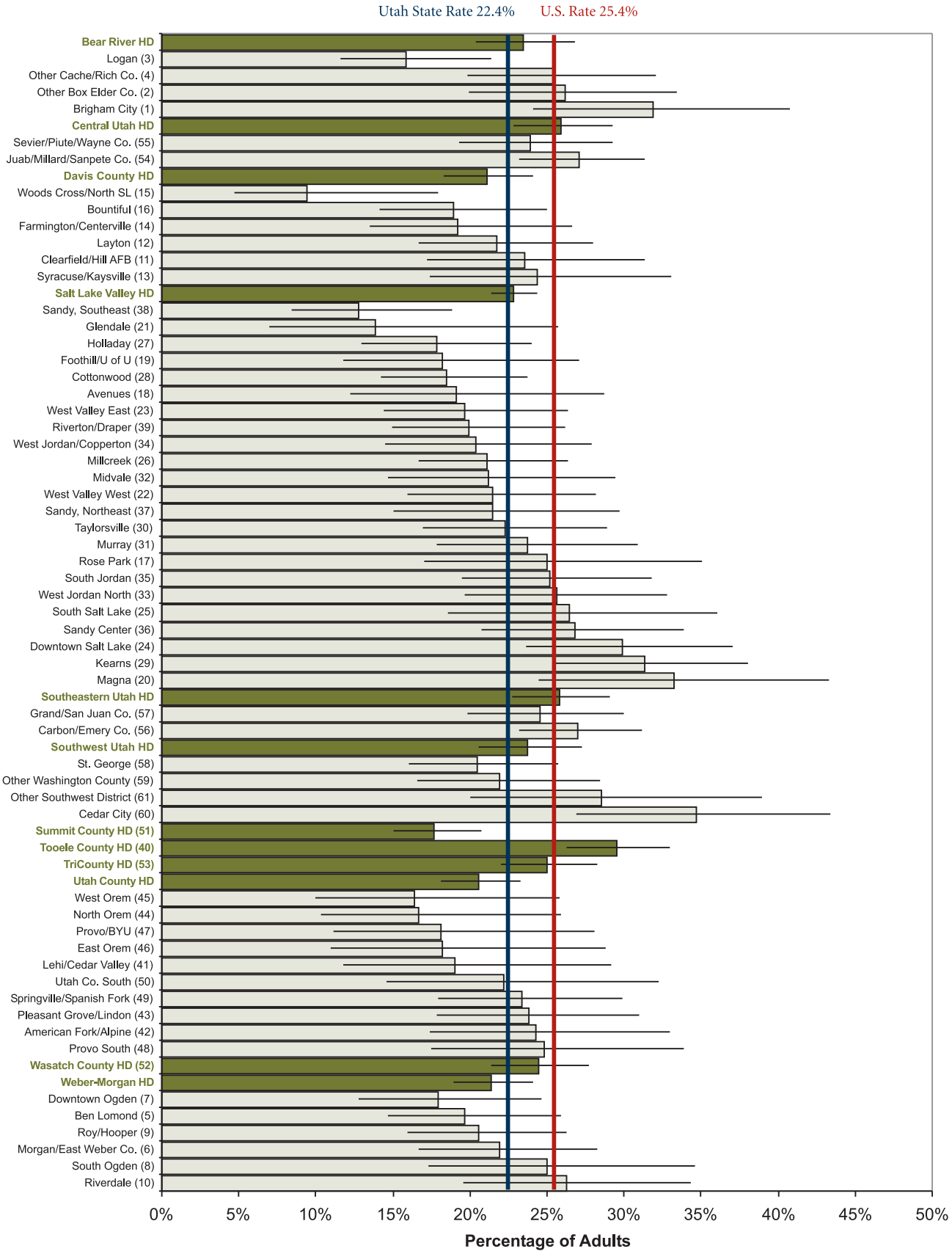


Prevention/Resources

The Heart Disease and Stroke Prevention Program (HDSPP) at the Utah Department of Health has a goal to decrease the number of heart disease and stroke-related deaths in the state. One way this is being addressed is by educating providers on current recommendations for blood pressure levels and treatment. For a copy of the manual that was produced for these teaching opportunities, please contact the HDSPP program at 801-538-6141. Many insurance companies and community health centers provide patients diagnosed with high blood pressure with a patient self-management kit that teaches the patient about high blood pressure and how to lower it. The kit also provides resources for getting more physical activity (a pedometer), a recipe book on "Dietary Approaches to Stop Hypertension" (DASH), and resources on how to take a blood pressure measurement so that they can monitor it at home or away from the clinical setting. The kit helps patients know what questions to ask their doctor so that they can discuss their disease more easily with their physician and empowers them to manage their blood pressure. The HDSPP provides more information at http://www.hearthighway.org. The National Institutes of Health provides resources, fact sheets, and answers to questions at http://health.nih.gov. The American Heart Association administers a comprehensive website for consumers and health care providers at http://www.americanheart.org.

7. Doctor-diagnosed High Blood Pressure

Figure 7.1: Percentage of Adults Reporting Doctor-diagnosed High Blood Pressure by Local Health District and Small Area, Utah Adults Aged 18+, 2001, 2003, 2005 (Age-adjusted)



7. Doctor-diagnosed High Blood Pressure

Table 7: Dr. Dx High Blood Pressure by Health District, Small Area, Utah, and U.S., 2001, 2003, 2005

State Rank*	State, Health District, or Small Area	2003 Population 18+	Number of Adults With Dr. Dx High Blood Pressure	Crude Rate	Age-adjusted Rate	95% Confidence Interval	
						Lower	Upper
	U.S.	217,803,051	56,410,990	25.9%	25.4%	25.3%	25.6%
	State of Utah	1,657,454	327,513	19.8%	22.4%	21.5%	23.3%
	Bear River HD	98,027	18,968	19.4%	23.4%	20.4%	26.8%
59	Brigham City (1)	14,566	4,246	29.2%	31.8%	24.1%	40.7%
4	Logan (3)	45,904	4,967	10.8%	15.9%	11.6%	21.4%
49	Other Box Elder Co. (2)	14,636	3,751	25.6%	26.1%	20.0%	33.4%
47	Other Cache/Rich Co. (4)	22,921	5,611	24.5%	25.5%	19.9%	32.0%
	Central Utah HD	47,558	12,256	25.8%	25.8%	22.8%	29.2%
54	Juab/Millard/Sanpete Co. (54)	31,637	8,409	26.6%	27.1%	23.2%	31.3%
37	Sevier/Piute/Wayne Co. (55)	15,921	3,875	24.3%	23.9%	19.3%	29.3%
	Davis County HD	175,027	31,592	18.1%	21.1%	18.3%	24.1%
14	Bountiful (16)	33,318	6,387	19.2%	19.0%	14.1%	25.0%
34	Clearfield/Hill AFB (11)	37,329	6,783	18.2%	23.6%	17.2%	31.3%
17	Farmington/Centerville (14)	19,034	3,316	17.4%	19.2%	13.5%	26.7%
28	Layton (12)	46,815	8,750	18.7%	21.8%	16.6%	28.0%
39	Syracuse/Kaysville (13)	24,542	5,151	21.0%	24.4%	17.4%	33.1%
1	Woods Cross/North SL (15)	13,989	1,175	8.4%	9.4%	4.7%	17.9%
	Salt Lake Valley HD	658,810	133,673	20.3%	22.8%	21.4%	24.3%
16	Avenues (18)	18,959	3,576	18.9%	19.1%	12.2%	28.7%
13	Cottonwood (28)	33,297	7,449	22.4%	18.5%	14.2%	23.8%
57	Downtown Salt Lake (24)	42,808	10,514	24.6%	29.9%	23.7%	37.0%
11	Foothill/U of U (19)	17,778	3,419	19.2%	18.2%	11.8%	27.1%
3	Glendale (21)	18,642	1,987	10.7%	13.9%	7.0%	25.7%
8	Holladay (27)	35,956	7,738	21.5%	17.8%	13.0%	24.0%
58	Kearns (29)	42,995	10,740	25.0%	31.3%	25.4%	38.0%
60	Magna (20)	15,623	3,778	24.2%	33.2%	24.5%	43.3%
25	Midvale (32)	21,672	3,673	17.0%	21.2%	14.7%	29.5%
24	Millcreek (26)	44,008	11,490	26.1%	21.1%	16.7%	26.3%
35	Murray (31)	24,072	6,057	25.2%	23.8%	17.9%	30.9%
20	Riverton/Draper (39)	41,391	5,050	12.2%	19.9%	14.9%	26.1%
44	Rose Park (17)	22,639	4,408	19.5%	25.0%	17.0%	35.1%
52	Sandy Center (36)	36,106	8,041	22.3%	26.8%	20.8%	33.8%
27	Sandy, Northeast (37)	18,245	3,456	18.9%	21.5%	15.1%	29.7%
2	Sandy, Southeast (38)	20,781	2,336	11.2%	12.8%	8.4%	18.8%
46	South Jordan (35)	20,931	3,820	18.3%	25.2%	19.5%	31.8%
51	South Salt Lake (25)	18,456	4,775	25.9%	26.4%	18.6%	36.1%
32	Taylorsville (30)	27,372	5,622	20.5%	22.3%	16.9%	28.9%
48	West Jordan North (33)	30,391	5,616	18.5%	25.7%	19.6%	32.8%
21	West Jordan/Copperton (34)	26,360	5,045	19.1%	20.4%	14.5%	27.9%
19	West Valley East (23)	35,527	7,770	21.9%	19.7%	14.4%	26.4%
26	West Valley West (22)	44,794	7,794	17.4%	21.4%	16.0%	28.2%
	Southeastern Utah HD	36,828	9,273	25.2%	25.7%	22.7%	29.0%
53	Carbon/Emery Co. (56)	21,451	5,642	26.3%	27.0%	23.2%	31.2%
41	Grand/San Juan Co. (57)	15,377	3,498	22.8%	24.5%	19.8%	30.0%
	Southwest Utah HD	116,150	27,795	23.9%	23.7%	20.6%	27.2%
61	Cedar City (60)	22,401	5,968	26.6%	34.7%	26.9%	43.4%
55	Other Southwest District (61)	15,384	4,757	30.9%	28.5%	20.0%	38.9%
30	Other Washington County (59)	32,503	6,835	21.0%	22.0%	16.6%	28.5%
22	St. George (58)	45,862	9,668	21.1%	20.5%	16.1%	25.7%
7	**Summit County HD (51)**	24,525	3,541	14.4%	17.7%	15.0%	20.8%
56	**Tooele County HD (40)**	32,458	8,644	26.6%	29.5%	26.3%	33.0%
45	**TriCounty HD (53)**	28,023	6,726	24.0%	25.0%	22.0%	28.2%
	Utah County HD	278,832	41,853	15.0%	20.6%	18.1%	23.3%
38	American Fork/Alpine (42)	26,819	5,723	21.3%	24.3%	17.4%	32.9%
12	East Orem (46)	14,955	2,789	18.7%	18.2%	11.0%	28.8%
15	Lehi/Cedar Valley (41)	18,752	2,211	11.8%	19.0%	11.7%	29.2%
6	North Orem (44)	25,965	3,768	14.5%	16.7%	10.3%	25.9%
36	Pleasant Grove/Lindon (43)	24,636	4,127	16.8%	23.8%	17.9%	31.0%
10	Provo/BYU (47)	39,401	4,413	11.2%	18.1%	11.2%	28.0%
42	Provo South (48)	48,138	4,852	10.1%	24.8%	17.5%	33.9%
33	Springville/Spanish Fork (49)	41,036	6,828	16.6%	23.4%	17.9%	29.9%
31	Utah Co. South (50)	17,363	2,860	16.5%	22.2%	14.6%	32.3%
5	West Orem (45)	21,774	2,746	12.6%	16.4%	10.0%	25.8%
40	**Wasatch County HD (52)**	12,514	2,833	22.6%	24.4%	21.4%	27.7%
	Weber-Morgan HD	148,702	29,859	20.1%	21.4%	18.9%	24.1%
18	Ben Lomond (5)	33,215	5,992	18.0%	19.7%	14.6%	25.9%
9	Downtown Ogden (7)	21,684	4,580	21.1%	18.0%	12.8%	24.7%
29	Morgan/East Weber Co. (6)	24,131	5,026	20.8%	21.9%	16.7%	28.2%
50	Riverdale (10)	15,522	3,590	23.1%	26.3%	19.6%	34.3%
23	Roy/Hooper (9)	27,898	4,854	17.4%	20.6%	15.9%	26.2%
43	South Ogden (8)	26,255	6,401	24.4%	25.0%	17.3%	34.6%

*State rank is by 61 small areas for age-adjusted rate; 1 is always the lowest rate in the state and 61 is always the highest rate in the state.

Figure 7.2: Dr. Dx High Blood Pressure by Small Area, Utah Adults Aged 18+, 2001, 2003, 2005 (Age-adjusted)

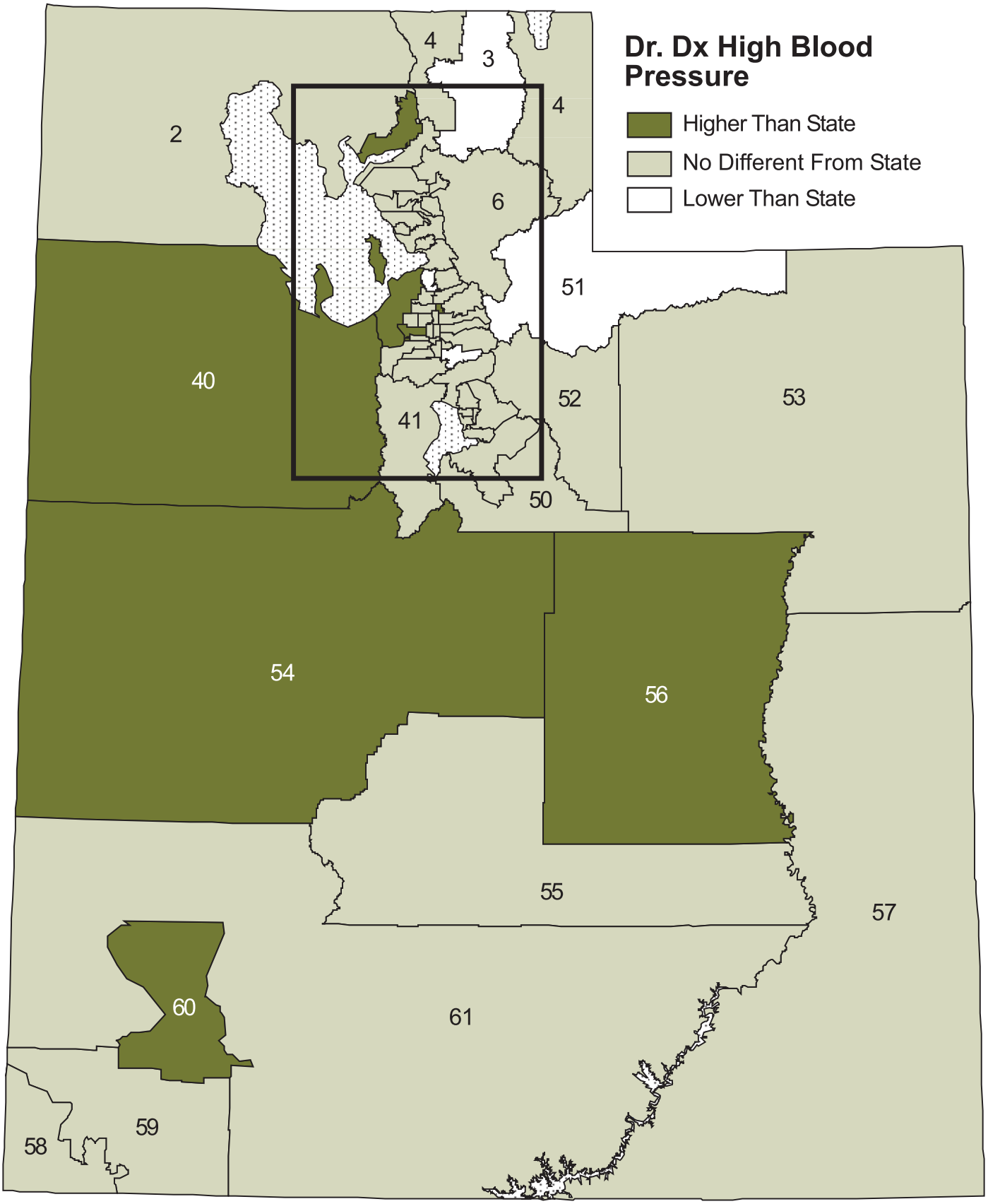
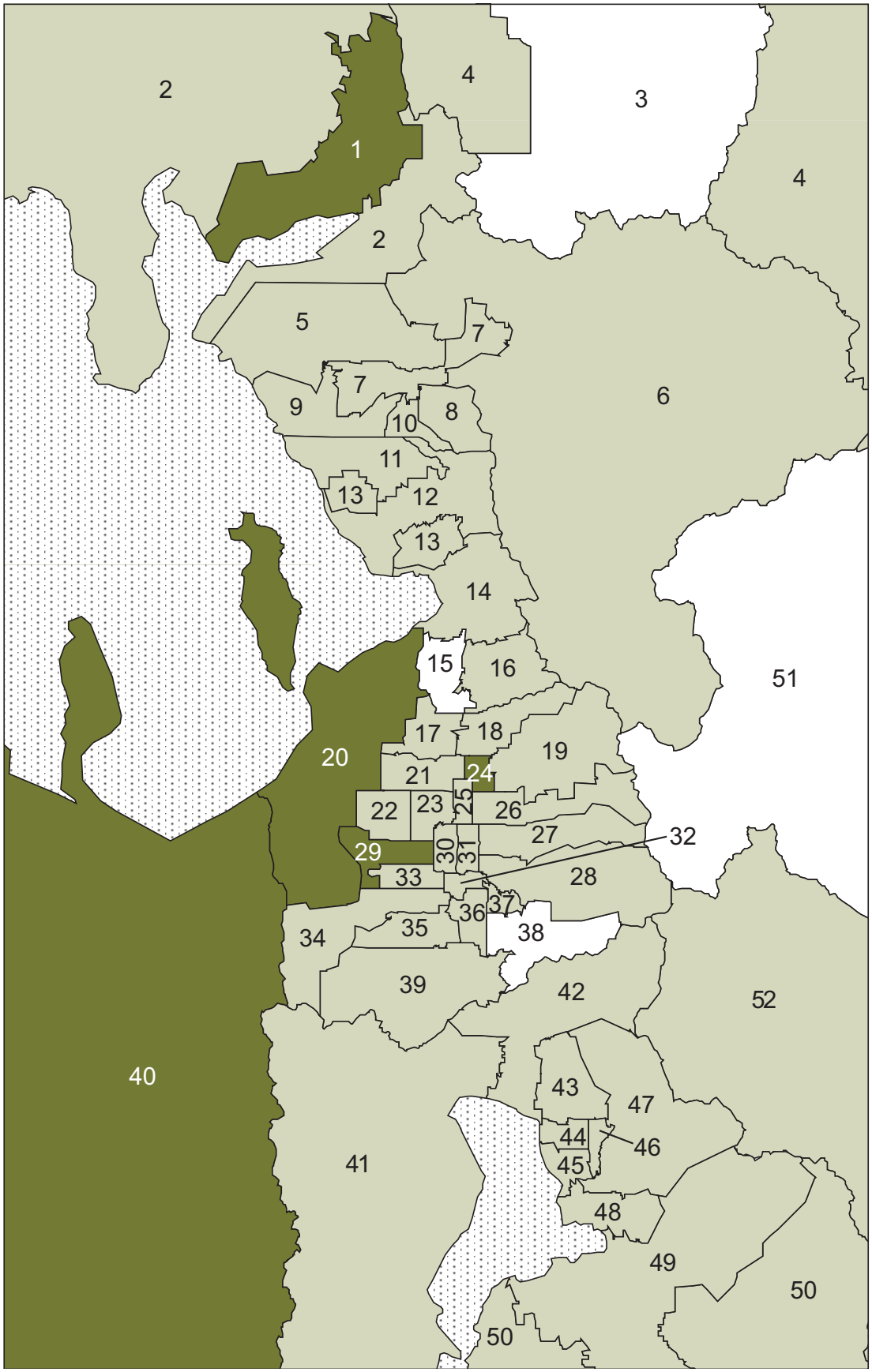


Figure 7.3: Dr. Dx High Blood Pressure by Small Area, Wasatch Front Adults 18+, 2001, 2003, 2005 (Age-adjusted)



8. Doctor-diagnosed High Cholesterol

Measure Definition: *"Have you ever been told by a doctor, nurse, or other health professional that your blood cholesterol is high?"* ***[Yes]***

Why is high cholesterol important to public health?

High levels of cholesterol and triglycerides increase the risk for heart disease, the number one killer in Utah. The National Heart, Lung, and Blood Institute defines high blood cholesterol as 240 mg/dl or greater and borderline high cholesterol as 200 to 239 mg/dl. Cholesterol and other fats cannot dissolve in the blood. They must be transported to and from the cells by special carriers called lipoproteins. There are two types of lipoproteins that are important in our bodies: low-density lipoprotein (LDL), which carries cholesterol to the arteries, and high-density lipoprotein (HDL), which removes cholesterol from the arteries. High levels of LDL and low levels of HDL are related to an increased incidence of heart disease including heart attack, atherosclerosis (hardening of the arteries), and coronary artery disease (narrowing of the blood vessels that supply blood and oxygen to the heart). Individuals with high cholesterol should take steps to reduce and control their cholesterol levels.[16]

Risk factors for high cholesterol

Everyone needs cholesterol. It is necessary for building cell walls and the production of sex hormones, vitamin D, and digestive juices. Cholesterol is necessary to help every organ in the body function properly. The body is able to make all the cholesterol a person needs. Cholesterol is also found in the animal products that we eat such as eggs, dairy products, meat, and poultry. When a person ingests too much cholesterol or the body makes too much cholesterol, it can build up in the blood vessels. The largest contributor to high blood cholesterol is eating a diet high in cholesterol. Physical activity can help lower the amount of LDL cholesterol in the body and increase the amount of HDL cholesterol. Increasing the amount of HDL in the body is beneficial because HDL cholesterol removes the LDL cholesterol from the arteries and transports it to the liver where it is used. Obesity, smoking, and excessive alcohol consumption can also increase the risk for high cholesterol.[9,17-19]

High cholesterol in Utah

The percentage of persons who have had their blood cholesterol measured in the past five years was 62.8% in 2005. This means a large number of Utahns who have not been tested could have high cholesterol and not know it. The data in this report should not be interpreted as the incidence of high blood cholesterol in Utah.

Between 2001–2005, the age-adjusted percentage of adults who had been told by a doctor that they had high cholesterol was 22.9%. The rate varied by local health district from a low of 20.4% to a high of 25.1%. None of the 12 health districts had rates that differed from the state. Two of Utah's 61 small areas had age-adjusted rates that were significantly lower than the state rate, and two small areas had rates that were significantly higher than the state rate. Overall Utah rates were lower than the U.S. rate. Eight small areas had rates that were significantly lower than the U.S. rate.

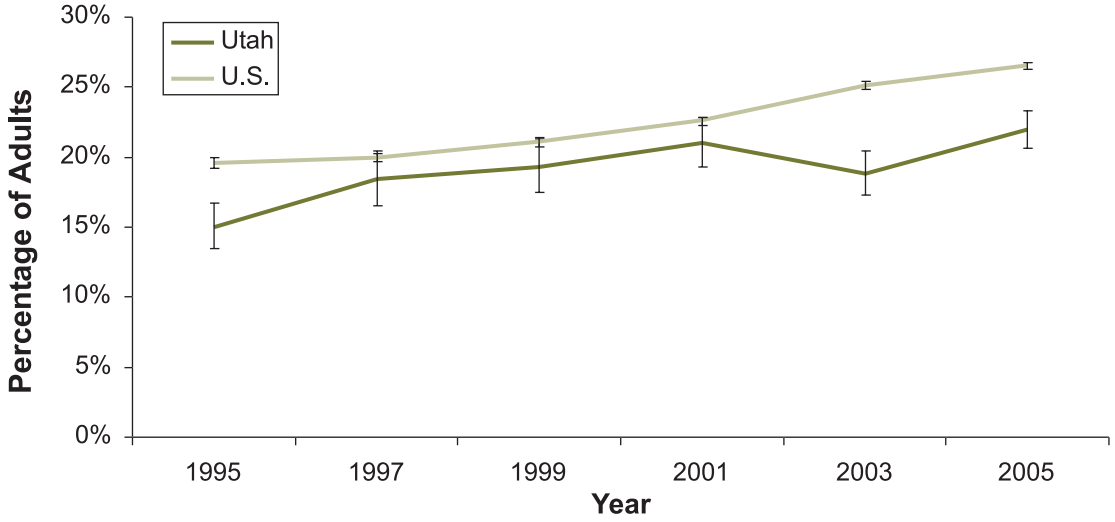
Rates for doctor-diagnosed high cholesterol have increased significantly over the past few years. From 1995–2005 the rate increased from 15.0% to 22.0%. Rates of respondents screened for high cholesterol did not increase significantly, which would suggest that actual rates of Utahns with high cholesterol are increas-

Utah Objective: Same as HP2010 objective.
HP2010 Objective (related) 12-14: Reduce the proportion of adults aged 20 years and older with high total blood cholesterol levels to 17% (age-adjusted to U.S. 2000 standard population).

High cholesterol in Utah (continued)

ing. Significant differences were not observed between genders. Rates of being diagnosed with high cholesterol increased with age.

Figure 8.A: Doctor-diagnosed High Cholesterol, Utah and U.S. Adults, 1995-2005

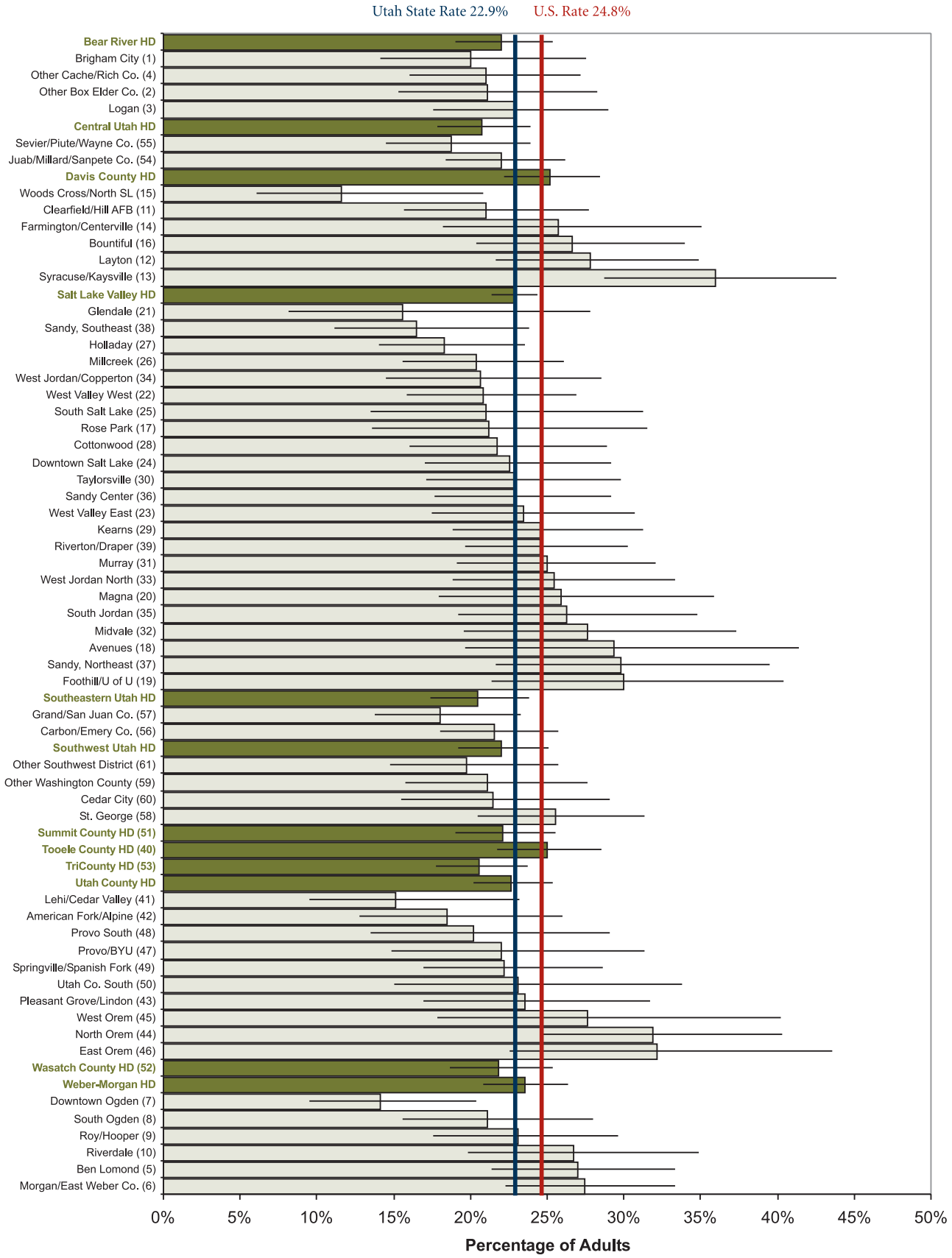


Prevention/Resources

The Heart Disease and Stroke Prevention Program (HDSPP) at the Utah Department of Health has a goal to decrease the number of heart disease and stroke-related deaths in the state. One way this is being done is by educating providers on the most current recommendations for cholesterol levels. This education also includes teaching physicians the suggested treatment of high blood cholesterol, and how to take a quick finger prick cholesterol test in the office. This is done so that they can give patients their results and counsel them at the initial office visit so patients who have a hard time following up with the physician will still be informed. For a copy of the manual that was produced for these teaching opportunities, please contact the HDSPP program at 801-538-6141. The HDSPP provides additional information at http://www.hearthighway.org. The National Institutes of Health provides resources, fact sheets, and answers to questions at http://health.nih.gov. The American Heart Association administers a comprehensive website for consumers and health care providers at http://www.americanheart.org.

8. Doctor-diagnosed High Cholesterol

Figure 8.1: Percentage of Adults Who Reported Doctor-diagnosed High Cholesterol by Local Health District and Small Area, Utah Adults Aged 18+, 2001, 2003, 2005 (Age-adjusted)



8. Doctor-diagnosed High Cholesterol

Table 8: Dr. Dx High Cholesterol by Health District, Small Area, Utah, and U.S., 2001, 2003, 2005

State Rank*	State, Health District, or Small Area	2003 Population 18+	Number of Adults With Dr. Dx High Cholesterol	Crude Rate	Age-adjusted Rate	95% Confidence Interval Lower	95% Confidence Interval Upper
	U.S.	217,803,051	54,995,270	25.3%	24.8%	24.6%	24.9%
	State of Utah	1,657,454	341,601	20.6%	22.9%	22.1%	23.8%
	Bear River HD	98,027	17,713	18.1%	22.0%	19.0%	25.4%
11	Brigham City (1)	14,566	3,028	20.8%	20.0%	14.1%	27.5%
33	Logan (3)	45,904	6,720	14.6%	22.8%	17.6%	29.0%
20	Other Box Elder Co. (2)	14,636	2,964	20.3%	21.1%	15.4%	28.2%
18	Other Cache/Rich Co. (4)	22,921	4,752	20.7%	21.1%	16.0%	27.2%
	Central Utah HD	47,558	9,721	20.4%	20.7%	17.8%	23.9%
28	Juab/Millard/Sanpete Co. (54)	31,637	6,685	21.1%	22.0%	18.4%	26.1%
9	Sevier/Piute/Wayne Co. (55)	15,921	3,062	19.2%	18.8%	14.5%	23.9%
	Davis County HD	175,027	40,204	23.0%	25.1%	22.2%	28.4%
49	Bountiful (16)	33,318	8,689	26.1%	26.6%	20.4%	34.0%
19	Clearfield/Hill AFB (11)	37,329	6,036	16.2%	21.1%	15.6%	27.7%
46	Farmington/Centerville (14)	19,034	4,947	26.0%	25.7%	18.2%	35.0%
55	Layton (12)	46,815	11,713	25.0%	27.8%	21.7%	34.9%
61	Syracuse/Kaysville (13)	24,542	7,758	31.6%	35.9%	28.7%	43.9%
1	Woods Cross/North SL (15)	13,989	1,441	10.3%	11.6%	6.1%	20.8%
	Salt Lake Valley HD	658,810	138,745	21.1%	22.9%	21.5%	24.4%
56	Avenues (18)	18,959	5,460	28.8%	29.3%	19.7%	41.4%
26	Cottonwood (28)	33,297	8,258	24.8%	21.8%	16.0%	28.9%
32	Downtown Salt Lake (24)	42,808	7,316	17.1%	22.5%	17.1%	29.1%
58	Foothill/U of U (19)	17,778	5,465	30.7%	30.0%	21.4%	40.4%
4	Glendale (21)	18,642	2,103	11.3%	15.6%	8.1%	27.8%
7	Holladay (27)	35,956	8,299	23.1%	18.3%	14.0%	23.5%
40	Kearns (29)	42,995	9,369	21.8%	24.5%	18.8%	31.3%
47	Magna (20)	15,623	2,959	18.9%	25.9%	18.0%	35.9%
53	Midvale (32)	21,672	4,538	20.9%	27.6%	19.6%	37.3%
13	Millcreek (26)	44,008	9,083	20.6%	20.3%	15.6%	26.1%
43	Murray (31)	24,072	6,487	27.0%	25.0%	19.1%	32.1%
41	Riverton/Draper (39)	41,391	8,307	20.1%	24.6%	19.7%	30.2%
23	Rose Park (17)	22,639	3,966	17.5%	21.2%	13.6%	31.5%
35	Sandy Center (36)	36,106	6,694	18.5%	22.9%	17.7%	29.2%
57	Sandy, Northeast (37)	18,245	4,879	26.7%	29.8%	21.6%	39.5%
5	Sandy, Southeast (38)	20,781	4,482	21.6%	16.5%	11.1%	23.9%
48	South Jordan (35)	20,931	5,423	25.9%	26.3%	19.2%	34.8%
17	South Salt Lake (25)	18,456	3,514	19.0%	21.0%	13.5%	31.2%
34	Taylorsville (30)	27,372	5,113	18.7%	22.8%	17.1%	29.8%
44	West Jordan North (33)	30,391	5,212	17.2%	25.4%	18.9%	33.4%
15	West Jordan/Copperton (34)	26,360	4,734	18.0%	20.6%	14.5%	28.5%
38	West Valley East (23)	35,527	8,971	25.3%	23.5%	17.5%	30.7%
16	West Valley West (22)	44,794	8,936	20.0%	20.9%	15.9%	26.9%
	Southeastern Utah HD	36,828	7,564	20.5%	20.4%	17.4%	23.8%
25	Carbon/Emery Co. (56)	21,451	4,458	20.8%	21.6%	18.0%	25.7%
6	Grand/San Juan Co. (57)	15,377	3,075	20.0%	18.1%	13.8%	23.3%
	Southwest Utah HD	116,150	26,076	22.5%	22.0%	19.2%	25.1%
24	Cedar City (60)	22,401	3,477	15.5%	21.5%	15.5%	29.0%
10	Other Southwest District (61)	15,384	3,664	23.8%	19.7%	14.8%	25.8%
21	Other Washington County (59)	32,503	6,813	21.0%	21.1%	15.8%	27.6%
45	St. George (58)	45,862	12,309	26.8%	25.5%	20.5%	31.4%
30	**Summit County HD (51)**	24,525	5,116	20.9%	22.1%	19.0%	25.6%
42	**Tooele County HD (40)**	32,458	7,569	23.3%	25.0%	21.8%	28.5%
14	**TriCounty HD (53)**	28,023	5,666	20.2%	20.6%	17.7%	23.7%
	Utah County HD	278,832	47,095	16.9%	22.6%	20.2%	25.3%
8	American Fork/Alpine (42)	26,819	3,902	14.6%	18.5%	12.7%	26.0%
60	East Orem (46)	14,955	4,765	31.9%	32.1%	22.5%	43.6%
3	Lehi/Cedar Valley (41)	18,752	2,181	11.6%	15.1%	9.5%	23.2%
59	North Orem (44)	25,965	5,920	22.8%	31.9%	24.5%	40.3%
39	Pleasant Grove/Lindon (43)	24,636	5,100	20.7%	23.5%	17.0%	31.7%
29	Provo/BYU (47)	39,401	5,520	14.0%	22.0%	14.9%	31.4%
12	Provo South (48)	48,138	4,125	8.6%	20.2%	13.5%	29.1%
31	Springville/Spanish Fork (49)	41,036	7,054	17.2%	22.2%	16.9%	28.6%
37	Utah Co. South (50)	17,363	3,301	19.0%	23.1%	15.1%	33.8%
54	West Orem (45)	21,774	3,893	17.9%	27.6%	17.8%	40.2%
27	**Wasatch County HD (52)**	12,514	2,520	20.1%	21.8%	18.7%	25.4%
	Weber-Morgan HD	148,702	33,161	22.3%	23.6%	20.9%	26.4%
51	Ben Lomond (5)	33,215	8,015	24.1%	27.0%	21.4%	33.4%
2	Downtown Ogden (7)	21,684	3,209	14.8%	14.1%	9.5%	20.4%
52	Morgan/East Weber Co. (6)	24,131	6,380	26.4%	27.5%	22.2%	33.4%
50	Riverdale (10)	15,522	3,708	23.9%	26.7%	19.8%	34.9%
36	Roy/Hooper (9)	27,898	5,652	20.3%	23.1%	17.6%	29.6%
22	South Ogden (8)	26,255	5,527	21.1%	21.1%	15.6%	28.0%

*State rank is by 61 small areas for age-adjusted rate; 1 is always the lowest rate in the state and 61 is always the highest rate in the state.

Figure 8.2: Dr. Dx High Cholesterol by Small Area, Utah Adults Aged 18+, 2001, 2003, 2005 (Age-adjusted)

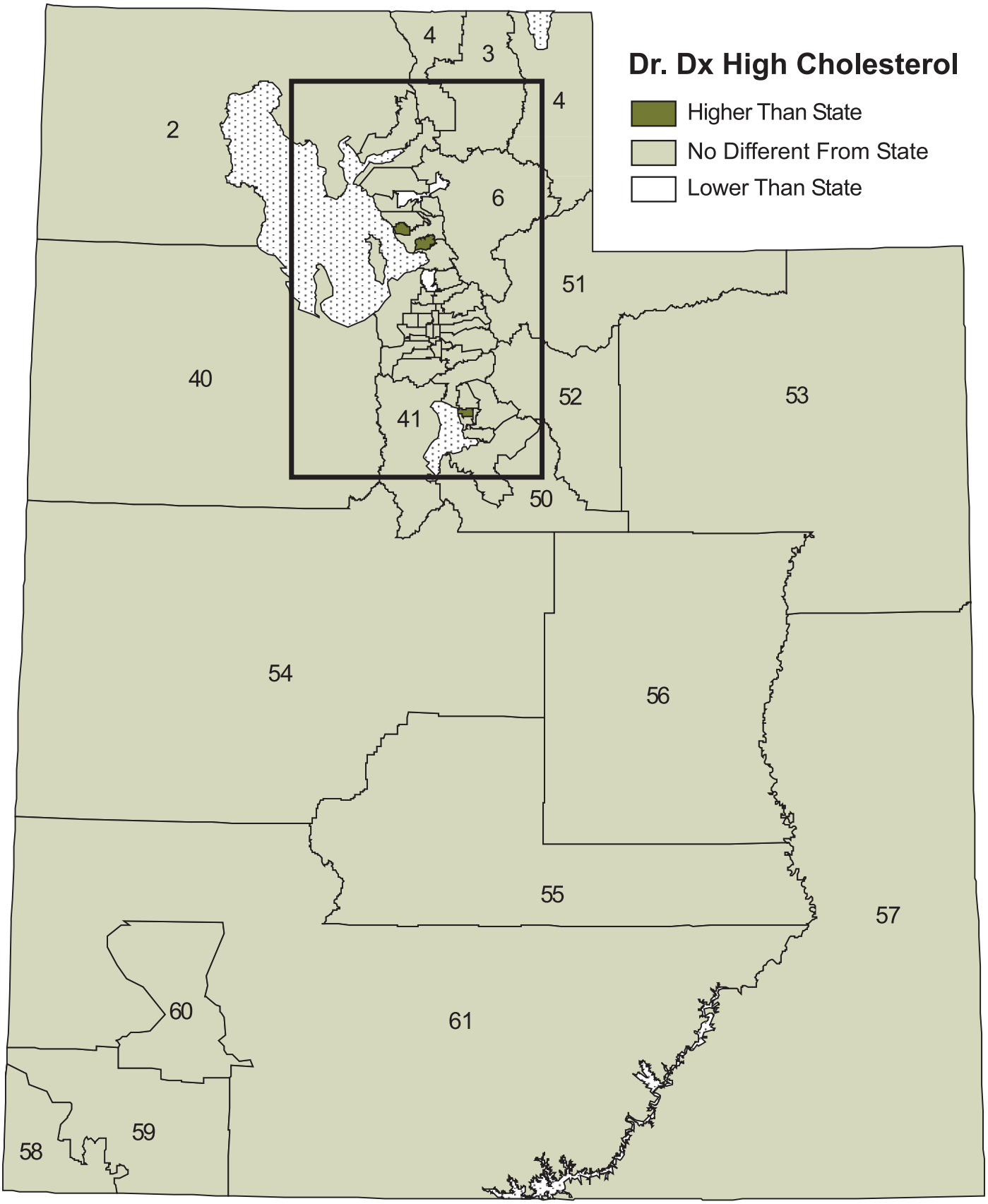
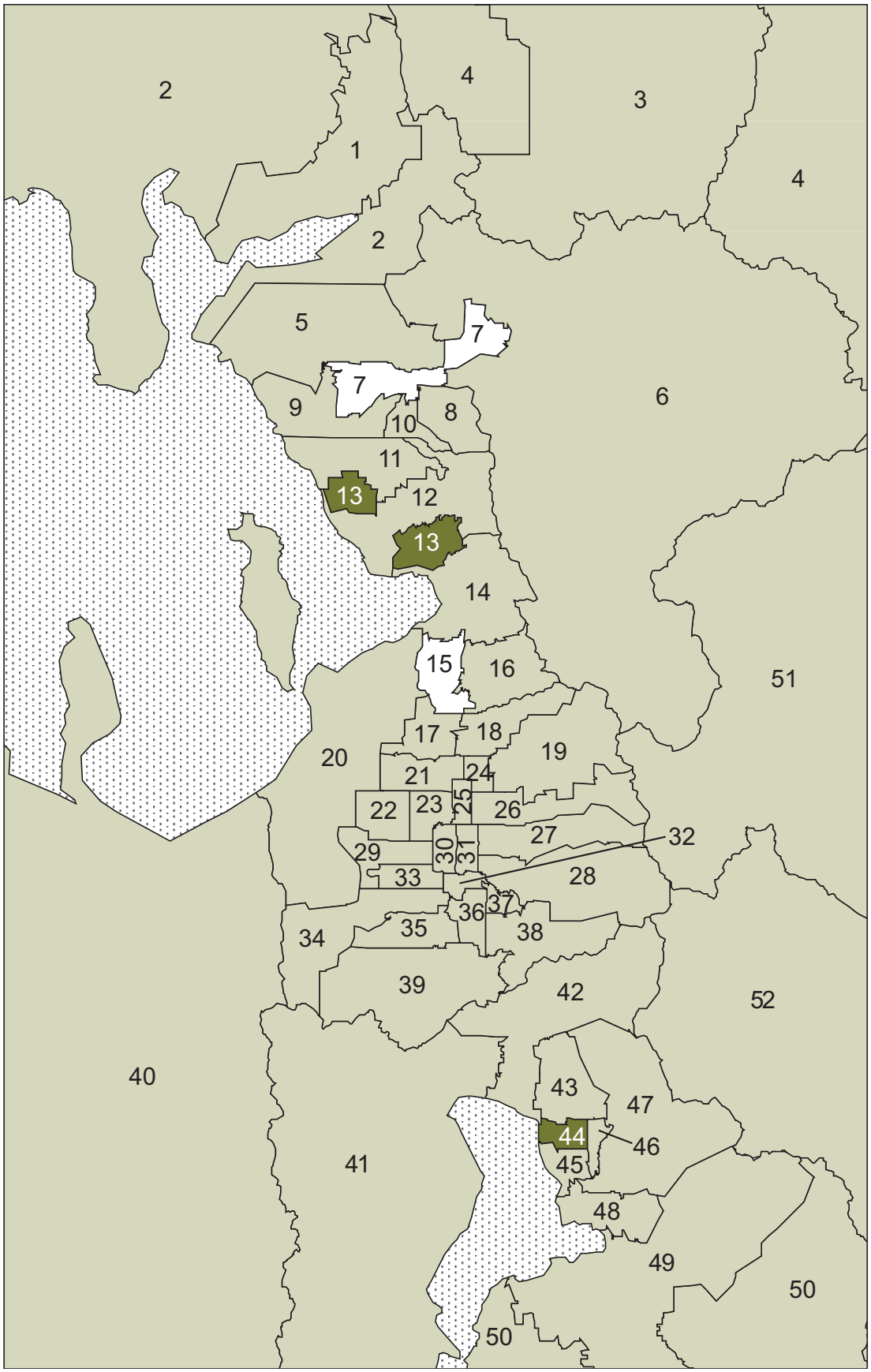


Figure 8.3: Dr. Dx High Cholesterol by Small Area, Wasatch Front Adults 18+, 2001, 2003, 2005 (Age-adjusted)



9. Activity Limitation

Measure Definition: *"Are you limited in any way in any activities because of physical, mental, or emotional problems?"* ***[Yes]***

Why is activity limitation important to public health?

The activity limitation question has historically been used by the BRFSS to screen for disability. Disability results when a physical or mental limitation is expressed in a social context. Chronic illnesses and disabilities, and their subsequent activity limitations, are a major health problem for many adults. Chronic illnesses and disabilities are often associated with reduced functioning, sensory impairments, depression, the need for extended care, loss of independence, and increased health care costs. As the population ages, the number of adults who experience activity limitation will have substantial effects on the health care system and its resources.[20]

Risk factors for activity limitation

Generally, females are more likely to experience activity limitation compared to males, and the older an individual is the more likely he or she will experience activity limitation. Among racial/ethnic groups, Asian and Pacific Islander persons reported the lowest rate of activity limitation, whereas Native American, non-Hispanic Black, and non-Hispanic White persons have reported higher rates. Education is inversely related to activity limitation; the more education someone has, the less likely he or she is to experience activity limitation.[21]

The major causes of activity limitation vary with age. In general, persons aged 18 to 44 years have reported back disorders as the most prevalent cause of activity limitation compared to those over 45 years of age who generally report heart disease as the most prevalent cause of activity limitation.[22]

In Utah, 25.5% of females reported activity limitation compared to 23.0% of males, and persons aged 65 and older reported the highest percentage of activity limitation (31.5%) for any age group. Generally, married people experienced less activity limitation (22.4%) compared to people who were separated (38.6%), divorced (31.5%), widowed (31.1%), or never married (30.8%). Twice as many people with an annual household income of less than $20,000 reported activity limitation (44.8%) compared to 20.0% for those with an annual household income of $50,000 or more.

Activity limitation in Utah

The age-adjusted rate of Utah respondents who reported activity limitation from 2001–2005 was 18.6%. In 2003, more than 283,000 Utah adults reported being limited because of a physical, mental, or emotional problem, which is equivalent to the population of Davis County. Summit County health district reported an age-adjusted rate of activity limitation that was lower than the state rate (13.6%), while Southeastern Utah health district reported a higher prevalence of activity limitation (21.9%) than the state rate.

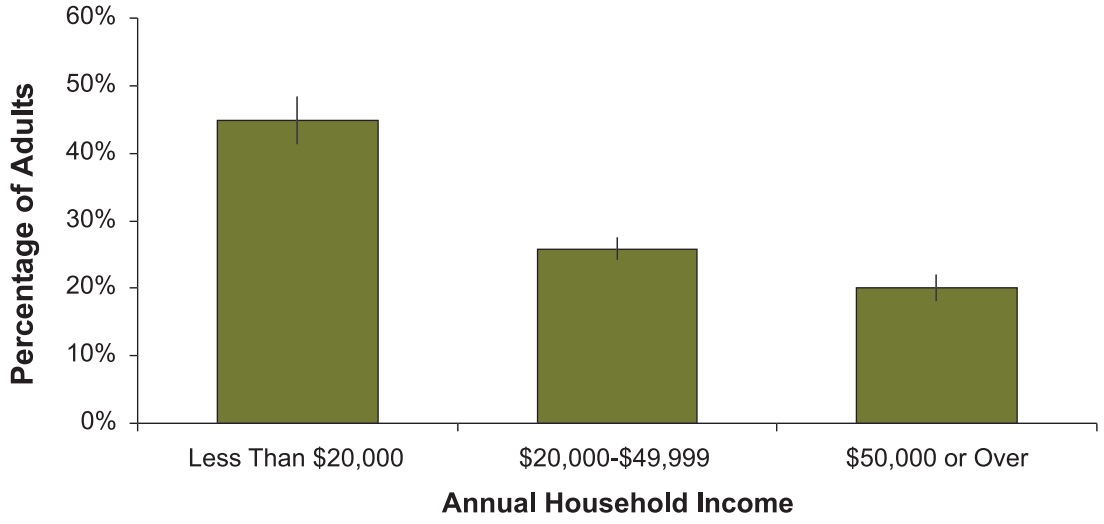
Within the local health districts there were small areas with lower and higher prevalence of activity limitation relative to the age-adjusted state rate. For example, adults living in Rose Park (7.5%) and Other Box Elder County (10.7%) reported a lower prevalence of activity limitation than the state rate. Adults living in the Southeastern Utah health district (21.9%), Juab, Millard, and Sanpete Counties (22.5%), Sandy Center (24.1%), Carbon and Emery Counties (24.2%), West Jordan North (24.5%), and Ben Lomond (24.6%) reported a higher prevalence of activity limitation compared to the state rate.

Utah Goal: No goal listed.
HP2010 Goal 1: Overarching – Improve the quality and years of healthy life and eliminate health disparities.

Activity limitation in Utah (continued)

Activity limitation varied significantly by age. For each successive age group (18–34, 35–49, 50–64, and 65 and over), the percentage of activity limitation increased significantly. A total of 10.4% of young adults (aged 18–34) experienced activity limitation and 31.5% of seniors aged 65 years and older experienced activity limitation. Activity limitation also varied by income. Those with a higher household income experienced less activity limitation compared to those with a lower household income. A total of 44.8% of respondents in households with an income of less than $20,000 experienced activity limitation compared to 20.0% of households with an income of $50,000 or greater. Because the BRFSS is a cross-sectional survey, the characteristics studied were assessed at a single point in time. Thus, in some cases, it is not possible to determine whether the characteristic preceded or followed an individual's report of fair or poor health.[3]

Figure 9.A: Activity Limitation by Income, Utah Adults, 2001-2005



Prevention/Resources

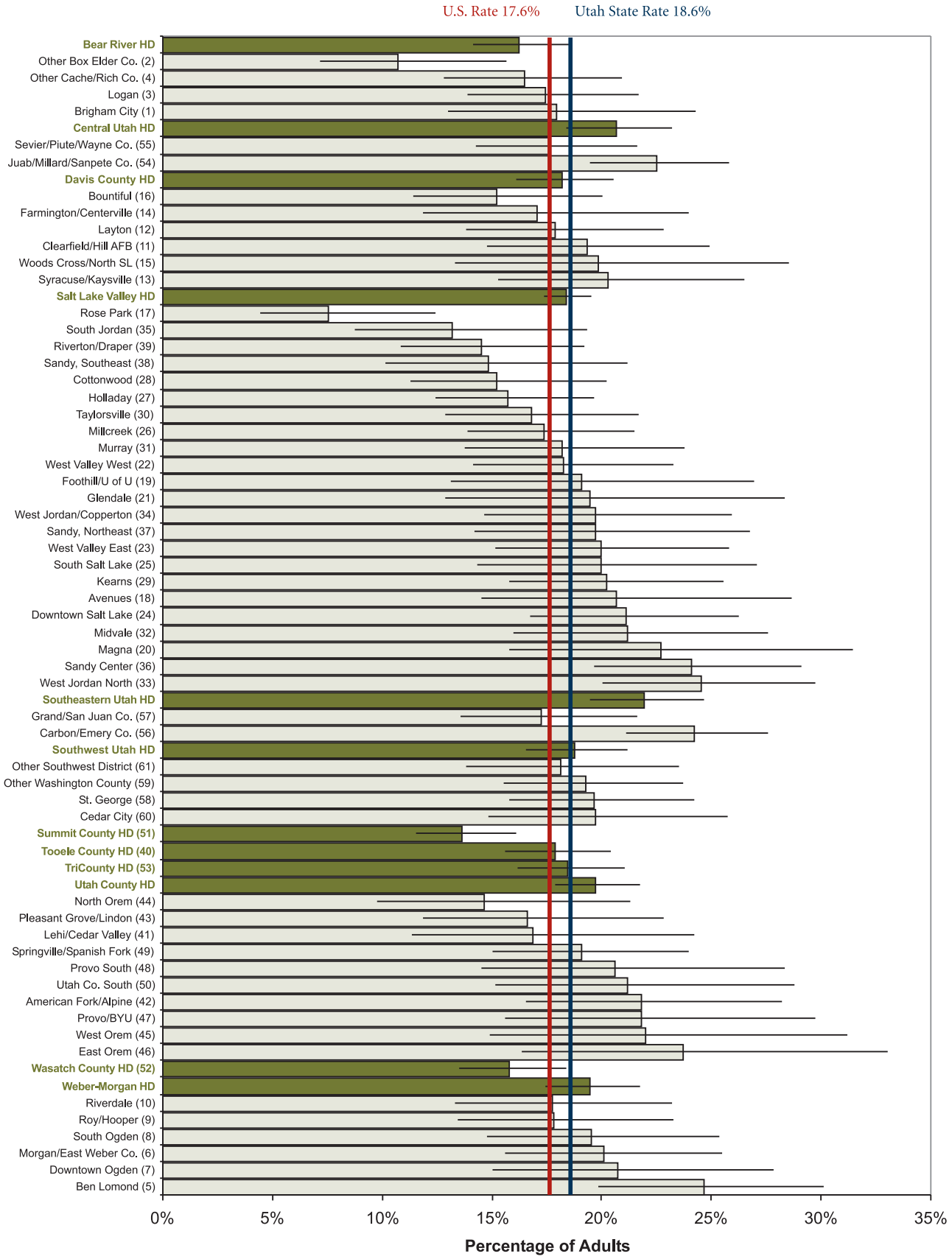
Physical activity and managing weight are a vital part of a healthy lifestyle for people who report activity limitations. Physical activity and weight management not only promote health and prevent disease, but also help to reduce the number of secondary conditions that can result from a disease or disability.

For more information about encouraging physical activity, contact the following agencies: Services for People With Disabilities (801-538-4200 or toll free at 1-800-837-6811, http://www.hsdspd.utah.gov); Aging Services Administrative Office (801-538-3910 or toll free at 1-877-424-4640, http://www.hsdaas.utah.gov); Utah Department of Health (801-538-6141, http://health.utah.gov/bhp/); Utah Walks (801-538-6241, www.utahwalks.org); Heart Disease and Stroke Prevention Program (801-538-6142, www.hearthighway.org); Utah Council for Worksite Health Promotion (801-538-6256, http://health.utah.gov/worksitewellness/); Utah State Parks and Recreation (801-538-7220, www.stateparks.utah.gov); Utah's Local Health Departments (http://health.utah.gov/lhd/lhd-directory.pdf); and Jordan River Parkway (801-468-2299, http://www.parks-recreation.org/parks/html/jordan.html).

Obtaining and maintaining mental health is also important for people who report activity limitation. For more information about mental health, contact the following agencies: The Utah Division of Substance Abuse and Mental Health (http://www.dsamh.utah.gov) and the U.S. Substance Abuse and Mental Health Services Administration (http://www.samhsa.gov).

9. Activity Limitation

Figure 9.1: Percentage of Adults Reporting Activity Limitation by Local Health District and Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)



9. Activity Limitation

Table 9: Activity Limitation by Health District, Small Area, Utah, and U.S., 2001-2005

State Rank*	State, Health District, or Small Area	2003 Population 18+	Number of Adults Reporting Activity Limitation	Crude Rate	Age-adjusted Rate	95% Confidence Interval	
						Lower	Upper
	U.S.	217,803,051	38,442,239	17.7%	17.6%	17.4%	17.7%
	State of Utah	1,657,454	283,425	17.1%	18.6%	18.0%	19.3%
	Bear River HD	98,027	14,322	14.6%	16.2%	14.2%	18.6%
25	Brigham City (1)	14,566	2,382	16.4%	17.9%	13.0%	24.3%
19	Logan (3)	45,904	6,817	14.9%	17.5%	13.9%	21.7%
2	Other Box Elder Co. (2)	14,636	1,595	10.9%	10.7%	7.2%	15.7%
12	Other Cache/Rich Co. (4)	22,921	3,349	14.6%	16.5%	12.8%	20.9%
	Central Utah HD	47,558	9,611	20.2%	20.7%	18.3%	23.2%
55	Juab/Millard/Sanpete Co. (54)	31,637	6,821	21.6%	22.5%	19.5%	25.8%
20	Sevier/Piute/Wayne Co. (55)	15,921	2,836	17.8%	17.6%	14.3%	21.6%
	Davis County HD	175,027	29,352	16.8%	18.2%	16.1%	20.5%
9	Bountiful (16)	33,318	4,811	14.4%	15.2%	11.4%	20.1%
33	Clearfield/Hill AFB (11)	37,329	6,383	17.1%	19.3%	14.7%	24.9%
16	Farmington/Centerville (14)	19,034	2,830	14.9%	17.1%	11.9%	23.9%
23	Layton (12)	46,815	7,650	16.3%	17.9%	13.8%	22.8%
45	Syracuse/Kaysville (13)	24,542	4,337	17.7%	20.3%	15.3%	26.5%
40	Woods Cross/North SL (15)	13,989	2,963	21.2%	19.8%	13.3%	28.5%
	Salt Lake Valley HD	658,810	110,944	16.8%	18.4%	17.3%	19.5%
47	Avenues (18)	18,959	3,888	20.5%	20.7%	14.5%	28.7%
8	Cottonwood (28)	33,297	5,221	15.7%	15.2%	11.3%	20.2%
49	Downtown Salt Lake (24)	42,808	8,125	19.0%	21.1%	16.8%	26.2%
31	Foothill/U of U (19)	17,778	3,396	19.1%	19.1%	13.1%	27.0%
34	Glendale (21)	18,642	3,305	17.7%	19.5%	12.9%	28.3%
10	Holladay (27)	35,956	6,458	18.0%	15.7%	12.4%	19.7%
44	Kearns (29)	42,995	7,232	16.8%	20.2%	15.8%	25.5%
56	Magna (20)	15,623	3,659	23.4%	22.7%	15.8%	31.5%
51	Midvale (32)	21,672	3,821	17.6%	21.2%	16.0%	27.6%
18	Millcreek (26)	44,008	7,794	17.7%	17.4%	13.9%	21.5%
27	Murray (31)	24,072	4,393	18.3%	18.2%	13.7%	23.8%
5	Riverton/Draper (39)	41,391	5,286	12.8%	14.5%	10.8%	19.2%
1	Rose Park (17)	22,639	1,580	7.0%	7.5%	4.5%	12.4%
58	Sandy Center (36)	36,106	8,073	22.4%	24.1%	19.6%	29.1%
39	Sandy, Northeast (37)	18,245	3,457	19.0%	19.7%	14.2%	26.7%
7	Sandy, Southeast (38)	20,781	2,402	11.6%	14.8%	10.1%	21.2%
3	South Jordan (35)	20,931	2,909	13.9%	13.2%	8.8%	19.3%
42	South Salt Lake (25)	18,456	3,551	19.2%	20.0%	14.4%	27.1%
14	Taylorsville (30)	27,372	4,166	15.2%	16.8%	12.9%	21.7%
60	West Jordan North (33)	30,391	5,829	19.2%	24.5%	20.0%	29.7%
37	West Jordan/Copperton (34)	26,360	3,870	14.7%	19.7%	14.7%	25.9%
41	West Valley East (23)	35,527	6,544	18.4%	19.9%	15.2%	25.8%
28	West Valley West (22)	44,794	6,836	15.3%	18.3%	14.2%	23.3%
	Southeastern Utah HD	36,828	8,080	21.9%	21.9%	19.4%	24.6%
59	Carbon/Emery Co. (56)	21,451	5,258	24.5%	24.2%	21.1%	27.6%
17	Grand/San Juan Co. (57)	15,377	2,626	17.1%	17.2%	13.6%	21.7%
	Southwest Utah HD	116,150	22,034	19.0%	18.8%	16.6%	21.2%
38	Cedar City (60)	22,401	3,667	16.4%	19.7%	14.8%	25.8%
26	Other Southwest District (61)	15,384	3,128	20.3%	18.2%	13.8%	23.5%
32	Other Washington County (59)	32,503	6,348	19.5%	19.3%	15.5%	23.7%
36	St. George (58)	45,862	9,062	19.8%	19.7%	15.8%	24.2%
4	**Summit County HD (51)**	24,525	2,784	11.4%	13.6%	11.5%	16.1%
24	**Tooele County HD (40)**	32,458	5,258	16.2%	17.9%	15.6%	20.4%
29	**TriCounty HD (53)**	28,023	5,229	18.7%	18.5%	16.2%	21.0%
	Utah County HD	278,832	46,230	16.6%	19.8%	17.9%	21.8%
52	American Fork/Alpine (42)	26,819	5,090	19.0%	21.8%	16.6%	28.2%
57	East Orem (46)	14,955	3,126	20.9%	23.7%	16.4%	33.0%
15	Lehi/Cedar Valley (41)	18,752	2,657	14.2%	16.9%	11.4%	24.3%
6	North Orem (44)	25,965	2,763	10.6%	14.6%	9.8%	21.3%
13	Pleasant Grove/Lindon (43)	24,636	3,752	15.2%	16.6%	11.8%	22.8%
53	Provo/BYU (47)	39,401	8,081	20.5%	21.8%	15.6%	29.7%
46	Provo South (48)	48,138	4,626	9.6%	20.6%	14.5%	28.4%
30	Springville/Spanish Fork (49)	41,036	7,288	17.8%	19.1%	15.0%	24.0%
50	Utah Co. South (50)	17,363	3,219	18.5%	21.2%	15.1%	28.8%
54	West Orem (45)	21,774	4,925	22.6%	22.0%	14.9%	31.2%
11	**Wasatch County HD (52)**	12,514	1,858	14.9%	15.8%	13.5%	18.4%
	Weber-Morgan HD	148,702	27,703	18.6%	19.5%	17.5%	21.8%
61	Ben Lomond (5)	33,215	7,257	21.9%	24.6%	19.9%	30.1%
48	Downtown Ogden (7)	21,684	3,944	18.2%	20.7%	15.1%	27.8%
43	Morgan/East Weber Co. (6)	24,131	4,674	19.4%	20.1%	15.6%	25.5%
21	Riverdale (10)	15,522	2,631	17.0%	17.7%	13.3%	23.2%
22	Roy/Hooper (9)	27,898	4,126	14.8%	17.8%	13.4%	23.3%
35	South Ogden (8)	26,255	5,122	19.5%	19.5%	14.8%	25.4%

*State rank is by 61 small areas for age-adjusted rate; 1 is always the lowest rate in the state and 61 is always the highest rate in the state.

Figure 9.2: Activity Limitation by Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)

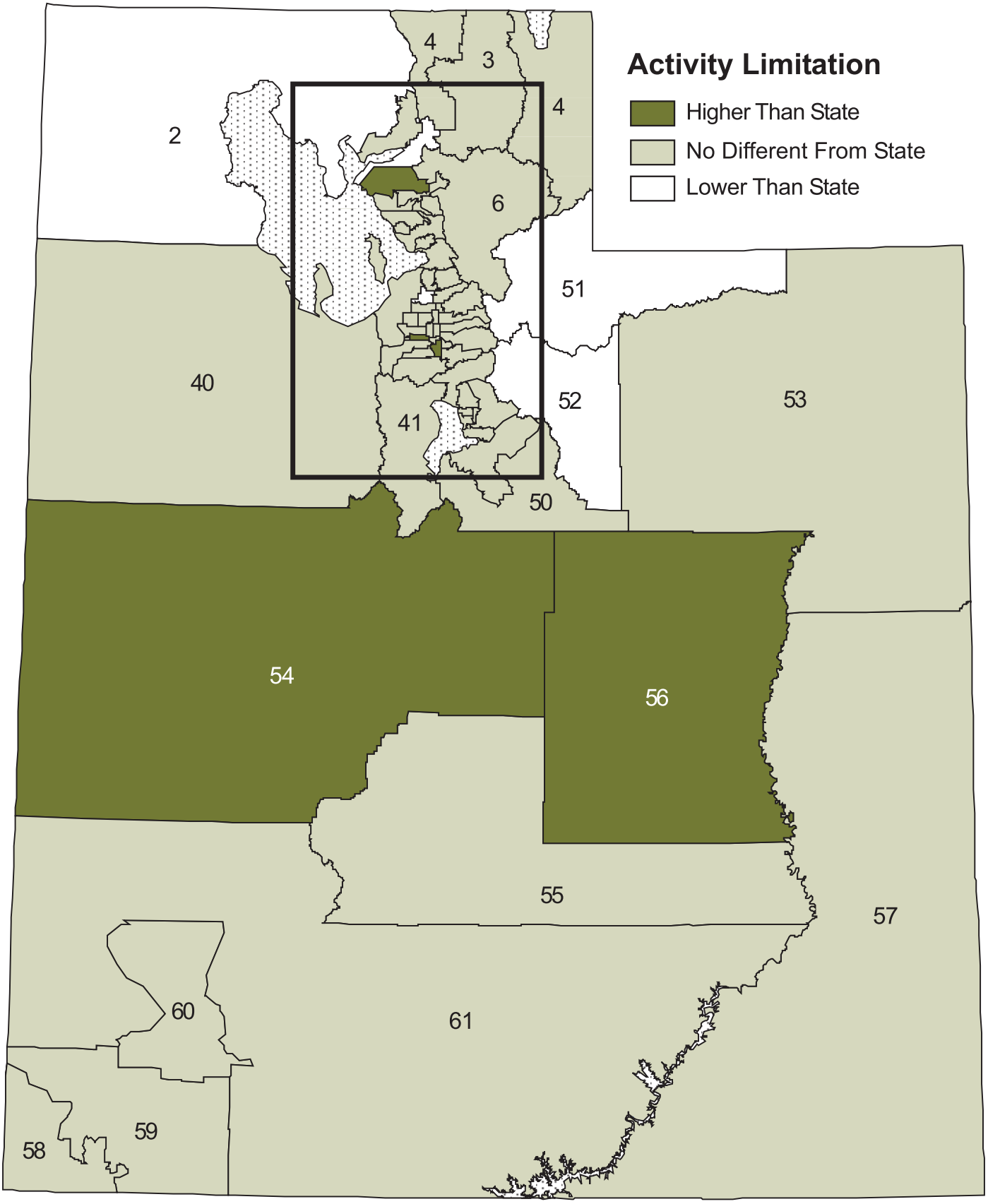
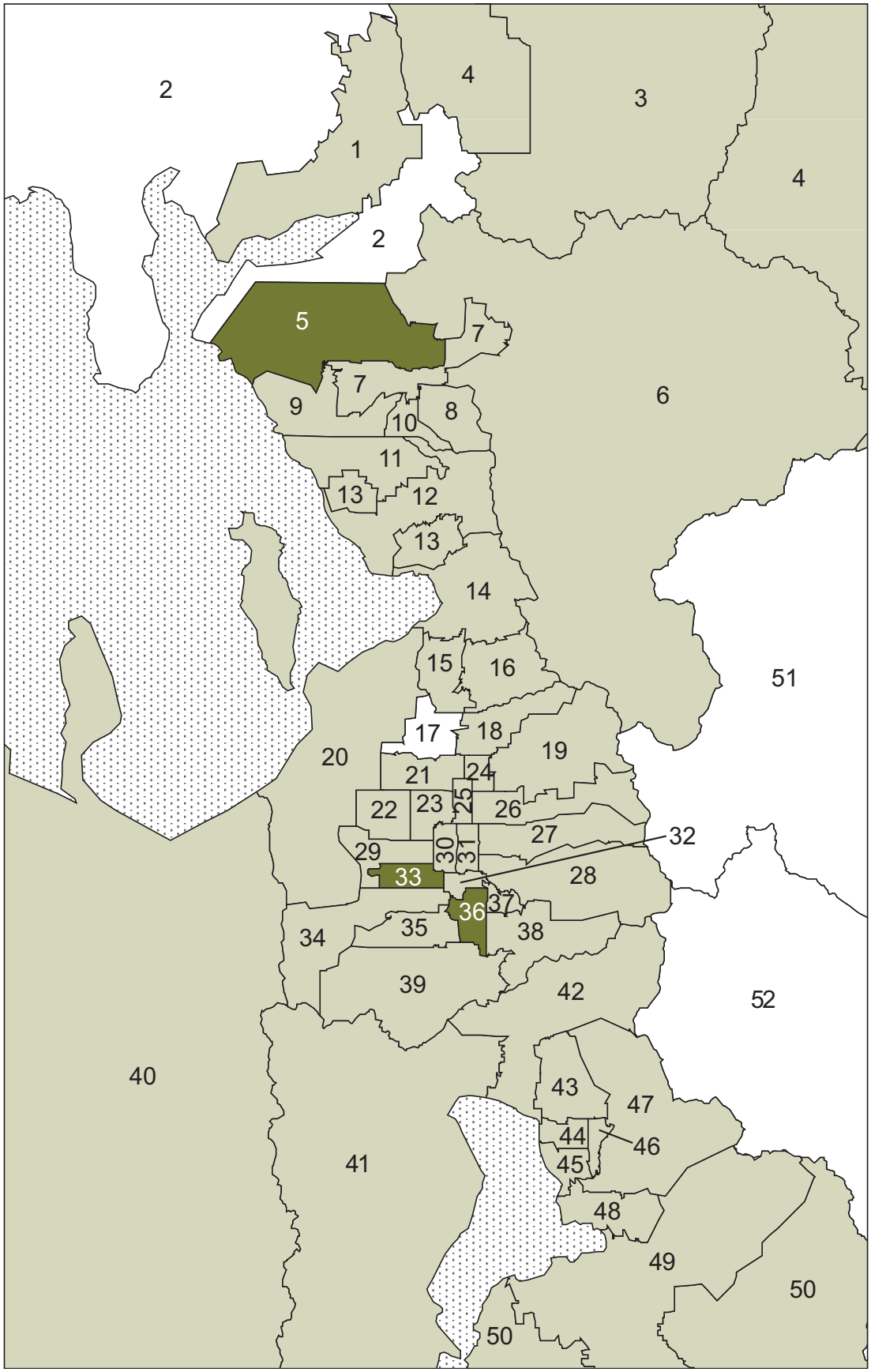


Figure 9.3: Activity Limitation by Small Area, Wasatch Front Adults Aged 18+, 2001–2005 (Age-adjusted)



10. Health Care Coverage

Measure Definition: *"Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare?"* ***[Yes]***

Why is health care coverage important to public health?

Having health care coverage encourages individuals to seek and obtain needed health care. Individuals with health care coverage are more likely than those without health care coverage to have a regular and accessible source of health care. Due to the high cost of health care, persons who do not have health care coverage are less likely to get timely medical care compared to those with health care coverage. Not receiving timely medical care can result in more severe health problems and unnecessary high-cost health care such as hospitalizations and emergency department visits.

Risk factors for no health care coverage

Analysis of national data from the Behavioral Risk Factor Surveillance Survey for 1994 and 1995 combined showed a correlation between a lack of health care coverage and increased reporting of fair to poor health, current cigarette smoking, and physical inactivity.[23] This study showed that in Utah, significantly more adults without health care coverage were current smokers and/or were physically inactive during the previous 12 months. Higher levels of cigarette smoking and physical inactivity are both important risk factors for many chronic diseases.

Delayed access to care can have a significant effect on clinical outcomes. Results of a Massachusetts study showed that patients who were poor or uninsured were significantly more likely to report delays in getting care than people with health care insurance.[24] Additionally, delayed access to care for conditions that eventually lead to hospitalization were associated with longer hospital stays and potentially poorer health outcomes. Therefore, it is essential that the percentage of adults without health care coverage be decreased so that delays in access to care can be reduced. Population factors that affect access to health care include uninsured rate, poverty rate, unemployment rate, percent minority population, percent metropolitan population, percent employed in service and trade industries, percent employed in firms with fewer than 100 employees, generosity/inclusiveness of public insurance programs, overall HMO penetration, Medicaid managed care penetration, and percent of population underserved by primary care physicians.[25]

Health care coverage in Utah

Utah had a significantly lower percentage of uninsured adults compared to the U.S. (age-adjusted rates 13.4% and 15.5% respectively). Approximately 14.8% of Utah adults, or 245,000 persons 18 or older, reported they were uninsured at some time between 2001–2005. This percentage of uninsured adults has remained relatively constant from 2001–2005. The small area with the highest age-adjusted percentage of uninsured adults was Glendale, with 31%, or approximately 5,900 uninsured adults and the small area with the lowest percentage of uninsured adults was Woods Cross/North Salt Lake, with 5.1%, or approximately 800 uninsured adults. There were 17 small areas that had a significantly higher percentage of uninsured adults compared to the state rate. These were Juab/Millard/Sanpete Counties and Sevier/Piute/Wayne Counties, which comprise all of the Central Utah health district; Glendale, Rose Park, South Salt Lake, West Valley East, Downtown Salt Lake, and Kearns in the Salt Lake Valley health district; Grand/San Juan Counties and Carbon/Emery Counties, which

Utah Objective: No objective listed.
HP2010 Objective (related) 1-1: Increase the proportion of persons under age 65 years with health insurance to 100% (age-adjusted to the U.S. 2000 standard population).

Health care coverage in Utah (continued)

comprise all of the Southeastern Utah health district; Other Southwest District, Other Washington County, and St. George, which comprise most of the Southwest Utah health district; TriCounty health district; North Orem in the Utah County health district; Wasatch County health district; and Downtown Ogden in the Weber-Morgan health district.

From 2001–2005, significantly more women had health care coverage compared to men (86.2% for women and 83.2% for men). Significantly more adults with a higher income ($25,000 or more: 91.2%) had health care coverage compared to adults with lower incomes of $15,000 to $24,999 (70.7%) or less than $15,000 (65.2%). Additionally, significantly more White, non-Hispanic (87.6%) and non-White, non-Hispanic (79.4%) adults had health care coverage compared to Hispanic adults (60.6%). Generally, the percentage of adults with health care coverage increased with age from 74.7% for adults aged 18–24 to 98.2% for adults 65 and over; the differences between consecutive age groups were not significant.

The 2003 and 2004 BRFSS included a question about veteran status and showed that approximately 10.0% of Utah adults were veterans. Interestingly, 8.5% of Utah's veterans reported that they did not have health care coverage, and 14.3% of veterans reported receiving all or some of the their health care from Veterans Affairs (VA) facilities in the last 12 months.

Figure 10.A: Health Care Coverage by Income, Utah Adults, 2001-2005

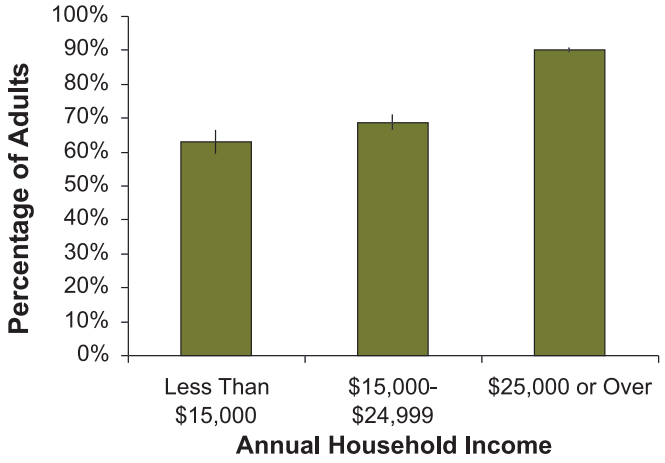
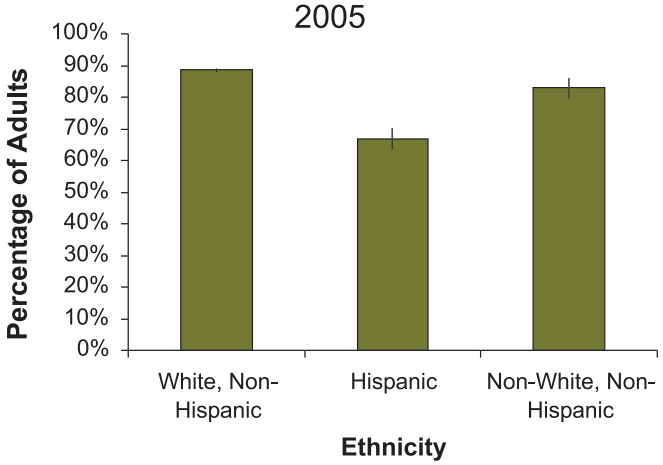


Figure 10.B: Health Care Coverage by Ethnicity, Utah Adults, 2001-2005

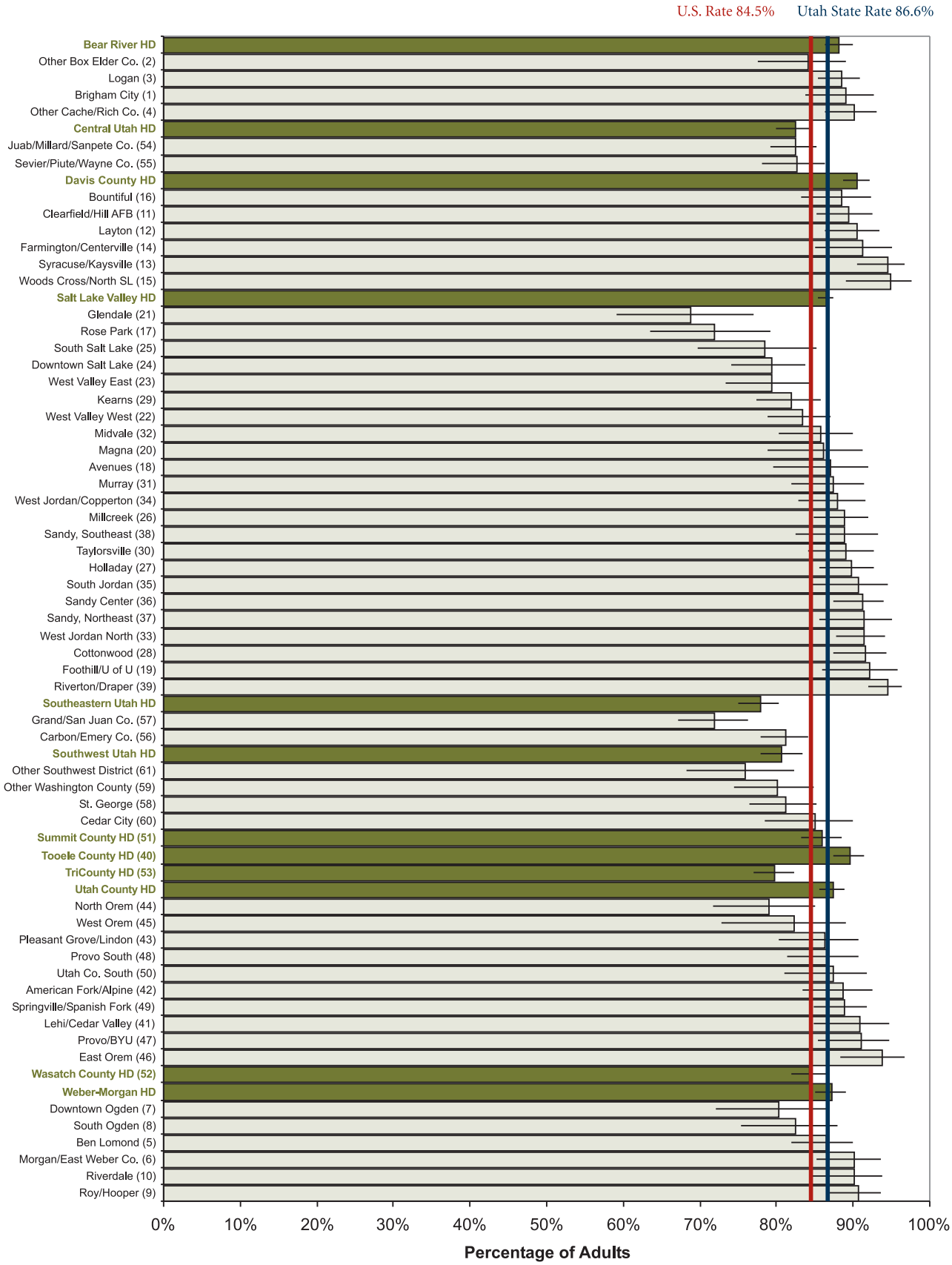


Prevention/Resources

The Utah Medicaid Program pays bills for people who qualify for a category of Medicaid (including children, adults, and families), who have a low income or cannot afford the cost of health care, or who have resources (assets) under the federal limit for the category of Medicaid. Information on Medicaid can be found at http://health.utah.gov/medicaid/ or call 1-800-662-9651. Federally Qualified Health Centers are clinics that offer low-cost medical care regardless of whether the patient qualifies for Medicaid or has health insurance. A list of these clinics can be found at http://health.utah.gov/medicaid/pdfs/resources.pdf. The Primary Care Network (PCN) is health care coverage for adults who qualify. Uninsured adults aged 19–64 may qualify for coverage. Go to http://health.utah.gov/pcn/ for more information or call 1-888-222-2542.

10. Health Care Coverage

Figure 10.1: Percentage of Adults Reporting Health Care Coverage by Local Health District and Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)



10. Health Care Coverage

Table 10: Health Care Coverage by Health District, Small Area, Utah, and U.S., 2001-2005

State Rank*	State, Health District, or Small Area	2003 Population 18+	Number of Adults With Health Care Coverage	Crude Rate	Age-adjusted Rate	95% Confidence Interval Lower	95% Confidence Interval Upper
	U.S.	217,803,051	184,261,381	84.6%	84.5%	84.4%	84.6%
	State of Utah	1,657,454	1,412,482	85.2%	86.6%	86.0%	87.2%
	Bear River HD	98,027	83,372	85.1%	88.2%	86.3%	89.9%
39	Brigham City (1)	14,566	12,448	85.5%	89.0%	83.7%	92.7%
33	Logan (3)	45,904	38,004	82.8%	88.5%	85.4%	90.9%
20	Other Box Elder Co. (2)	14,636	12,397	84.7%	84.1%	77.5%	89.0%
46	Other Cache/Rich Co. (4)	22,921	20,368	88.9%	90.2%	86.3%	93.1%
	Central Utah HD	47,558	39,193	82.4%	82.4%	79.9%	84.7%
16	Juab/Millard/Sanpete Co. (54)	31,637	25,974	82.1%	82.4%	79.3%	85.2%
18	Sevier/Piute/Wayne Co. (55)	15,921	13,205	82.9%	82.7%	78.2%	86.4%
	Davis County HD	175,027	156,754	89.6%	90.6%	88.7%	92.2%
34	Bountiful (16)	33,318	29,217	87.7%	88.5%	83.2%	92.3%
41	Clearfield/Hill AFB (11)	37,329	32,614	87.4%	89.5%	85.2%	92.6%
52	Farmington/Centerville (14)	19,034	17,304	90.9%	91.3%	85.0%	95.1%
47	Layton (12)	46,815	41,324	88.3%	90.4%	86.3%	93.4%
59	Syracuse/Kaysville (13)	24,542	23,045	93.9%	94.5%	90.6%	96.8%
61	Woods Cross/North SL (15)	13,989	13,183	94.2%	94.9%	89.1%	97.7%
	Salt Lake Valley HD	658,810	560,977	85.2%	86.5%	85.5%	87.4%
29	Avenues (18)	18,959	16,644	87.8%	87.0%	79.6%	92.0%
56	Cottonwood (28)	33,297	30,447	91.4%	91.6%	87.4%	94.4%
7	Downtown Salt Lake (24)	42,808	32,705	76.4%	79.4%	74.2%	83.8%
57	Foothill/U of U (19)	17,778	16,251	91.4%	92.2%	86.0%	95.8%
1	Glendale (21)	18,642	12,673	68.0%	68.8%	59.2%	77.0%
43	Holladay (27)	35,956	32,288	89.8%	89.7%	85.5%	92.8%
14	Kearns (29)	42,995	33,592	78.1%	81.9%	77.3%	85.8%
25	Magna (20)	15,623	13,067	83.6%	86.1%	78.8%	91.2%
23	Midvale (32)	21,672	17,697	81.7%	85.8%	80.3%	89.9%
37	Millcreek (26)	44,008	39,308	89.3%	88.9%	84.8%	92.0%
31	Murray (31)	24,072	20,950	87.0%	87.4%	81.9%	91.4%
60	Riverton/Draper (39)	41,391	38,688	93.5%	94.5%	91.9%	96.4%
3	Rose Park (17)	22,639	15,444	68.2%	72.0%	63.4%	79.2%
53	Sandy Center (36)	36,106	32,640	90.4%	91.3%	87.5%	94.0%
54	Sandy, Northeast (37)	18,245	16,548	90.7%	91.5%	85.7%	95.1%
38	Sandy, Southeast (38)	20,781	18,801	90.5%	88.9%	82.5%	93.2%
48	South Jordan (35)	20,931	18,775	89.7%	90.6%	84.6%	94.5%
5	South Salt Lake (25)	18,456	14,281	77.4%	78.5%	69.8%	85.2%
40	Taylorsville (30)	27,372	24,112	88.1%	89.1%	84.1%	92.6%
55	West Jordan North (33)	30,391	27,802	91.5%	91.5%	87.7%	94.2%
32	West Jordan/Copperton (34)	26,360	22,609	85.8%	87.9%	82.9%	91.6%
8	West Valley East (23)	35,527	27,793	78.2%	79.4%	73.4%	84.4%
19	West Valley West (22)	44,794	35,732	79.8%	83.3%	78.9%	87.0%
	Southeastern Utah HD	36,828	28,744	78.1%	77.9%	75.1%	80.4%
12	Carbon/Emery Co. (56)	21,451	17,571	81.9%	81.2%	78.0%	84.0%
2	Grand/San Juan Co. (57)	15,377	10,870	70.7%	72.0%	67.1%	76.4%
	Southwest Utah HD	116,150	93,965	80.9%	80.8%	77.9%	83.4%
22	Cedar City (60)	22,401	18,176	81.1%	85.0%	78.4%	89.9%
4	Other Southwest District (61)	15,384	12,183	79.2%	76.0%	68.3%	82.3%
10	Other Washington County (59)	32,503	25,843	79.5%	80.2%	74.4%	84.9%
13	St. George (58)	45,862	37,676	82.2%	81.3%	76.4%	85.3%
24	**Summit County HD (51)**	24,525	20,949	85.4%	86.0%	83.1%	88.5%
42	**Tooele County HD (40)**	32,458	28,813	88.8%	89.6%	87.5%	91.4%
9	**TriCounty HD (53)**	28,023	22,309	79.6%	79.8%	77.1%	82.3%
	Utah County HD	278,832	238,680	85.6%	87.4%	85.6%	89.0%
35	American Fork/Alpine (42)	26,819	23,322	87.0%	88.7%	83.4%	92.5%
58	East Orem (46)	14,955	14,131	94.5%	93.7%	88.3%	96.7%
50	Lehi/Cedar Valley (41)	18,752	16,916	90.2%	90.9%	84.9%	94.6%
6	North Orem (44)	25,965	20,100	77.4%	79.1%	71.6%	85.0%
26	Pleasant Grove/Lindon (43)	24,636	20,845	84.6%	86.3%	80.2%	90.7%
51	Provo/BYU (47)	39,401	35,193	89.3%	91.1%	85.3%	94.8%
28	Provo South (48)	48,138	40,195	83.5%	86.6%	81.4%	90.6%
36	Springville/Spanish Fork (49)	41,036	35,841	87.3%	88.9%	84.9%	91.9%
30	Utah Co. South (50)	17,363	14,578	84.0%	87.3%	81.0%	91.8%
15	West Orem (45)	21,774	17,600	80.8%	82.3%	72.8%	89.1%
21	**Wasatch County HD (52)**	12,514	10,488	83.8%	84.4%	82.0%	86.6%
	Weber-Morgan HD	148,702	128,107	86.2%	87.2%	85.1%	89.0%
27	Ben Lomond (5)	33,215	28,216	85.0%	86.4%	82.0%	89.9%
11	Downtown Ogden (7)	21,684	16,979	78.3%	80.3%	72.1%	86.5%
44	Morgan/East Weber Co. (6)	24,131	21,646	89.7%	90.1%	85.2%	93.6%
45	Riverdale (10)	15,522	13,796	88.9%	90.2%	84.7%	93.9%
49	Roy/Hooper (9)	27,898	25,066	89.9%	90.7%	86.6%	93.6%
17	South Ogden (8)	26,255	22,004	83.8%	82.5%	75.4%	87.9%

*State rank is by 61 small areas for age-adjusted rate; 1 is always the lowest rate in the state and 61 is always the highest rate in the state.

Figure 10.2: Health Care Coverage by Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)

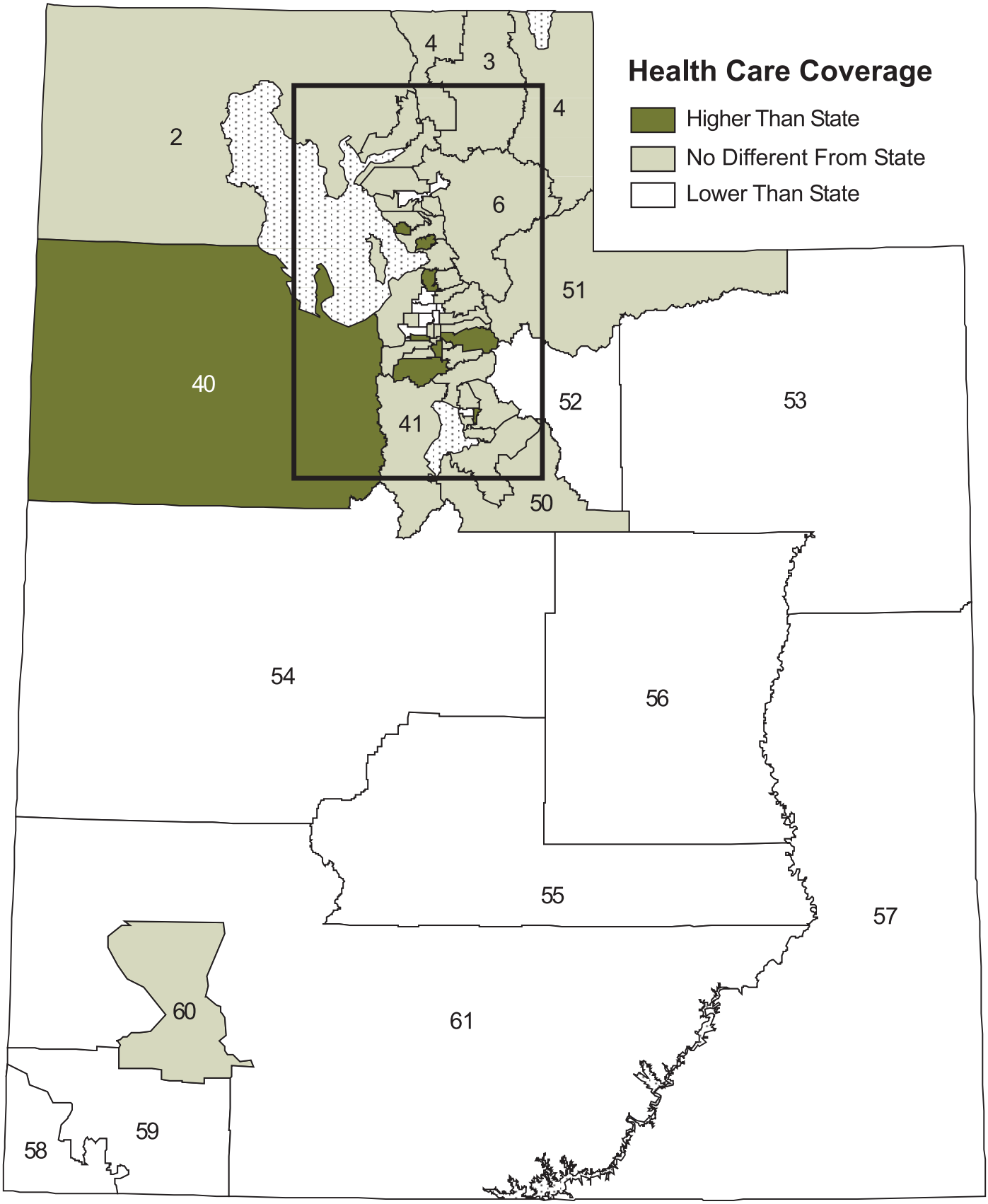
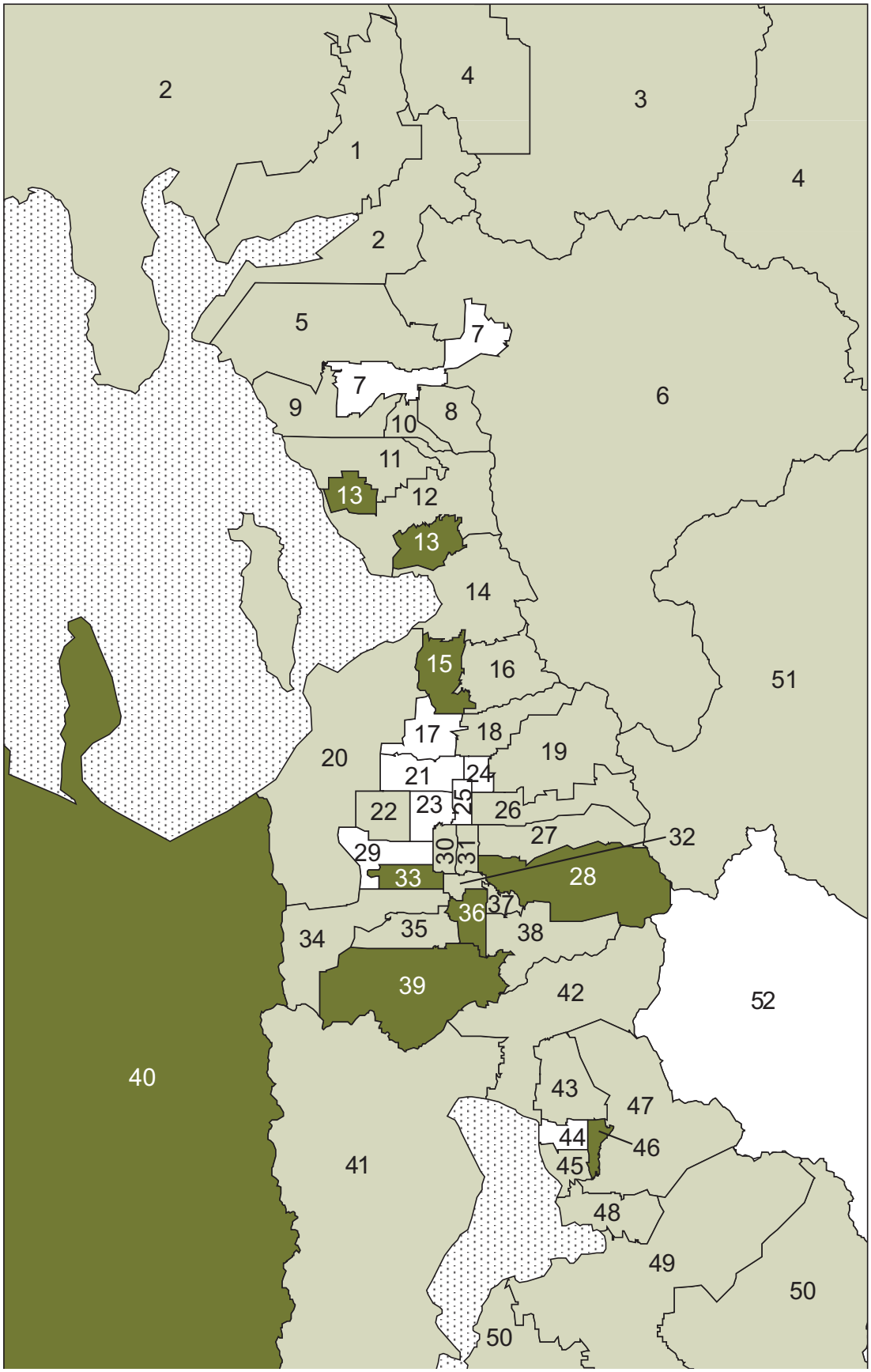


Figure 10.3: Health Care Coverage by Small Area, Wasatch Front Adults Aged 18+, 2001–2005 (Age-adjusted)



11. Primary Care Provider

Definition Measure: *"Do you have one person you think of as your personal doctor or health care provider? If no, is there more than one, or is there no person who you think of as your personal doctor or health care provider?"* ***[Yes to having one or more than one personal doctor or health care provider]***

Why is having a primary care provider important to public health?

Individuals with a primary care provider are more likely to obtain preventive health care services, to have access to care, to receive continuous care, and to have lower rates of hospitalization, as well as lower health care costs.[1,26] Preventive health care services may include: clinical breast exam, mammogram, prostate exam, colon cancer screening, Pap test, cholesterol screening, blood pressure screening, diabetes tests, and many more. Screenings are recommended in many cases to prevent a more serious diagnosis at a later date. According to Healthy People 2010 (HP2010), "Strong predictors of access to quality health care include having health insurance, a higher income level, and a regular primary care provider or other source of ongoing health care. Use of clinical preventive services, such as early prenatal care, can serve as indicators of access to quality health care services."[1]

Additionally HP2010 states that, "More than 40 million Americans do not have a particular health care provider's office, clinic, health center, or other place where they usually go to seek health care or health-related advice. Even among privately insured persons, a significant number lacked a usual source of care or reported difficulty in accessing needed care due to financial constraints or insurance problems."[1]

According to BRFSS data 2001–2005, individuals are more likely to have a primary care provider if their activities are limited in any way because of physical, mental, or emotional problems. The survey also showed that persons who indicated that they had a primary care provider were more likely to report eating at least two fruits a day or three vegetables a day. In addition, persons who did not have a primary care provider were less likely to get recommended screenings, vaccinations, and prenatal care such as mammograms, Pap tests, prostate-specific antigen (PSA) tests, flu shots, clinical breast exams, and take folic acid daily supplements.

Risk factors for not having a primary care provider

According to BRFSS data 2001–2005, multiple factors influenced the likelihood of an individual having a primary care provider. Some of these factors included gender, age, household income, education, ethnicity, health insurance, and marital status. Males were less likely to have a primary care provider. Younger individuals were less likely to have a primary care provider as were those living in lower income households. Additionally, Hispanic persons and those with less education were less likely to have a primary care provider. Those without health care coverage were less likely to have a primary care provider. Those not married were significantly less likely to have a primary care provider. Finally, students were least likely of all occupations to have a primary care provider. There was no difference in perceived general health for those who did and did not have a primary care provider.

Primary care provider in Utah

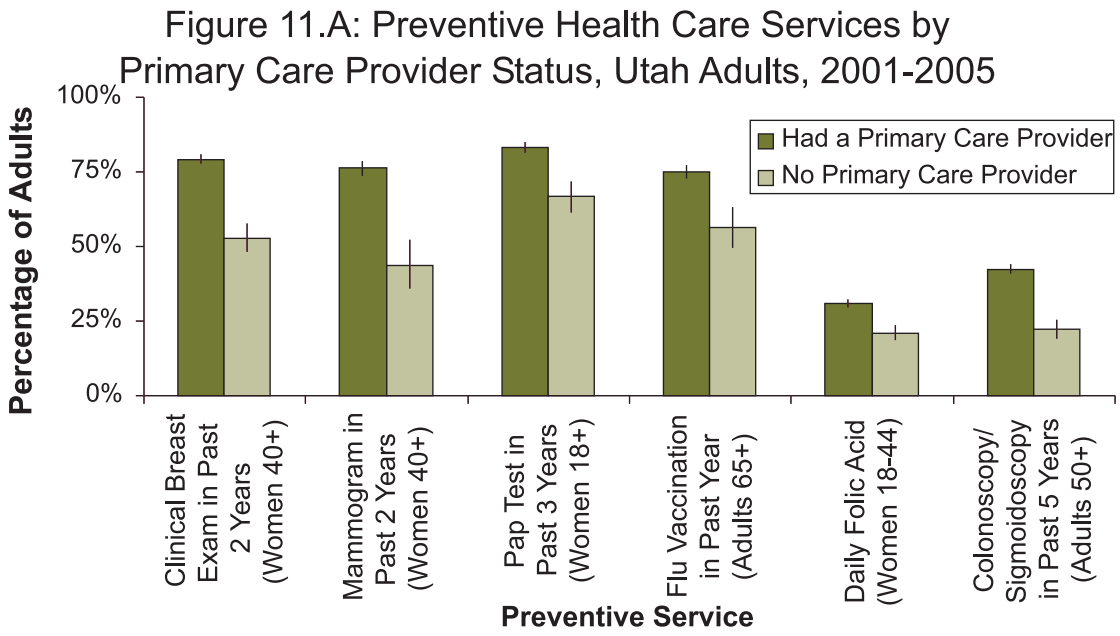
The age-adjusted aggregated state rate for having a primary care provider from 2001–2005 was 76.4%. The related crude rate was 74.4%, meaning that approximately 425,000 adult Utahns did not have a primary care provider in 2003. However, the age-adjusted prevalence of having a primary care provider varied by local health district and ranged from a low of 71.0% to a high of 81.0% (see Figure 11.1). Central Utah had the

Utah Objective: Same as HP2010 objective.
HP2010 Objective (related) 1-5: Increase the proportion of persons with a usual primary care provider to 85%.

Primary care provider in Utah (continued)

highest prevalence for having a primary care provider and Summit County had the lowest prevalence. Overall, the small area with the highest rate for having a primary care provider was East Orem with a rate of 92.7% and the small area with the lowest rate was South Salt Lake whose rate was 63.9%.

Statewide, persons with a primary care provider had significantly higher rates of preventive health care services than those without a personal health care provider.



Prevention/Resources

The Utah Department of Health has programs such as Medicaid, Children's Health Insurance Program (CHIP) for children 0–18, and the Primary Care Network (PCN) to pay health care costs for low-income children and adults and those with disabilities.

To contact Medicaid in the Salt Lake City area, call (801) 538-6155. In Utah, Idaho, Wyoming, Colorado, New Mexico, Arizona, and Nevada, call toll-free 1-800-662-9651. From other states, call 1-801-538-6155. Call the Health Resource Line at 1-888-222-2542 for information on CHIP and PCN. Or visit the CHIP website at http://www.utahchip.org/ and the PCN website at http://health.utah.gov/pcn/.

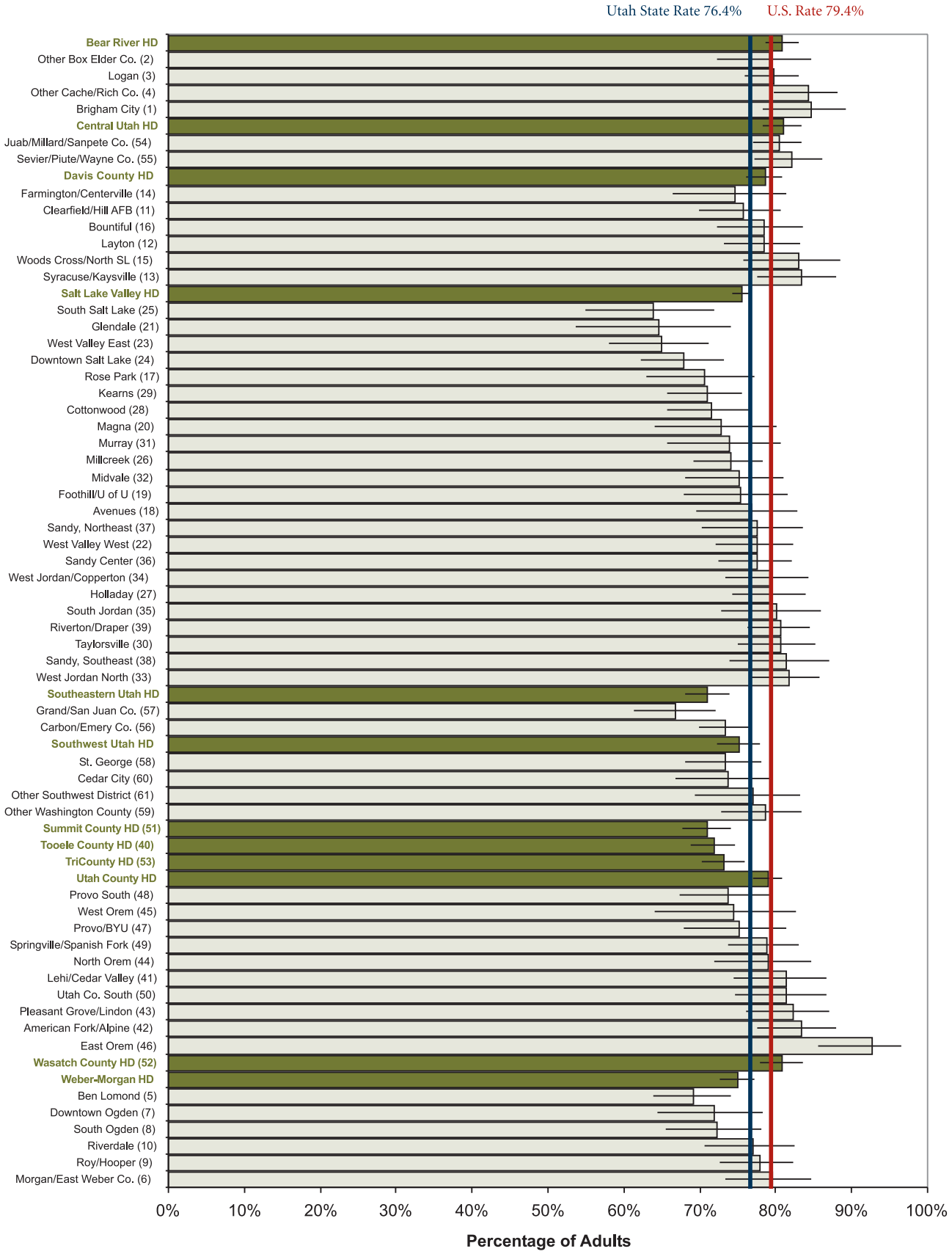
UPP (Utah's Premium Partnership for Health Insurance) helps make health insurance more affordable for working individuals and families who do not currently have health insurance. Call 1-888-222-2542 or visit www.health.utah.gov/upp.

The Association for Utah Community Health (AUCH) is the primary care association for the state of Utah. AUCH members include Federally Qualified Health Centers (FQHC) and other providers who strive to meet the needs of the medically underserved. AUCH and its member organizations are part of a statewide and national movement to reduce barriers to health care by enhancing primary care service delivery through prevention, health promotion, and community participation. Call (801) 974-5522 or visit www.auch.org.

General Cancer Resource Guide - A comprehensive list of cancer resources is made available by the Huntsman Cancer Institute and the Utah Cancer Action Network and can be found at the following URL: http://www.hci.utah.edu/pdf/brochures/cancerResourceGuide.pdf.

11. Primary Care Provider

Figure 11.1: Percentage of Adults Reporting a Primary Care Provider by Local Health District and Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)



11. Primary Care Provider

Table 11: Primary Care Provider by Health District, Small Area, Utah, and U.S., 2001-2005

State Rank*	State, Health District, or Small Area	2003 Population 18+	Number of Adults Reporting Primary Care Provider	Crude Rate	Age-adjusted Rate	95% Confidence Interval Lower	95% Confidence Interval Upper
	U.S.	217,803,051	173,262,327	79.6%	79.4%	79.3%	79.5%
	State of Utah	1,657,454	1,232,649	74.4%	76.4%	75.7%	77.1%
	Bear River HD	98,027	75,530	77.1%	80.9%	78.5%	83.0%
60	Brigham City (1)	14,566	12,069	82.9%	84.6%	78.3%	89.3%
44	Logan (3)	45,904	31,899	69.5%	79.7%	75.8%	83.1%
40	Other Box Elder Co. (2)	14,636	11,712	80.0%	79.2%	72.2%	84.7%
59	Other Cache/Rich Co. (4)	22,921	19,185	83.7%	84.4%	79.7%	88.1%
	Central Utah HD	47,558	38,403	80.8%	81.0%	78.3%	83.5%
46	Juab/Millard/Sanpete Co. (54)	31,637	25,411	80.3%	80.4%	77.0%	83.4%
54	Sevier/Piute/Wayne Co. (55)	15,921	12,976	81.5%	82.0%	77.2%	86.1%
	Davis County HD	175,027	134,771	77.0%	78.6%	76.2%	80.9%
35	Bountiful (16)	33,318	25,888	77.7%	78.4%	72.2%	83.5%
27	Clearfield/Hill AFB (11)	37,329	27,467	73.6%	75.7%	70.0%	80.6%
23	Farmington/Centerville (14)	19,034	14,232	74.8%	74.7%	66.5%	81.4%
36	Layton (12)	46,815	35,514	75.9%	78.5%	73.1%	83.1%
57	Syracuse/Kaysville (13)	24,542	19,997	81.5%	83.3%	77.5%	87.9%
56	Woods Cross/North SL (15)	13,989	11,586	82.8%	83.1%	75.8%	88.5%
	Salt Lake Valley HD	658,810	485,609	73.7%	75.6%	74.3%	76.7%
28	Avenues (18)	18,959	14,487	76.4%	76.8%	69.5%	82.8%
10	Cottonwood (28)	33,297	23,987	72.0%	71.6%	65.8%	76.8%
5	Downtown Salt Lake (24)	42,808	27,752	64.8%	67.9%	62.2%	73.1%
26	Foothill/U of U (19)	17,778	12,871	72.4%	75.4%	67.9%	81.6%
2	Glendale (21)	18,642	12,121	65.0%	64.6%	53.7%	74.1%
42	Holladay (27)	35,956	29,056	80.8%	79.5%	74.2%	83.9%
8	Kearns (29)	42,995	29,340	68.2%	70.9%	65.8%	75.6%
14	Magna (20)	15,623	10,744	68.8%	72.7%	64.0%	80.0%
24	Midvale (32)	21,672	15,450	71.3%	75.1%	68.0%	81.1%
21	Millcreek (26)	44,008	32,848	74.6%	74.0%	69.2%	78.4%
20	Murray (31)	24,072	18,037	74.9%	73.8%	65.7%	80.7%
47	Riverton/Draper (39)	41,391	32,107	77.6%	80.6%	76.2%	84.4%
7	Rose Park (17)	22,639	15,021	66.4%	70.6%	62.9%	77.2%
33	Sandy Center (36)	36,106	27,130	75.1%	77.6%	72.4%	82.1%
31	Sandy, Northeast (37)	18,245	13,988	76.7%	77.5%	70.2%	83.5%
51	Sandy, Southeast (38)	20,781	16,930	81.5%	81.3%	73.9%	87.1%
45	South Jordan (35)	20,931	16,684	79.7%	80.1%	72.8%	85.9%
1	South Salt Lake (25)	18,456	11,900	64.5%	63.9%	54.9%	72.0%
48	Taylorsville (30)	27,372	21,909	80.0%	80.7%	75.0%	85.3%
53	West Jordan North (33)	30,391	24,200	79.6%	81.8%	76.8%	85.8%
41	West Jordan/Copperton (34)	26,360	20,337	77.2%	79.4%	73.4%	84.3%
3	West Valley East (23)	35,527	22,439	63.2%	64.9%	58.0%	71.2%
32	West Valley West (22)	44,794	33,972	75.8%	77.6%	72.1%	82.2%
	Southeastern Utah HD	36,828	26,107	70.9%	71.1%	68.1%	73.9%
17	Carbon/Emery Co. (56)	21,451	15,751	73.4%	73.4%	69.9%	76.6%
4	Grand/San Juan Co. (57)	15,377	10,157	66.1%	66.9%	61.2%	72.1%
	Southwest Utah HD	116,150	87,124	75.0%	75.2%	72.2%	77.9%
18	Cedar City (60)	22,401	15,325	68.4%	73.7%	66.9%	79.6%
29	Other Southwest District (61)	15,384	12,215	79.4%	77.1%	69.4%	83.3%
37	Other Washington County (59)	32,503	25,479	78.4%	78.6%	72.9%	83.4%
16	St. George (58)	45,862	33,975	74.1%	73.4%	68.1%	78.0%
9	**Summit County HD (51)**	24,525	17,028	69.4%	71.0%	67.8%	74.0%
12	**Tooele County HD (40)**	32,458	22,867	70.5%	71.8%	68.9%	74.6%
15	**TriCounty HD (53)**	28,023	20,404	72.8%	73.2%	70.3%	75.8%
	Utah County HD	278,832	205,862	73.8%	79.0%	77.0%	80.9%
58	American Fork/Alpine (42)	26,819	21,667	80.8%	83.5%	77.6%	88.0%
61	East Orem (46)	14,955	13,815	92.4%	92.7%	85.6%	96.5%
50	Lehi/Cedar Valley (41)	18,752	15,191	81.0%	81.3%	74.4%	86.7%
39	North Orem (44)	25,965	19,331	74.5%	79.0%	71.9%	84.7%
55	Pleasant Grove/Lindon (43)	24,636	19,953	81.0%	82.2%	76.1%	87.1%
25	Provo/BYU (47)	39,401	25,622	65.0%	75.2%	67.9%	81.4%
19	Provo South (48)	48,138	26,765	55.6%	73.7%	67.3%	79.2%
38	Springville/Spanish Fork (49)	41,036	31,684	77.2%	78.8%	73.8%	83.1%
52	Utah Co. South (50)	17,363	13,753	79.2%	81.4%	74.7%	86.7%
22	West Orem (45)	21,774	15,531	71.3%	74.5%	64.0%	82.8%
49	**Wasatch County HD (52)**	12,514	10,027	80.1%	80.9%	77.9%	83.6%
	Weber-Morgan HD	148,702	109,222	73.5%	75.0%	72.6%	77.3%
6	Ben Lomond (5)	33,215	22,111	66.6%	69.2%	63.9%	74.2%
11	Downtown Ogden (7)	21,684	14,927	68.8%	71.8%	64.4%	78.2%
43	Morgan/East Weber Co. (6)	24,131	19,240	79.7%	79.5%	73.3%	84.6%
30	Riverdale (10)	15,522	11,991	77.3%	77.1%	70.7%	82.4%
34	Roy/Hooper (9)	27,898	21,183	75.9%	77.9%	72.7%	82.4%
13	South Ogden (8)	26,255	18,909	72.0%	72.2%	65.5%	78.1%

*State rank is by 61 small areas for age-adjusted rate; 1 is always the lowest rate in the state and 61 is always the highest rate in the state.

Figure 11.2: Primary Care Provider by Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)

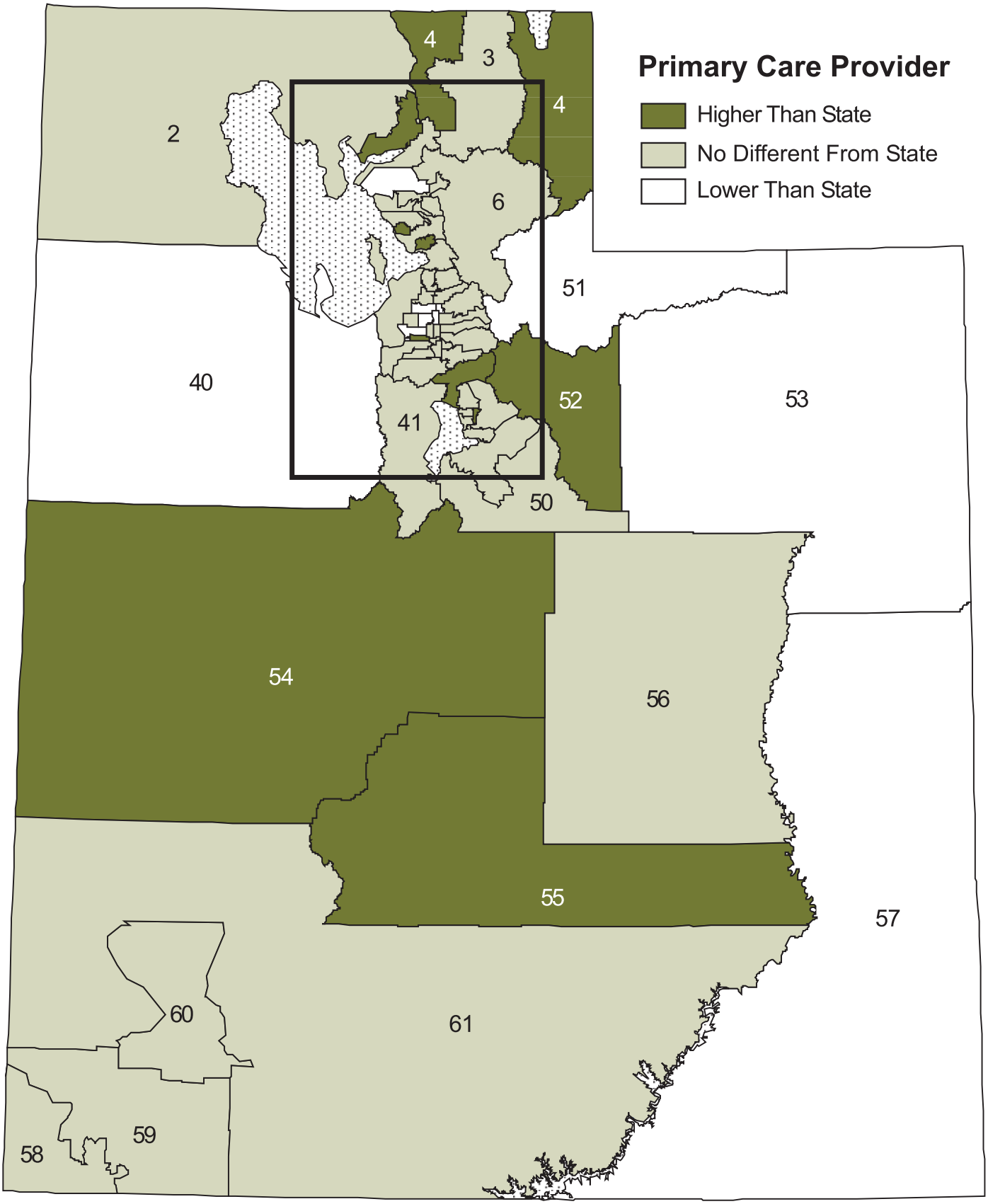
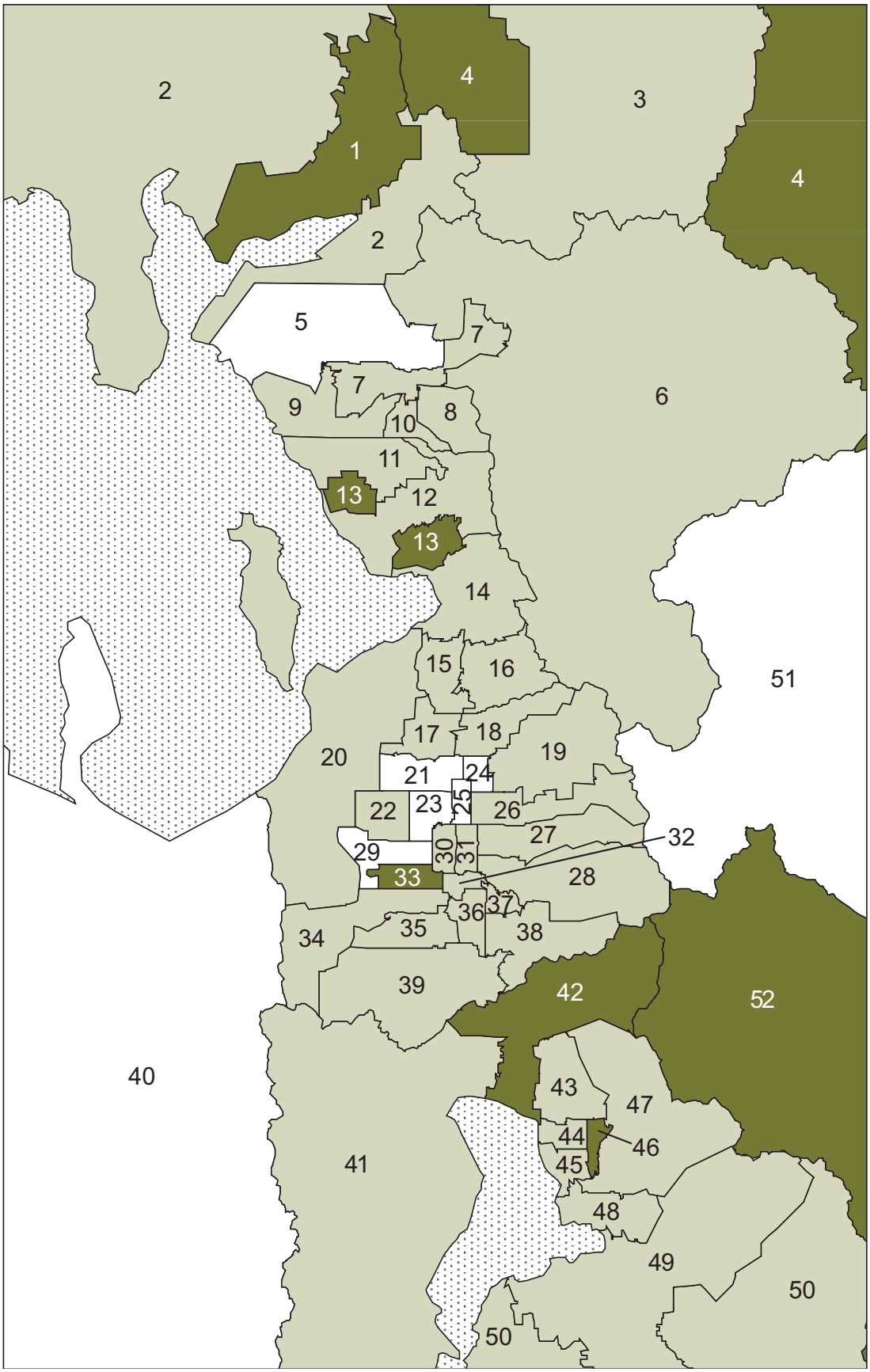


Figure 11.3: Primary Care Provider by Small Area, Wasatch Front Adults Aged 18+, 2001–2005 (Age-adjusted)



12. HIV Testing

Measure Definition: *"Have you ever been tested for HIV? Do not count tests you may have had as part of a blood donation."* ***[Yes]***

Why is HIV testing important to public health?

We cannot tell by looking at someone whether he or she has HIV infection. Someone can look and feel perfectly healthy and still be infected. Many people who have HIV infections do not know it, and neither do their sex partners.

The HIV-antibody test is the only way to determine whether someone is infected. When any virus enters the body, the immune system responds by making proteins called antibodies. Different viruses cause the body to make different antibodies. A person makes antibodies to HIV when he or she has HIV infection. The HIV-antibody test detects HIV antibodies in a person's blood. The test determines whether someone is infected with HIV. The test does not tell if a person has AIDS or when or whether that person will get AIDS. HIV antibodies are a sign of infection, but unlike antibodies for many other infections, they do not protect people from disease, make them immune, or prevent them from giving HIV to someone else.

The HIV-antibody test should always include before-test and after-test counseling. This counseling helps people understand the result, how to protect their own health, and (if they are infected) how to not infect other people. Counseling is a central part of the testing process, whether a person is infected or not.

Risk factors for HIV/AIDS

There is evidence that HIV, the virus that causes AIDS, has been in the United States since 1978. The following are known risk factors for HIV infection. Persons who answer yes to any of these questions should immediately seek counseling and testing. They may be at increased risk of infection if any of the following apply to them since 1978:

- Have you shared needles or syringes to inject drugs or steroids?
- If you are a male, have you had unprotected sex with other males?
- Have you had unprotected sex with someone who you know or suspect was infected with HIV?
- Have you had a sexually transmitted disease (STD)?
- Have you received a blood transfusion or clotting factor between 1978 and 1985?
- Have you had unprotected sex with someone who would answer yes to any of the above questions?

If a person has had sex with someone and didn't know their risk behavior, or has had many sex partners, then that person has increased the chance that he or she might be HIV infected. If someone plans to become pregnant, counseling and testing is extremely important. Without treatment, HIV-infected women have about a one-in-four chance of infecting their baby during pregnancy or delivery. Medical treatment can reduce this to about a 1 in 12 chance.

HIV/AIDS in Utah

During 2005, 63 new AIDS cases were documented in Utah. The majority of these cases (63%) met the AIDS case definition based on low CD4 T-lymphocyte counts. The 63 AIDS cases reported in 2005 represent a 17% decrease from the 76 cases reported in 2004. Twenty-seven AIDS deaths were reported through December

Utah Objective: No objective listed.
HP2010 Objective (related) 13-7: (Developmental) Increase the number of HIV positive persons who know their serostatus.

HIV/AIDS in Utah (continued)

2005, a reported 4% decrease from the 28 deaths reported in 2004. During 2005, 71% of HIV-positive individuals and 49% of newly reported AIDS cases were in the 20–39 age group. Twenty-nine percent of newly reported AIDS cases were in the 40–49 age group. Of the 163 individuals reported with HIV and AIDS in 2005, 130 (80%) were male, and 33 (20%) were female.

During 2005, male-to-male sexual contact was the most common means of HIV/AIDS exposure reported among men of all races. Men who have sex with men and inject drugs was the second most common means of exposure, followed by injecting drug use alone. Nine percent of men reported during 2005 did not disclose a risk. The racial/ethnic breakdown of men with HIV/AIDS in 2005 shows 70% were White, 25% were Hispanic, 4% were Black, and 1% were Native American.

Thirty-three women were reported with HIV/AIDS during 2005. Heterosexual contact with an HIV-positive partner was the most common means of HIV/AIDS exposure reported by women. Injecting drug use was the second highest means of exposure. Thirty percent of women reported during 2005 did not disclose a risk. The racial/ethnic breakdown of women shows 52% were White, 21% were Black, 12% were Hispanic, 6% were Native American, and for 9% race/ethnicity was unknown.

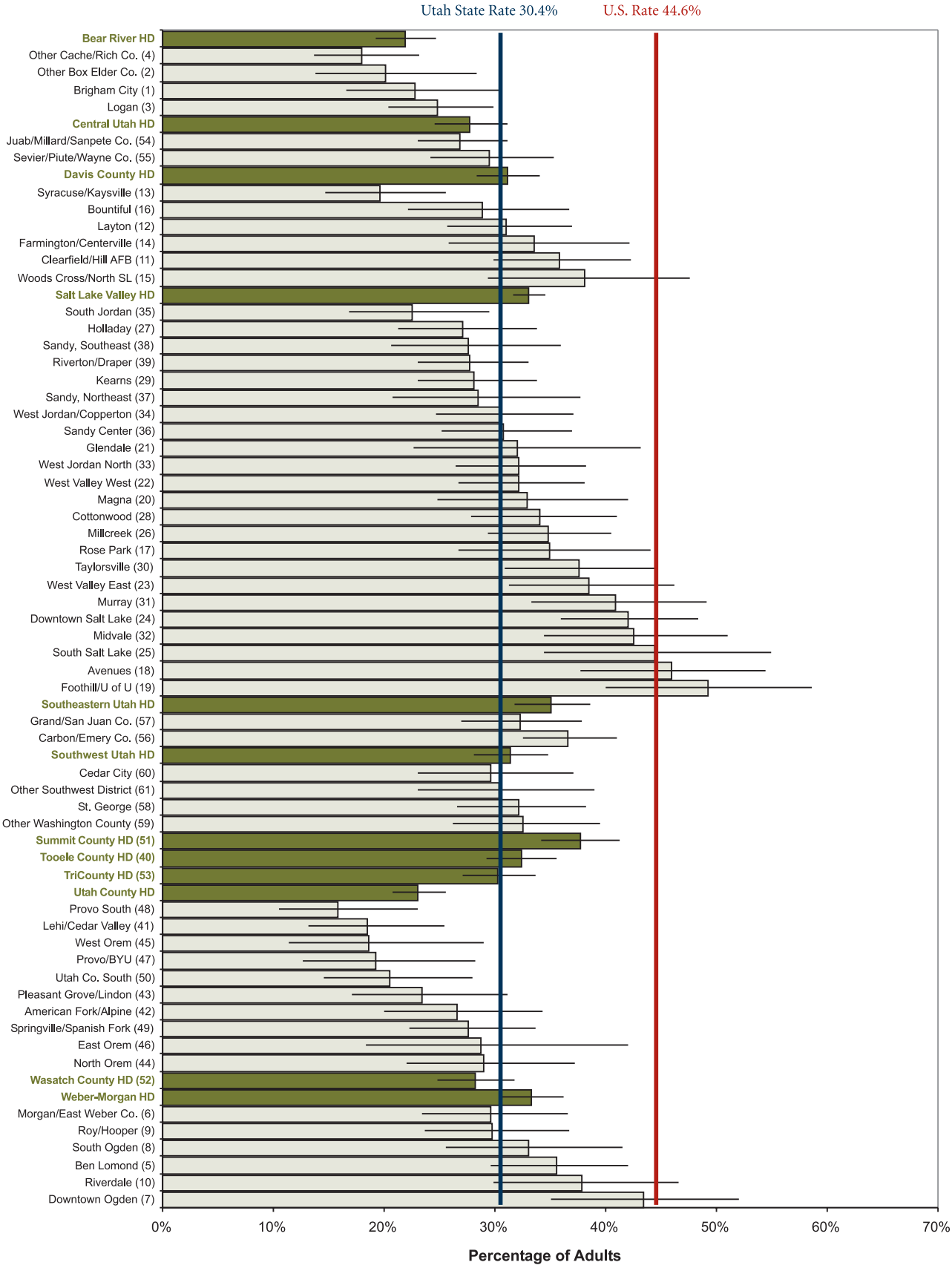
According to the 2001–2005 BRFSS data, the overall age-adjusted percentage of Utah adults aged 18–64 who reported ever having had an HIV test was 30.4%. This was quite a bit lower than the U.S. rate of 44.2%. This age-adjusted rate varied among Utah's 12 local health districts from a low of 21.7% in Bear River to a high of 37.7% in Summit County. Bear River and Utah County had rates lower than the state rate. Four health districts, Salt Lake Valley, Southeastern Utah, Weber-Morgan, and Summit County, had rates higher than the state rate.

The age-adjusted percentage of Utah adults aged 18–64 who reported ever having had an HIV test varied among Utah's small areas from a low of 15.9% in Provo South to a high of 49.3% in Foothill/U of U. In Davis County health district, Syracuse/Kaysville was the only small area with a rate significantly lower than the state rate. The South Jordan small area was the only one in the Salt Lake Valley health district with a rate lower than the state. In Utah County health district, Lehi/Cedar Valley, Provo/BYU, Provo South, Utah Co. South, and West Orem had rates lower than the state rate.

Prevention/Resources

The Utah Department of Health HIV Prevention Program offers confidential conventional and rapid HIV testing at publicly funded sites throughout the state of Utah. A listing of the individual sites is provided at http://health.utah.gov/cdc/hiv_testing.htm. A listing of all HIV prevention providers in Utah and other resources is available at http://health.utah.gov/cdc/hivprevention/resources/Prevention%20Directory%202003.pdf. Providers are listed by organization name and interventions currently being conducted. Additional web links to other helpful organizations are included at the end of the resource directory. Information on current events can be found at www.aidsinfoutah.net.

Figure 12.1: Percentage of Adults Who Ever Had an HIV Test by Local Health District and Small Area, Utah Adults Aged 18–64, 2001–2005 (Age-adjusted)



12. HIV Testing

Table 12: HIV Testing by Health District, Small Area, Utah, and U.S., 2001-2005

State Rank*	State, Health District, or Small Area	2003 Population 18-64	Number of Adults Tested for HIV	Crude Rate	Age-adjusted Rate	95% Confidence Interval Lower	95% Confidence Interval Upper
	U.S.	181,850,662	80,359,808	44.2%	44.6%	44.5%	44.8%
	State of Utah	1,454,204	441,787	30.4%	30.4%	29.5%	31.2%
	Bear River HD	86,286	18,733	21.7%	21.8%	19.2%	24.7%
10	Brigham City (1)	11,991	2,857	23.8%	22.8%	16.6%	30.5%
12	Logan (3)	41,507	9,165	22.1%	24.9%	20.4%	29.9%
7	Other Box Elder Co. (2)	12,539	2,491	19.9%	20.1%	13.8%	28.4%
2	Other Cache/Rich Co. (4)	20,249	3,859	19.1%	17.9%	13.7%	23.2%
	Central Utah HD	39,461	10,812	27.4%	27.7%	24.6%	31.1%
14	Juab/Millard/Sanpete Co. (54)	26,685	7,042	26.4%	26.9%	23.1%	31.1%
25	Sevier/Piute/Wayne Co. (55)	12,776	3,741	29.3%	29.4%	24.2%	35.4%
	Davis County HD	155,669	47,993	30.8%	31.1%	28.4%	34.0%
23	Bountiful (16)	26,901	6,908	25.7%	28.9%	22.1%	36.7%
48	Clearfield/Hill AFB (11)	34,288	12,762	37.2%	35.8%	29.8%	42.2%
43	Farmington/Centerville (14)	17,177	5,474	31.9%	33.5%	25.8%	42.2%
33	Layton (12)	42,489	13,609	32.0%	31.1%	25.8%	36.9%
6	Syracuse/Kaysville (13)	22,121	4,398	19.9%	19.6%	14.7%	25.6%
53	Woods Cross/North SL (15)	12,690	4,775	37.6%	38.1%	29.4%	47.5%
	Salt Lake Valley HD	582,879	194,623	33.4%	33.1%	31.6%	34.5%
60	Avenues (18)	16,120	6,935	43.0%	45.9%	37.7%	54.4%
44	Cottonwood (28)	28,263	9,502	33.6%	34.1%	27.8%	41.0%
56	Downtown Salt Lake (24)	38,114	16,206	42.5%	42.0%	35.9%	48.4%
61	Foothill/U of U (19)	14,586	7,137	48.9%	49.3%	40.0%	58.7%
34	Glendale (21)	16,439	5,619	34.2%	32.0%	22.6%	43.2%
15	Holladay (27)	27,658	6,862	24.8%	27.1%	21.3%	33.9%
19	Kearns (29)	39,663	11,903	30.0%	28.1%	23.1%	33.8%
41	Magna (20)	14,209	5,185	36.5%	32.9%	24.9%	42.0%
57	Midvale (32)	19,004	8,658	45.6%	42.5%	34.5%	51.1%
45	Millcreek (26)	34,704	12,237	35.3%	34.8%	29.4%	40.6%
55	Murray (31)	19,835	7,571	38.2%	40.9%	33.3%	49.1%
18	Riverton/Draper (39)	38,984	11,504	29.5%	27.7%	23.0%	33.0%
46	Rose Park (17)	19,976	7,046	35.3%	34.9%	26.7%	44.1%
32	Sandy Center (36)	32,303	9,746	30.2%	30.7%	25.2%	36.9%
21	Sandy, Northeast (37)	16,593	4,578	27.6%	28.5%	20.8%	37.7%
17	Sandy, Southeast (38)	19,421	4,723	24.3%	27.6%	20.6%	36.0%
9	South Jordan (35)	19,303	4,295	22.3%	22.6%	16.8%	29.5%
59	South Salt Lake (25)	16,135	7,427	46.0%	44.4%	34.4%	54.9%
50	Taylorsville (30)	24,293	8,784	36.2%	37.6%	30.9%	44.7%
35	West Jordan North (33)	28,918	9,471	32.8%	32.1%	26.5%	38.3%
31	West Jordan/Copperton (34)	24,917	8,380	33.6%	30.5%	24.7%	37.0%
54	West Valley East (23)	31,956	12,140	38.0%	38.4%	31.2%	46.2%
37	West Valley West (22)	41,480	13,589	32.8%	32.2%	26.7%	38.2%
	Southeastern Utah HD	30,622	10,589	34.6%	35.0%	31.7%	38.5%
49	Carbon/Emery Co. (56)	17,658	6,429	36.4%	36.6%	32.5%	41.0%
38	Grand/San Juan Co. (57)	12,964	4,047	31.2%	32.2%	27.0%	37.9%
	Southwest Utah HD	92,003	28,834	31.3%	31.3%	28.0%	34.8%
27	Cedar City (60)	20,004	5,997	30.0%	29.6%	23.1%	37.1%
30	Other Southwest District (61)	12,056	3,408	28.3%	30.4%	23.1%	38.9%
40	Other Washington County (59)	25,720	8,256	32.1%	32.5%	26.3%	39.5%
36	St. George (58)	34,223	11,389	33.3%	32.1%	26.6%	38.2%
51	**Summit County HD (51)**	22,704	8,605	37.9%	37.7%	34.2%	41.3%
39	**Tooele County HD (40)**	29,082	9,705	33.4%	32.4%	29.3%	35.6%
29	**TriCounty HD (53)**	23,741	7,167	30.2%	30.3%	27.1%	33.6%
	Utah County HD	253,444	57,836	22.8%	23.0%	20.8%	25.5%
13	American Fork/Alpine (42)	24,031	6,409	26.7%	26.5%	19.9%	34.3%
22	East Orem (46)	13,013	3,981	30.6%	28.7%	18.3%	42.0%
3	Lehi/Cedar Valley (41)	17,417	4,372	25.1%	18.5%	13.1%	25.5%
24	North Orem (44)	23,532	6,485	27.6%	29.0%	22.0%	37.2%
11	Pleasant Grove/Lindon (43)	22,530	5,416	24.0%	23.4%	17.1%	31.2%
5	Provo/BYU (47)	35,365	4,866	13.8%	19.2%	12.6%	28.2%
1	Provo South (48)	45,671	7,257	15.9%	15.8%	10.6%	23.0%
16	Springville/Spanish Fork (49)	36,522	10,197	27.9%	27.6%	22.2%	33.6%
8	Utah Co. South (50)	15,486	3,433	22.2%	20.5%	14.6%	28.0%
4	West Orem (45)	19,879	3,807	19.2%	18.6%	11.4%	29.0%
20	**Wasatch County HD (52)**	11,068	3,165	28.6%	28.2%	24.8%	31.8%
	Weber-Morgan HD	127,245	41,876	32.9%	33.3%	30.5%	36.2%
47	Ben Lomond (5)	28,123	10,217	36.3%	35.6%	29.7%	42.0%
58	Downtown Ogden (7)	19,065	7,971	41.8%	43.4%	35.1%	52.1%
26	Morgan/East Weber Co. (6)	20,976	5,945	28.3%	29.6%	23.4%	36.6%
52	Riverdale (10)	12,822	4,747	37.0%	37.8%	29.8%	46.6%
28	Roy/Hooper (9)	24,632	7,367	29.9%	29.8%	23.6%	36.7%
42	South Ogden (8)	21,625	7,004	32.4%	33.1%	25.6%	41.6%

*State rank is by 61 small areas for age-adjusted rate; 1 is always the lowest rate in the state and 61 is always the highest rate in the state.

Figure 12.2: HIV Testing by Small Area, Utah Adults Aged 18–64, 2001–2005 (Age-adjusted)

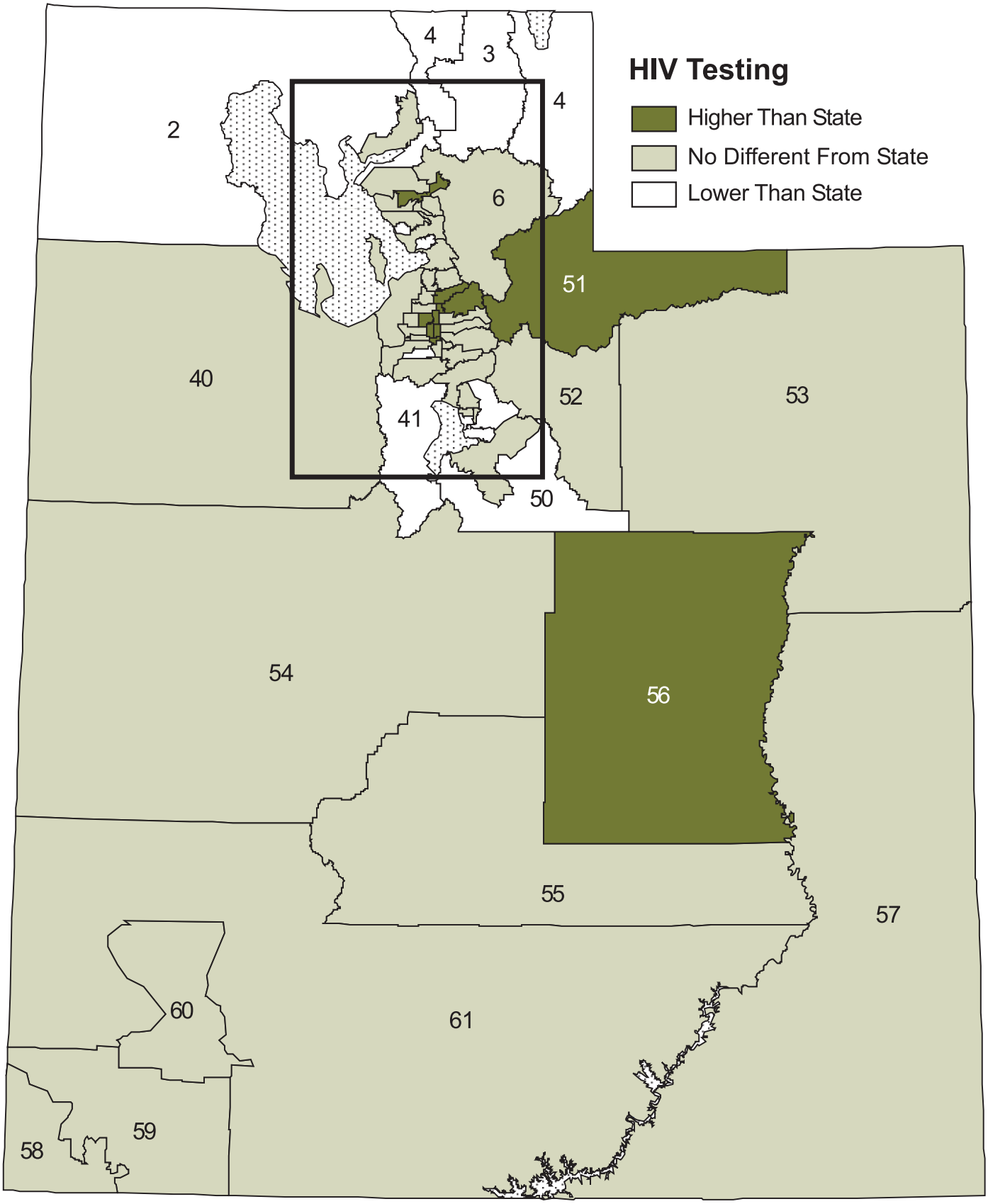
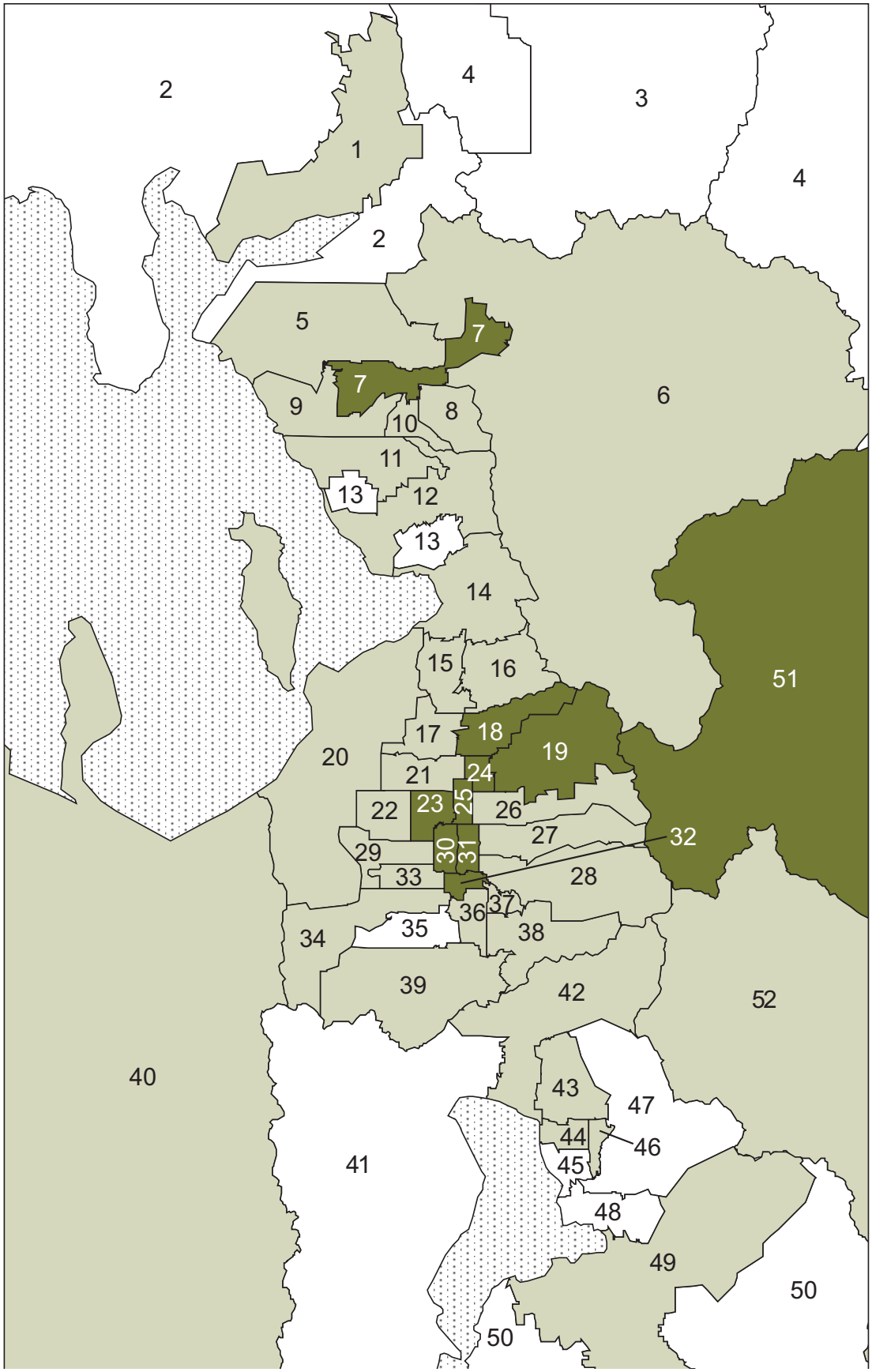


Figure 12.3: HIV Testing by Small Area, Wasatch Front Adults Aged 18–64, 2001–2005 (Age-adjusted)



13. Sigmoidoscopy or Colonoscopy

Measure Definition: *"Sigmoidoscopy and colonoscopy are exams in which a tube is inserted in the rectum to view the bowel for signs of cancer or other health problems. Have you ever had either of these exams? How long has it been since you had your last sigmoidoscopy or colonoscopy?"* ***[Yes, within the past five years]***

Why is colorectal cancer screening important to public health?

Colorectal cancer is the second leading cause of cancer-related death in the United States. The American Cancer Society (ACS) estimates that 55,170 Americans will die of colorectal cancer this year. Colorectal cancer is also one of the most commonly diagnosed cancers in the United States; approximately 148,610 new cases will be diagnosed in 2006.[27] Colorectal cancer is the third most common cancer in men and in women.[28]

Reducing the number of deaths from colorectal cancer depends on detecting and removing pre-cancerous colorectal polyps, as well as detecting and treating the cancer in its early stages. Colorectal cancer can be prevented by removing pre-cancerous polyps or growths, which can be present in the colon for years before invasive cancer develops. The Centers for Disease Control and Prevention (CDC) estimates that if all adults aged 50 years or older were screened regularly, as many as 60% of deaths from colorectal cancer could be prevented.[28]

Risk factors for colorectal cancer

The risk of developing colorectal cancer increases with advancing age, with more than 90% of cases occurring in persons aged 50 years or older. Other risk factors include inflammatory bowel disease, a personal or family history of colorectal cancer or colorectal polyps, and certain hereditary syndromes. Lifestyle factors that may contribute to increased risk of colorectal cancer include lack of regular physical activity, low fruit and vegetable intake, a low-fiber and high-fat diet, obesity, alcohol consumption, and tobacco use.[28]

Screening is critical in the prevention and detection of colorectal cancer, as approximately 75% of these cancers occur in people with no known risk factors.[28]

Colorectal cancer screening in Utah

Between 2001–2005, 42.9% of Utahns aged 50 and older reported having a sigmoidoscopy or colonoscopy within the past five years (rate is age-adjusted). This rate is similar to the U.S. rate.

The age-adjusted percentage of adults aged 50 and older who reported having a sigmoidoscopy or colonoscopy within the past five years varied by local health district. Reported age-adjusting screening rates for local health districts ranged from a low of 26.9% in Southeastern Utah to a high of 48.3% in Salt Lake Valley. Five local health districts had rates that differed significantly from the state. Southeastern Utah, Central Utah, TriCounty, and Utah County had rates lower than the state rate, while Salt Lake Valley was the only health district with a rate higher than the state rate.

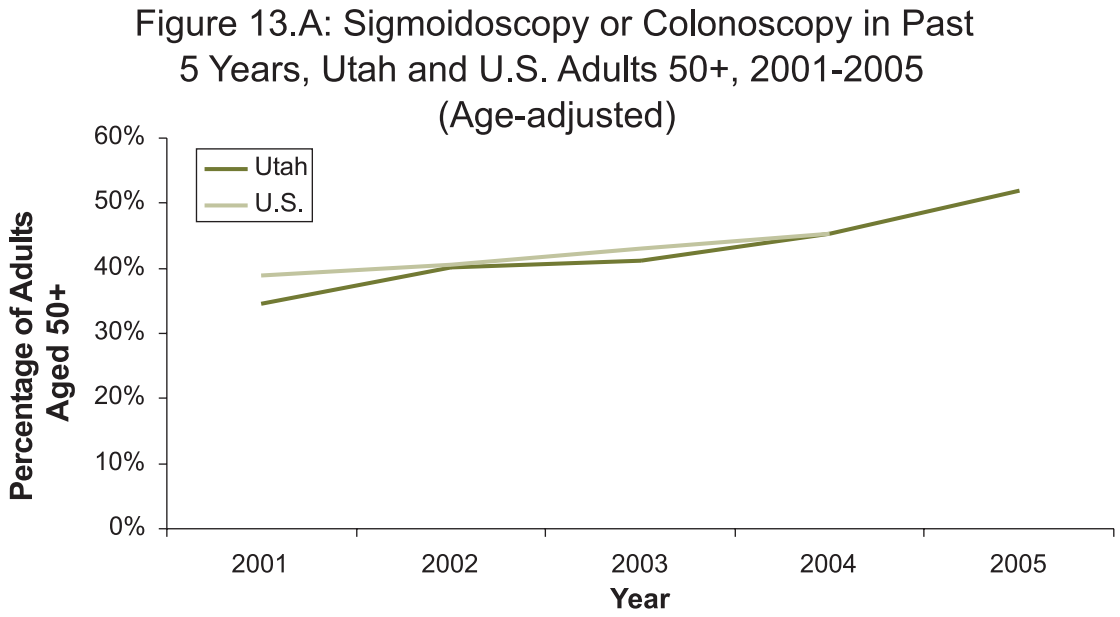
Differences in screening rates also existed when local health districts were further divided into the predetermined 61 small areas. Overall, adults aged 50 and older living in the small area that includes Sevier, Piute, and Wayne Counties were least likely to report having a sigmoidoscopy or colonoscopy within the past five

Utah Objective: Increase the proportion of adults aged 50 years and older who have had a sigmoidoscopy or colonoscopy within the past five years to 65% in 2010.
HP2010 Objective (related) 3-12b: Increase the proportion of adults aged 50 years and older who have ever received a sigmoidoscopy to 50% (age-adjusted to the U.S. 2000 standard population).

Colorectal cancer screening in Utah (continued)

years (25.2%). The highest screening rate (62.1%) was reported in the Foothill/U of U area of the Salt Lake Valley health district (see Figure 13.1).

Nationally, the percentage of older adults having had a sigmoidoscopy or colonoscopy in the past five years rose from 38.8% in 2001 to 45.4% in 2004. Utah rates have increased from 34.5% in 2001 to 52.0% in 2005.



Prevention/Resources

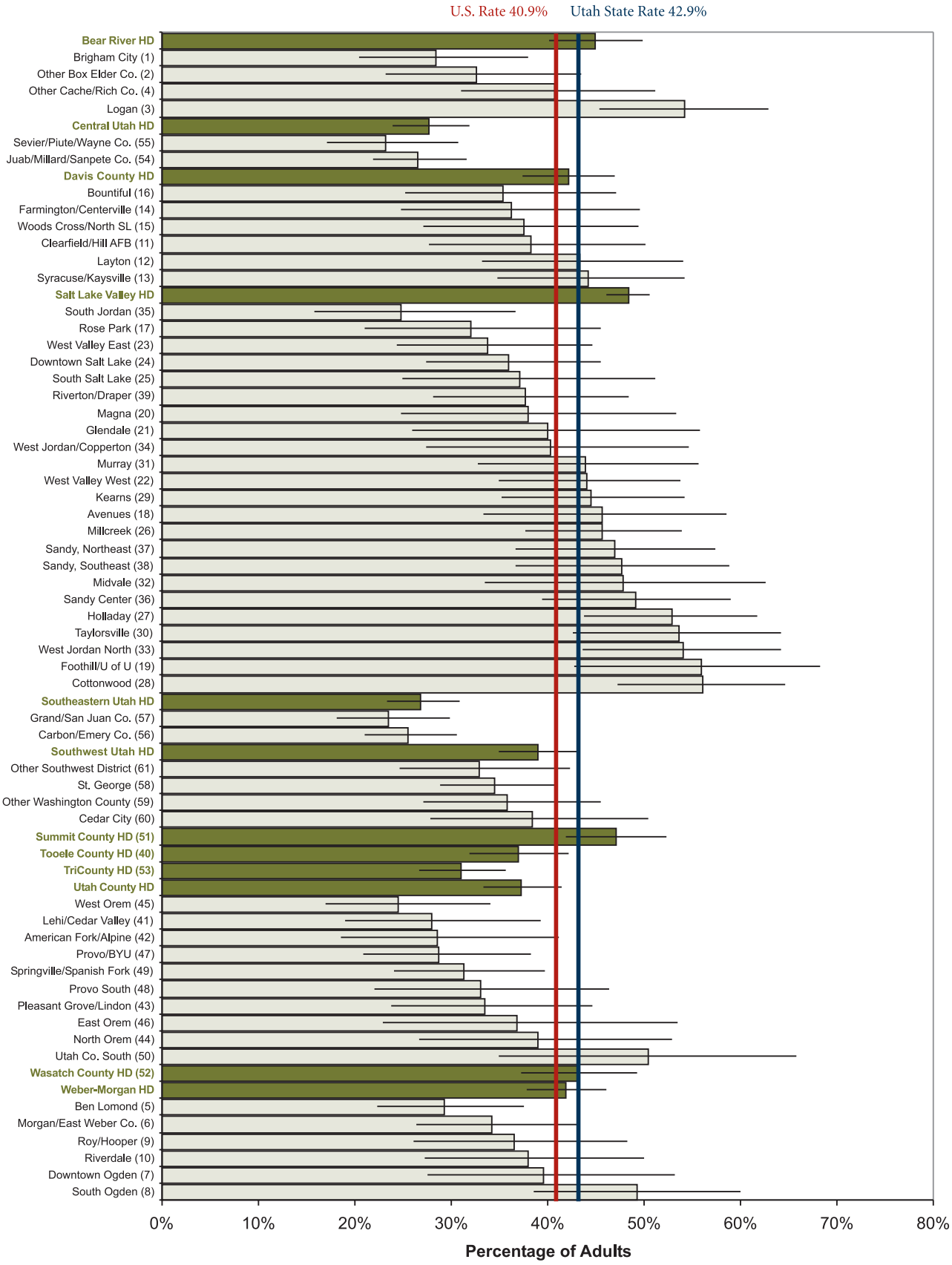
In June 2002, the Utah Cancer Control Program received a grant from the CDC to launch a statewide education campaign. Additional funds were awarded to continue the public education efforts in June 2003, 2004, and 2005. Education efforts aim to increase awareness about colorectal cancer and promote screening and early detection for Utahns aged 50 and older.

In addition, the Utah Department of Health initiated the Utah Cancer Action Network (UCAN), a statewide partnership whose goal is to reduce the burden of cancer. The mission of UCAN is to lower cancer incidence and mortality in Utah through collaborative efforts directed toward cancer prevention and control. As a result of this planning process, objectives and strategies have been developed by community partners regarding the early detection of cervical, prostate, skin, breast, and colorectal cancers, as well as the promotion of physical activity, healthy eating habits, and smoking cessation.

For more information about colorectal cancer in Utah, call UCAN's health resource line at 1-888-222-2542 or visit www.ucan.cc.

13. Sigmoidoscopy or Colonoscopy

Figure 13.1: Percentage of Persons Aged 50+ Who Had a Sigmoidoscopy or Colonoscopy in the Past Five Years by Local Health District and Small Area, Utah, 2001–2005 (Age-adjusted)



13. Sigmoidoscopy or Colonoscopy

Table 13: Sig./Colon. in Past 5 Years by Health District, Small Area, Utah, and U.S., 2001-2005

State Rank*	State, Health District, or Small Area	2003 Population 50+	Number of Adults 50+ Reporting Sig./Colon. in Past 5 Years	Crude Rate	Age-adjusted Rate	95% Confidence Interval	
						Lower	Upper
	U.S.	82,827,331	33,818,399	40.8%	40.9%	40.5%	41.2%
	State of Utah	496,067	209,390	42.2%	42.9%	41.5%	44.2%
	Bear River HD	26,906	12,070	44.9%	44.9%	40.2%	49.8%
8	Brigham City (1)	5,275	1,701	32.3%	32.8%	24.0%	43.1%
60	Logan (3)	9,740	5,672	58.2%	60.2%	52.1%	67.9%
21	Other Box Elder Co. (2)	4,885	1,859	38.1%	37.4%	27.3%	48.8%
34	Other Cache/Rich Co. (4)	7,006	3,000	42.8%	41.4%	32.8%	50.6%
	Central Utah HD	17,525	4,837	27.6%	27.6%	23.9%	31.8%
4	Juab/Millard/Sanpete Co. (54)	10,899	3,116	28.6%	28.9%	24.2%	34.2%
1	Sevier/Piute/Wayne Co. (55)	6,626	1,717	25.9%	25.2%	19.4%	32.0%
	Davis County HD	50,863	21,093	41.5%	42.1%	37.4%	46.9%
18	Bountiful (16)	13,201	4,891	37.1%	37.0%	28.6%	46.3%
17	Clearfield/Hill AFB (11)	8,262	3,349	40.5%	37.0%	26.8%	48.4%
24	Farmington/Centerville (14)	5,966	2,330	39.1%	37.8%	26.5%	50.6%
41	Layton (12)	12,511	6,078	48.6%	46.4%	36.9%	56.2%
55	Syracuse/Kaysville (13)	6,961	3,347	48.1%	54.8%	44.8%	64.6%
19	Woods Cross/North SL (15)	3,965	1,225	30.9%	37.0%	23.4%	53.1%
	Salt Lake Valley HD	198,437	93,404	47.1%	48.3%	46.0%	50.6%
39	Avenues (18)	6,359	2,864	45.0%	45.9%	34.5%	57.8%
58	Cottonwood (28)	13,578	7,824	57.6%	59.0%	50.6%	66.9%
27	Downtown Salt Lake (24)	10,925	4,268	39.1%	38.7%	29.8%	48.4%
61	Foothill/U of U (19)	6,557	4,129	63.0%	62.1%	48.5%	74.0%
43	Glendale (21)	5,052	2,110	41.8%	47.2%	33.2%	61.5%
56	Holladay (27)	16,222	9,172	56.5%	55.8%	47.9%	63.4%
48	Kearns (29)	10,774	5,005	46.5%	49.0%	39.4%	58.6%
15	Magna (20)	3,760	1,366	36.3%	36.8%	20.4%	57.1%
50	Midvale (32)	6,247	3,135	50.2%	50.4%	37.1%	63.6%
46	Millcreek (26)	17,219	8,596	49.9%	48.4%	40.4%	56.5%
40	Murray (31)	8,616	3,987	46.3%	46.3%	36.5%	56.4%
16	Riverton/Draper (39)	8,840	3,372	38.1%	36.9%	25.7%	49.8%
14	Rose Park (17)	6,114	2,040	33.4%	35.8%	23.3%	50.7%
51	Sandy Center (36)	11,101	5,446	49.1%	52.6%	42.7%	62.2%
54	Sandy, Northeast (37)	7,004	3,242	46.3%	53.3%	42.2%	64.0%
53	Sandy, Southeast (38)	6,974	3,422	49.1%	53.1%	41.2%	64.7%
5	South Jordan (35)	6,005	1,725	28.7%	29.6%	19.1%	42.8%
31	South Salt Lake (25)	5,181	1,952	37.7%	39.6%	27.6%	53.1%
52	Taylorsville (30)	8,173	4,405	53.9%	52.9%	41.7%	63.8%
57	West Jordan North (33)	6,410	3,397	53.0%	56.0%	44.3%	67.1%
22	West Jordan/Copperton (34)	5,281	2,178	41.2%	37.5%	26.4%	50.1%
30	West Valley East (23)	10,068	3,537	35.1%	39.4%	30.0%	49.6%
42	West Valley West (22)	11,978	5,311	44.3%	46.5%	34.6%	58.8%
	Southeastern Utah HD	14,432	3,871	26.8%	26.9%	23.3%	30.8%
3	Carbon/Emery Co. (56)	8,605	2,350	27.3%	27.2%	22.7%	32.2%
2	Grand/San Juan Co. (57)	5,827	1,508	25.9%	27.0%	21.3%	33.6%
	Southwest Utah HD	45,590	18,355	40.3%	39.0%	35.0%	43.3%
36	Cedar City (60)	5,774	2,415	41.8%	42.7%	31.7%	54.5%
26	Other Southwest District (61)	6,976	2,646	37.9%	38.2%	29.5%	47.8%
20	Other Washington County (59)	13,559	5,181	38.2%	37.3%	29.6%	45.7%
29	St. George (58)	19,281	8,534	44.3%	39.4%	33.1%	46.0%
45	**Summit County HD (51)**	7,344	3,472	47.3%	48.2%	42.7%	53.9%
33	**Tooele County HD (40)**	8,932	3,539	39.6%	39.9%	34.6%	45.4%
10	**TriCounty HD (53)**	10,139	3,252	32.1%	33.3%	29.2%	37.7%
	Utah County HD	62,696	22,408	35.7%	37.2%	33.3%	41.3%
6	American Fork/Alpine (42)	7,583	2,348	31.0%	30.5%	20.4%	43.0%
35	East Orem (46)	4,820	1,883	39.1%	42.6%	28.7%	57.7%
12	Lehi/Cedar Valley (41)	3,681	1,331	36.2%	35.2%	24.1%	48.3%
25	North Orem (44)	5,903	2,228	37.8%	37.9%	26.7%	50.6%
7	Pleasant Grove/Lindon (43)	5,897	1,694	28.7%	31.2%	20.8%	44.0%
23	Provo/BYU (47)	8,124	2,908	35.8%	37.5%	25.8%	51.0%
9	Provo South (48)	5,845	1,861	31.8%	32.9%	20.7%	48.0%
28	Springville/Spanish Fork (49)	11,086	3,900	35.2%	38.7%	29.9%	48.2%
59	Utah Co. South (50)	4,742	2,674	56.4%	59.6%	47.4%	70.8%
11	West Orem (45)	5,022	1,789	35.6%	34.6%	23.4%	47.8%
44	**Wasatch County HD (52)**	3,759	1,743	46.4%	47.5%	41.3%	53.9%
	Weber-Morgan HD	49,444	20,722	41.9%	41.9%	37.7%	46.1%
13	Ben Lomond (5)	11,154	3,952	35.4%	35.4%	27.2%	44.7%
49	Downtown Ogden (7)	6,204	2,641	42.6%	49.1%	36.5%	61.7%
32	Morgan/East Weber Co. (6)	8,550	3,486	40.8%	39.7%	30.9%	49.2%
38	Riverdale (10)	5,708	2,642	46.3%	44.6%	34.3%	55.4%
37	Roy/Hooper (9)	8,267	3,552	43.0%	43.0%	32.3%	54.5%
47	South Ogden (8)	9,565	4,652	48.6%	48.9%	38.9%	58.9%

*State rank is by 61 small areas for age-adjusted rate; 1 is always the lowest rate in the state and 61 is always the highest rate in the state.

Figure 13.2: Sig./Colon. in the Past Five Years by Small Area, Utah Adults Aged 50+, 2001–2005 (Age-adjusted)

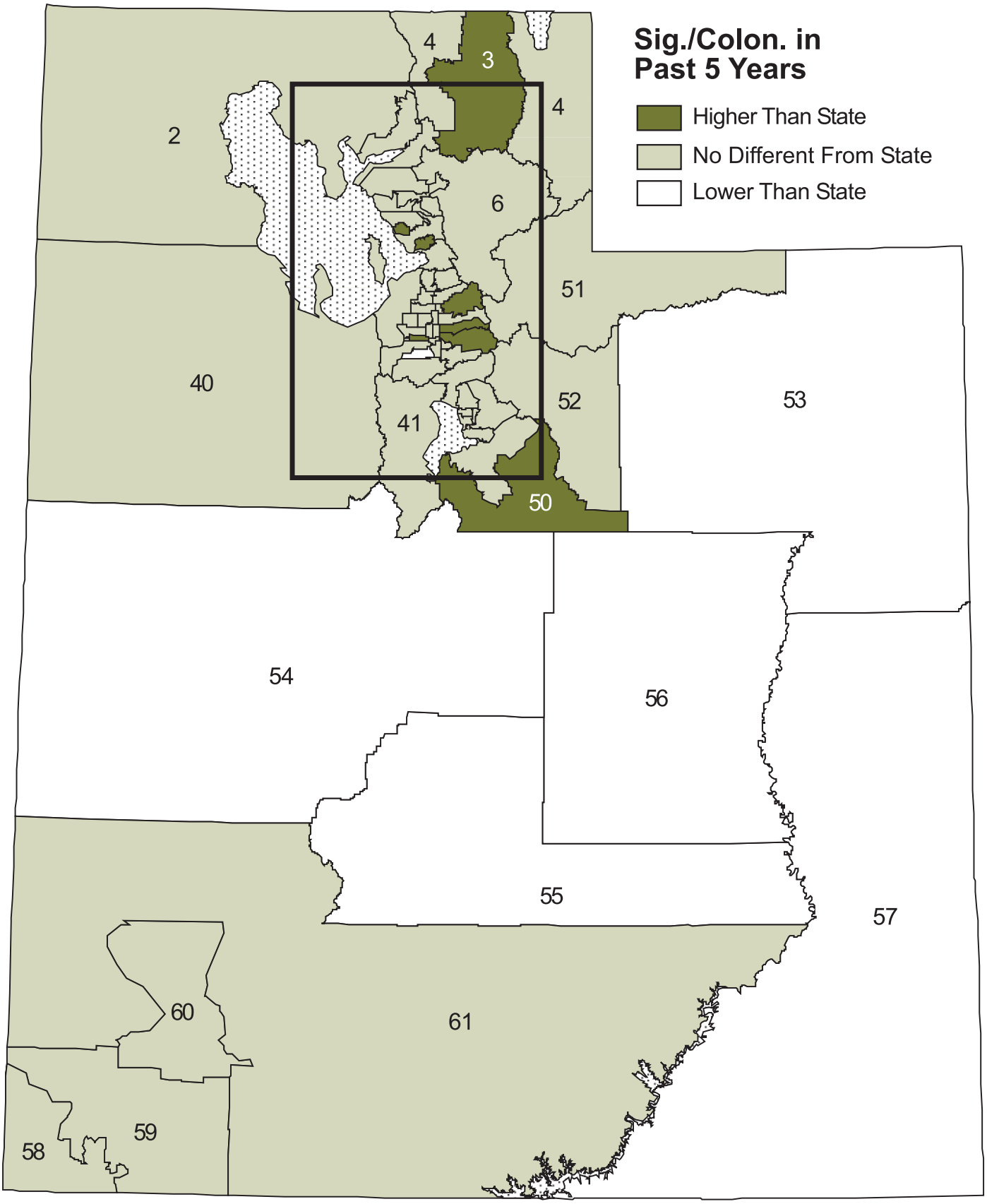
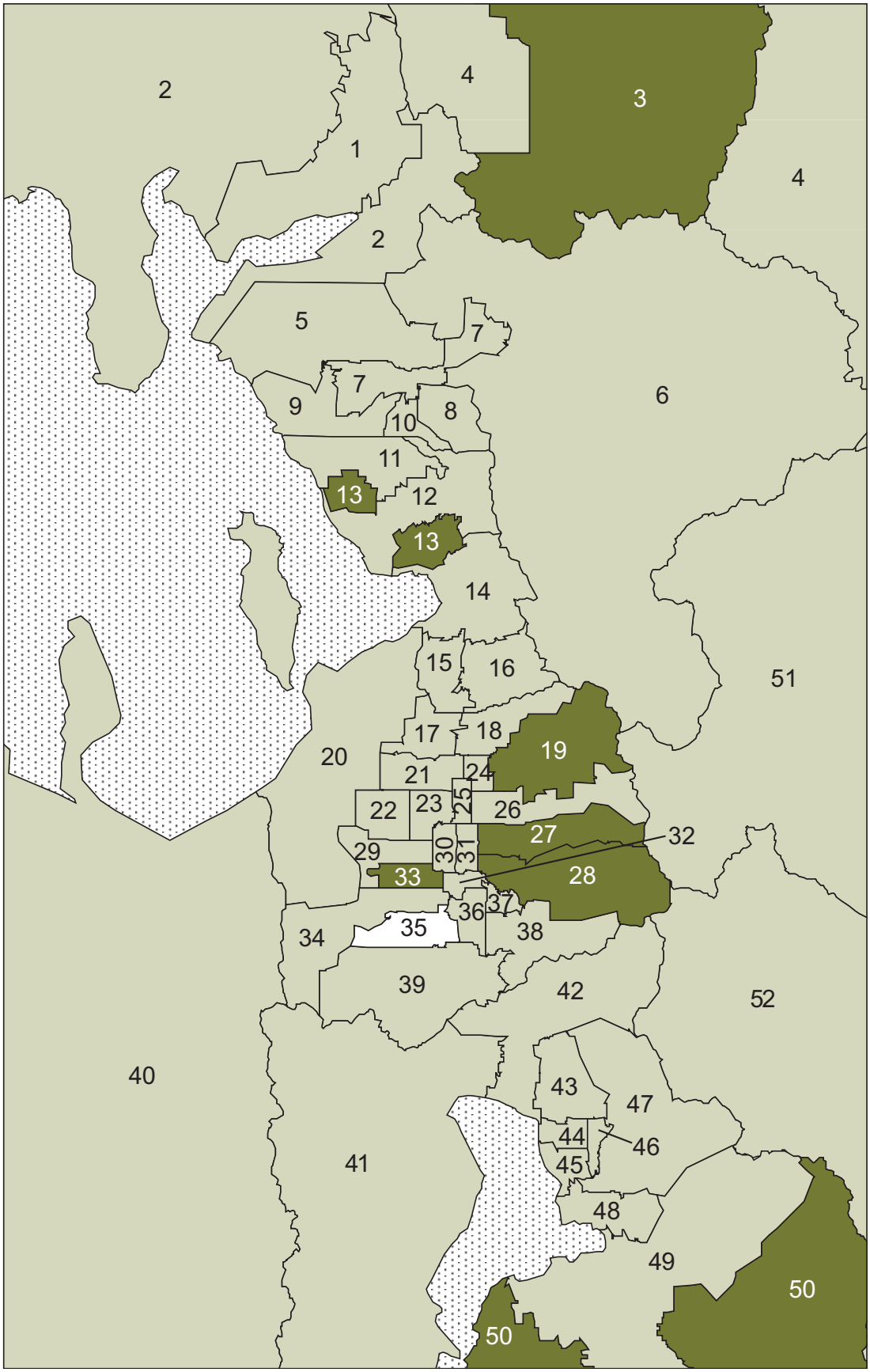


Figure 13.3: Sig./Colon. in Past Five Years by Small Area, Wasatch Front, Aged 50+, 2001–2005 (Age-adjusted)



14. Current Cigarette Smoking

Measure Definition: *"Have you smoked at least 100 cigarettes in your entire life? Do you now smoke cigarettes every day, some days, or not at all?"* ***[Yes to smoking at least 100 cigarettes and currently smoking everyday or some days]***

Why is cigarette smoking important to public health?

Smoking remains the leading preventable cause of death in the U.S. Approximately 440,000 people die of tobacco use each year and more than 8.6 million people have at least one serious illness as a result of smoking.[29] Smoking increases the risk for many types of cancer including cancers of the lip, oral cavity, and pharynx; esophagus; pancreas; larynx (voice box); lung; uterine cervix; urinary bladder; and kidney. Smokers are 2–4 times more likely to develop coronary heart disease and 10 times more likely to develop peripheral vascular disease than non-smokers. Furthermore, smoking has many adverse reproductive and early childhood effects, including an increased risk for infertility, preterm delivery, stillbirth, low birth weight, and sudden infant death syndrome (SIDS). Smokeless tobacco, cigars, and pipes also have deadly consequences, including lung, larynx, esophageal, and oral cancers.[30]

Secondhand smoke is a known human carcinogen. Exposure to secondhand smoke is associated with an increased risk for lung cancer and coronary heart disease in nonsmoking adults and with low birth weight, sudden infant death syndrome, asthma, pneumonia, ear infections, and bronchitis in children.[31]

Quitting smoking has major and immediate health benefits for people of all ages.

Risk factors for cigarette smoking

Approximately 80% of adult smokers start before the age of 18. Early initiation of tobacco use has been shown to increase the likelihood of lifetime smoking and the risk for tobacco-related illnesses and mortality.[29] Furthermore, tobacco use is strongly associated with socioeconomic status. U.S. and Utah data show that adults with less education and lower income levels have higher smoking rates. In addition, recent Utah surveys found that Utah's Black, Native American, and Hispanic male adults are more likely to be smokers than the general adult population.

Youth who smoke are more likely to have friends and family members who smoke, more likely to believe that smoking makes young people look cool or fit in, and are less likely to believe that tobacco use is harmful and addictive. Furthermore, tobacco use in adolescence is associated with a range of other health-compromising behaviors, including being involved in fights, carrying weapons, and using alcohol and other drugs.[32]

Current cigarette smoking in Utah

The age-adjusted aggregated state smoking rate for the years 2001–2005 was 11.7%. In 2003, approximately 198,000 adult Utahns were current cigarette smokers. Since 2003, Utah's adult smoking rate has remained below the national Healthy People 2010 objective of 12%. The age-adjusted prevalence of cigarette smoking varied by local health district and ranged from a low of 5.8% to a high of 19.4% (see Figure 14.1). Six local health districts had rates higher than the state rate, four local health districts had rates lower than the state rate, and

Utah Objective: Reduce adult cigarette smoking among adults to 11% (age-adjusted to the U.S. 2000 standard population).
HP2010 Objective 27-1a: Reduce adult cigarette smoking among adults to 12% (age-adjusted to the U.S. 2000 standard population).

Current cigarette smoking in Utah (continued)

two local health districts had rates similar to the state rate. TriCounty had the highest prevalence of cigarette smoking and Utah County had the lowest prevalence.

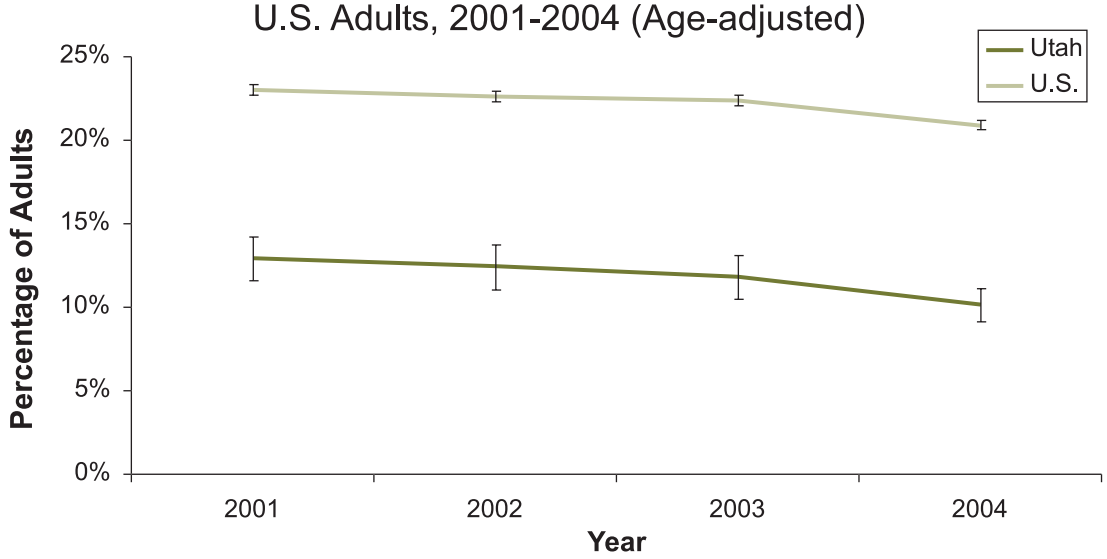
Cigarette smoking among high school students decreased from 8.3% in 2001 to 7.4% in 2005 (Utah Youth Tobacco Survey). In 2005, approximately 10,000 Utah students in Grades 9–12 were current smokers.

When local health districts were separated into their predetermined small areas, data showed that within a local health district some small areas had dramatically higher or lower age-adjusted prevalence rates relative to the district's prevalence rate. For example, in Utah County health district (prevalence 5.8%) the small area prevalence ranged from a low of 0.7% in Provo/BYU to a high of 11.6% in Springville/Spanish Fork; the differences between these small areas were statistically significant. See Figure 14.1 and Table 14 for rates of other small areas.

Overall, the small area with the highest rate of cigarette smoking was South Salt Lake with a rate of 26.0%. The small area with the lowest smoking rate in Utah was Provo/BYU with a rate of 0.7%.

Statewide and U.S. current cigarette smoking has decreased over time from 2001–2005. Since 2003 the state of Utah has met the HP2010 and state objectives to reduce the cigarette smoking rate to less than 12%.

Figure 14.A: Current Cigarette Smoking, Utah and U.S. Adults, 2001-2004 (Age-adjusted)

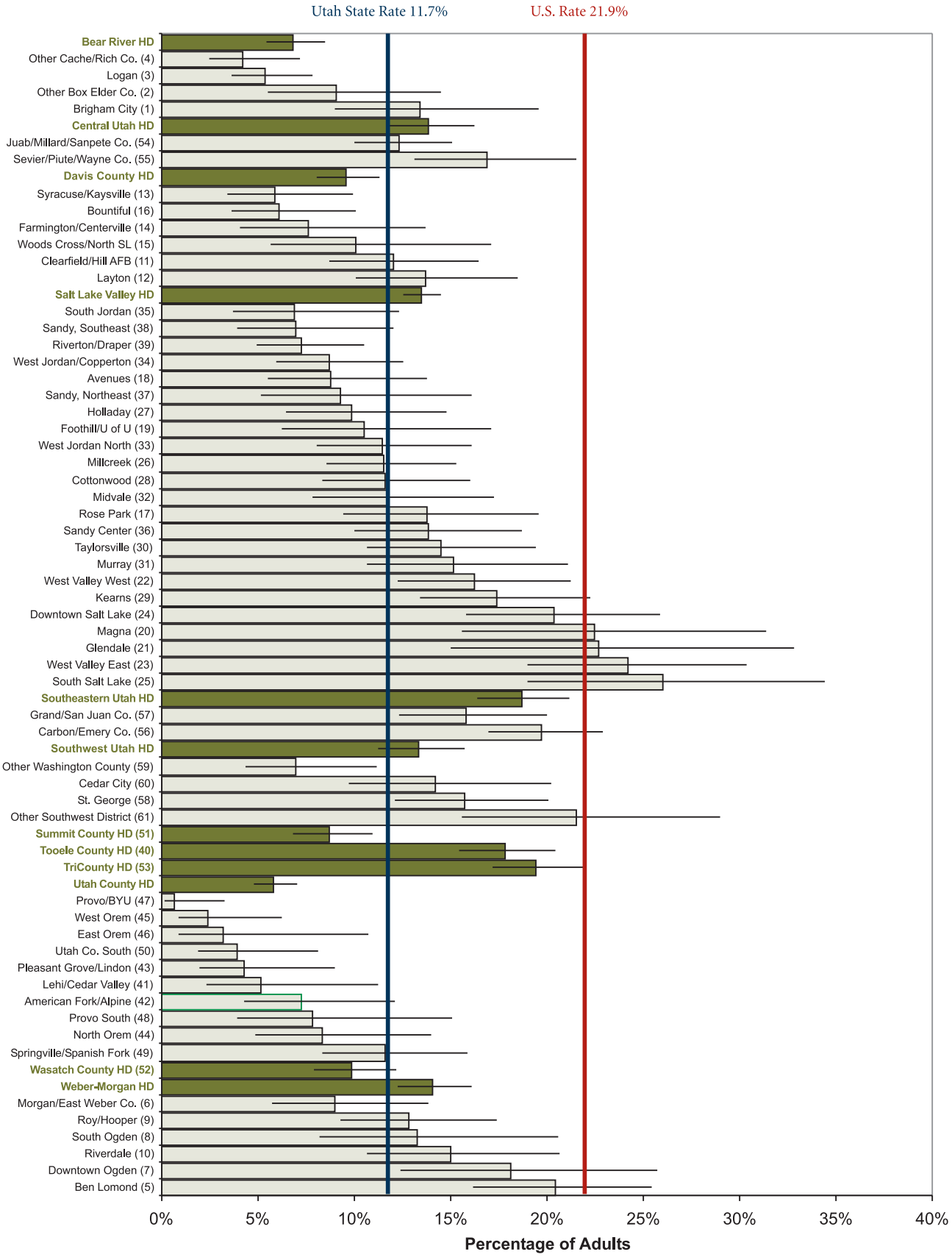


Prevention/Resources

The Tobacco Prevention and Control Program (TPCP) at the Utah Department of Health and its partners offer comprehensive programs to help smokers quit and prevent youth from starting to use tobacco. These programs include The TRUTH anti-tobacco marketing campaign, telephone-, web-, and group-based tobacco cessation services, and tobacco prevention programs in schools and communities. Efforts to improve tobacco policies aim to protect nonsmokers from secondhand smoke and strengthen tobacco-free norms. For more information about tobacco prevention and control programs in Utah, call the Tobacco Free Resource Line at 1-877-220-3466. To get help with quitting tobacco use, call the Utah Tobacco Quit Line at 1-888-567-TRUTH or visit Utah's online tobacco cessation support program www.utah.quitnet.com.

14. Current Cigarette Smoking

Figure 14.1: Percentage of Adults Reporting Current Cigarette Smoking by Local Health District and Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)



14. Current Cigarette Smoking

Table 14: Current Cigarette Smoking by Health District, Small Area, Utah, and U.S., 2001-2005

State Rank*	State, Health District, or Small Area	2003 Population 18+	Number of Adult Current Cigarette Smokers	Crude Rate	Age-adjusted Rate	95% Confidence Interval Lower	95% Confidence Interval Upper
	U.S.	217,803,051	47,546,406	21.8%	21.9%	21.8%	22.0%
	State of Utah	1,657,454	197,734	11.9%	11.7%	11.2%	12.2%
	Bear River HD	98,027	6,950	7.1%	6.8%	5.5%	8.5%
38	Brigham City (1)	14,566	2,019	13.9%	13.4%	9.0%	19.5%
8	Logan (3)	45,904	2,612	5.7%	5.4%	3.6%	7.8%
23	Other Box Elder Co. (2)	14,636	1,292	8.8%	9.1%	5.5%	14.5%
5	Other Cache/Rich Co. (4)	22,921	1,038	4.5%	4.2%	2.4%	7.2%
	Central Utah HD	47,558	6,435	13.5%	13.8%	11.8%	16.2%
35	Juab/Millard/Sanpete Co. (54)	31,637	3,790	12.0%	12.3%	10.0%	15.1%
49	Sevier/Piute/Wayne Co. (55)	15,921	2,592	16.3%	16.9%	13.1%	21.5%
	Davis County HD	175,027	17,485	10.0%	9.5%	8.0%	11.3%
10	Bountiful (16)	33,318	1,633	4.9%	6.1%	3.6%	10.1%
34	Clearfield/Hill AFB (11)	37,329	4,562	12.2%	12.0%	8.7%	16.5%
16	Farmington/Centerville (14)	19,034	1,317	6.9%	7.6%	4.1%	13.7%
39	Layton (12)	46,815	6,891	14.7%	13.7%	10.0%	18.5%
9	Syracuse/Kaysville (13)	24,542	1,610	6.6%	5.9%	3.4%	9.9%
27	Woods Cross/North SL (15)	13,989	1,382	9.9%	10.0%	5.7%	17.1%
	Salt Lake Valley HD	658,810	92,431	14.0%	13.5%	12.5%	14.5%
21	Avenues (18)	18,959	1,750	9.2%	8.8%	5.5%	13.8%
32	Cottonwood (28)	33,297	3,896	11.7%	11.6%	8.3%	16.0%
55	Downtown Salt Lake (24)	42,808	9,375	21.9%	20.4%	15.8%	25.9%
28	Foothill/U of U (19)	17,778	2,160	12.2%	10.5%	6.3%	17.1%
59	Glendale (21)	18,642	4,317	23.2%	22.7%	15.0%	32.8%
26	Holladay (27)	35,956	3,365	9.4%	9.8%	6.4%	14.8%
50	Kearns (29)	42,995	8,040	18.7%	17.4%	13.4%	22.3%
58	Magna (20)	15,623	3,340	21.4%	22.5%	15.6%	31.4%
33	Midvale (32)	21,672	2,759	12.7%	11.8%	7.9%	17.3%
30	Millcreek (26)	44,008	4,656	10.6%	11.5%	8.6%	15.3%
45	Murray (31)	24,072	3,558	14.8%	15.2%	10.7%	21.1%
14	Riverton/Draper (39)	41,391	3,320	8.0%	7.2%	4.9%	10.5%
40	Rose Park (17)	22,639	3,523	15.6%	13.7%	9.4%	19.6%
41	Sandy Center (36)	36,106	5,661	15.7%	13.8%	10.0%	18.7%
24	Sandy, Northeast (37)	18,245	1,633	9.0%	9.3%	5.2%	16.1%
12	Sandy, Southeast (38)	20,781	1,692	8.1%	7.0%	3.9%	12.0%
11	South Jordan (35)	20,931	1,576	7.5%	6.9%	3.7%	12.4%
61	South Salt Lake (25)	18,456	4,808	26.1%	26.0%	19.0%	34.4%
43	Taylorsville (30)	27,372	4,089	14.9%	14.5%	10.7%	19.4%
29	West Jordan North (33)	30,391	3,738	12.3%	11.5%	8.0%	16.1%
20	West Jordan/Copperton (34)	26,360	2,473	9.4%	8.7%	5.9%	12.5%
60	West Valley East (23)	35,527	8,626	24.3%	24.2%	19.0%	30.3%
48	West Valley West (22)	44,794	7,499	16.7%	16.2%	12.2%	21.3%
	Southeastern Utah HD	36,828	6,817	18.5%	18.6%	16.3%	21.1%
54	Carbon/Emery Co. (56)	21,451	4,207	19.6%	19.7%	16.9%	22.9%
47	Grand/San Juan Co. (57)	15,377	2,522	16.4%	15.8%	12.3%	20.0%
	Southwest Utah HD	116,150	14,449	12.4%	13.4%	11.3%	15.7%
42	Cedar City (60)	22,401	3,015	13.5%	14.2%	9.7%	20.2%
57	Other Southwest District (61)	15,384	3,126	20.3%	21.5%	15.6%	29.0%
13	Other Washington County (59)	32,503	2,275	7.0%	7.0%	4.3%	11.1%
46	St. George (58)	45,862	5,962	13.0%	15.7%	12.1%	20.1%
19	**Summit County HD (51)**	24,525	2,222	9.1%	8.7%	6.8%	11.0%
51	**Tooele County HD (40)**	32,458	5,735	17.7%	17.8%	15.4%	20.5%
53	**TriCounty HD (53)**	28,023	5,523	19.7%	19.4%	17.2%	21.9%
	Utah County HD	278,832	16,005	5.7%	5.8%	4.8%	7.0%
15	American Fork/Alpine (42)	26,819	2,261	8.4%	7.3%	4.3%	12.1%
3	East Orem (46)	14,955	307	2.1%	3.2%	0.9%	10.7%
7	Lehi/Cedar Valley (41)	18,752	767	4.1%	5.2%	2.3%	11.2%
18	North Orem (44)	25,965	2,430	9.4%	8.3%	4.8%	14.0%
6	Pleasant Grove/Lindon (43)	24,636	1,109	4.5%	4.3%	2.0%	9.0%
1	Provo/BYU (47)	39,401	303	0.8%	0.7%	0.1%	3.2%
17	Provo South (48)	48,138	1,781	3.7%	7.8%	3.9%	15.1%
31	Springville/Spanish Fork (49)	41,036	4,695	11.4%	11.6%	8.4%	15.9%
4	Utah Co. South (50)	17,363	719	4.1%	3.9%	1.9%	8.1%
2	West Orem (45)	21,774	682	3.1%	2.4%	0.9%	6.2%
25	**Wasatch County HD (52)**	12,514	1,284	10.3%	9.8%	7.9%	12.2%
	Weber-Morgan HD	148,702	20,908	14.1%	14.1%	12.2%	16.1%
56	Ben Lomond (5)	33,215	6,334	19.1%	20.4%	16.2%	25.4%
52	Downtown Ogden (7)	21,684	3,999	18.4%	18.1%	12.4%	25.8%
22	Morgan/East Weber Co. (6)	24,131	2,150	8.9%	9.0%	5.7%	13.9%
44	Riverdale (10)	15,522	2,426	15.6%	15.0%	10.6%	20.7%
36	Roy/Hooper (9)	27,898	3,710	13.3%	12.8%	9.3%	17.4%
37	South Ogden (8)	26,255	3,235	12.3%	13.2%	8.2%	20.6%

*State rank is by 61 small areas for age-adjusted rate; 1 is always the lowest rate in the state and 61 is always the highest rate in the state.

Figure 14.2: Current Cigarette Smoking by Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)

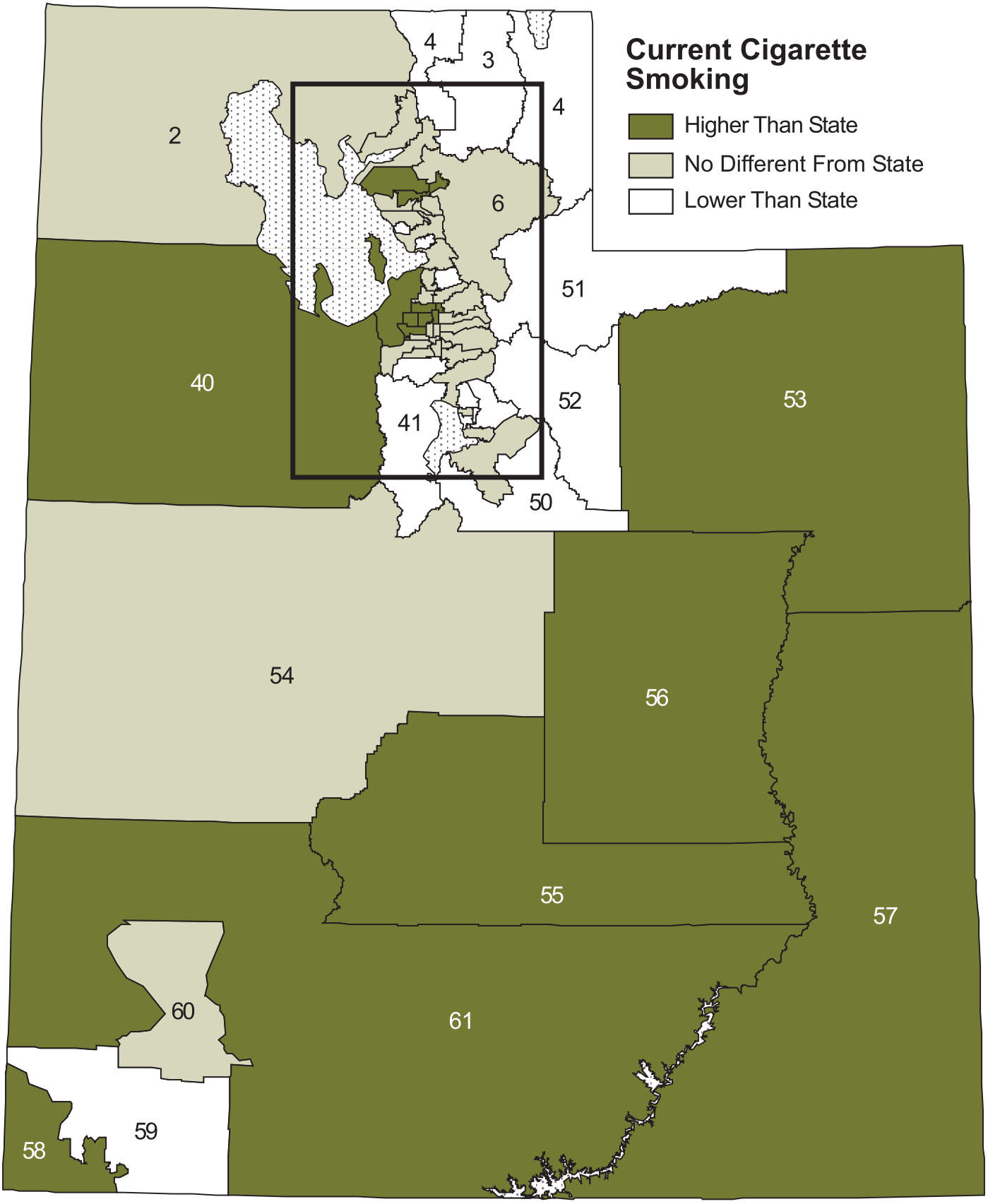
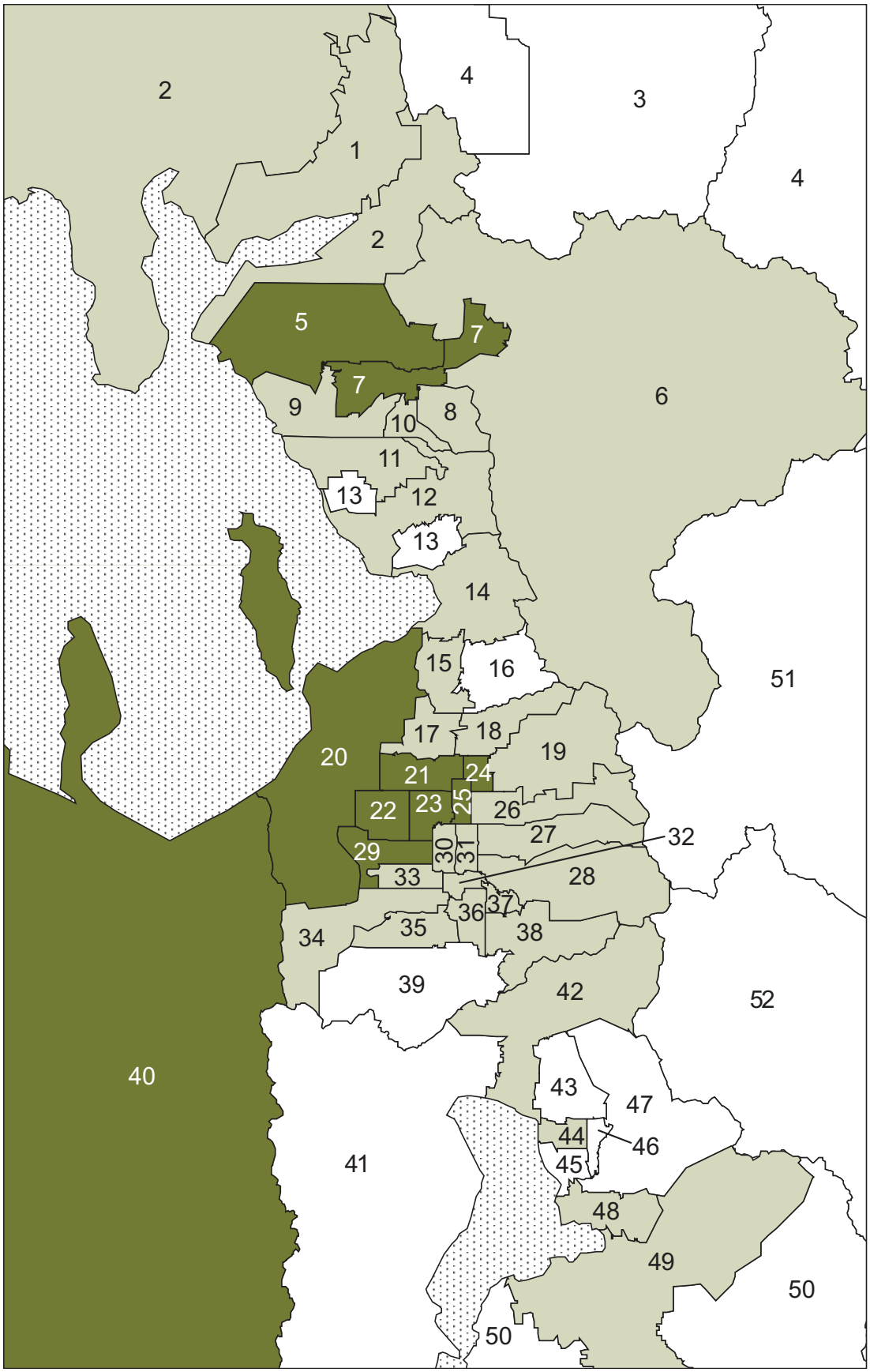


Figure 14.3: Current Cigarette Smoking by Small Area, Wasatch Front, Aged 18+, 2001–2005 (Age-adjusted)



15. Binge Drinking

Measure Definition: *"Considering all types of alcoholic beverages, how many times during the past 30 days did you have 5 or more drinks on an occasion?"* ***[One or more times]***

Why is binge drinking important to public health?

Binge drinking is defined as consuming five or more alcoholic beverages on one occasion. A drink is defined as one can of beer (12 ounces), one glass of wine (5 ounces), one can or bottle of wine cooler, one cocktail, or one shot liquor (1.5 ounces of 80-proof distilled spirits).

Binge drinking is an indicator of potentially serious alcohol abuse and is related to driving under the influence of alcohol. It is a national problem, especially among males and young adults. Alcohol abuse is strongly associated with injuries (both intended and unintended), violence, chronic liver disease, fetal alcohol syndrome, and the risk of other acute and chronic health problems. Binge drinking among women of childbearing age is problematic because of the risk for prenatal alcohol exposure. Birth defects associated with prenatal alcohol exposure can occur during the first six to eight weeks of pregnancy, before a women knows that she is pregnant. According to Centers for Disease Control and Prevention (CDC) estimates, approximately 76,000 deaths in the U.S. in 2001 were attributable to excessive alcohol use.

Risk factors for binge drinking

Generally, younger adults and males are at higher risk for binge drinking than older adults and females. Additionally, adults with less education tend to be at higher risk for binge drinking. Just over 40% of binge drinkers report that they are current cigarette smokers, thus compounding their risk for adverse health outcomes.

Binge drinking in Utah

The age-adjusted aggregated state binge drinking rate was significantly lower than the U.S. rate (8.9% versus 15.2%). This means that approximately 158,000 adult Utahns engaged in binge drinking in 2003. The prevalence of binge drinking varied by local health district and ranged from a low of 3.5% to a high of 17.3%. Four local health districts had age-adjusted rates higher than the state rate, three local health districts had rates lower than the state rate, and five local health districts had rates similar to the state rate. Summit County (17.3%) had the highest prevalence for binge drinking and Utah County (3.5%) had the lowest prevalence.

In terms of small areas, 11 showed age-adjusted binge drinking rates that were higher than the state rate and 10 showed rates that were lower than the state rate. The small areas with binge drinking rates higher than the state rate were Avenues, Cottonwood, Downtown Salt Lake, Foothill/U of U, Kearns, South Salt Lake, West Valley East, Carbon/Emery Co., Other Southwest District, Summit County, and Tooele County. Seven of these small areas are in the Salt Lake Valley health district. The small areas with binge drinking rates lower than the state rate were Other Cache/Rich Counties, Logan, Bountiful, American Fork/Alpine, East Orem, Provo/BYU, West Orem, Provo South, Utah County South, and Downtown Ogden. Six of these small areas are in the Utah County health district.

Overall, the small area with the highest rate of binge drinking was South Salt Lake with a rate of 22.9% and the small area with the lowest rate was East Orem with a rate of 0.9%.

Utah Objective: No objective listed.
HP2010 Objective 26-11c: Reduce the proportion of adults aged 18 years and older engaging in binge drinking of alcoholic beverages to 6.0%.

Binge drinking in Utah (continued)

Adults who did not graduate from high school reported the highest rate of binge drinking (17.5%) compared to all other education categories; college graduates reported the lowest rate of binge drinking (6.3%). A higher percentage of Hispanic adults reported binge drinking (15.7%) compared to White, non-Hispanic adults (8.8%). The rate of binge drinking for non-White, non-Hispanic adults was 13.3%.

Figure 15.A: Binge Drinking by Ethnicity, Utah Adults, 2001-2005

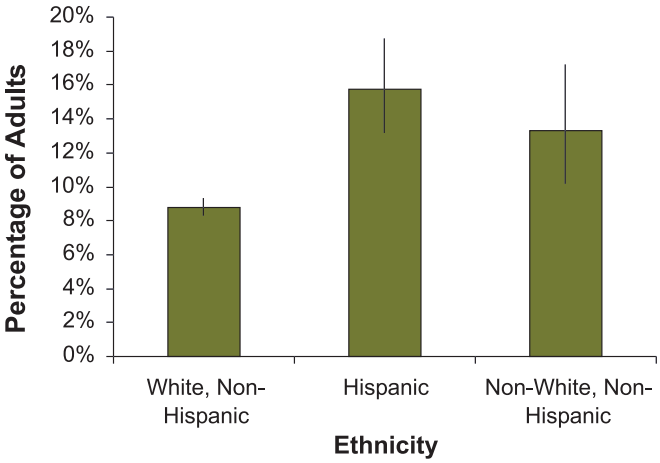
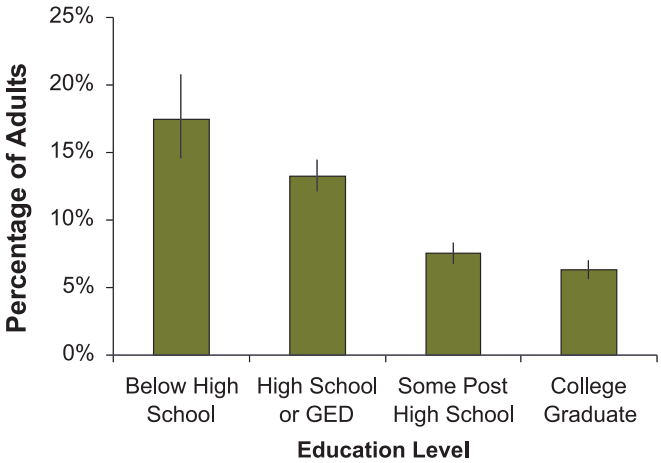


Figure 15.B: Binge Drinking by Education, Utah Adults, 2001-2005

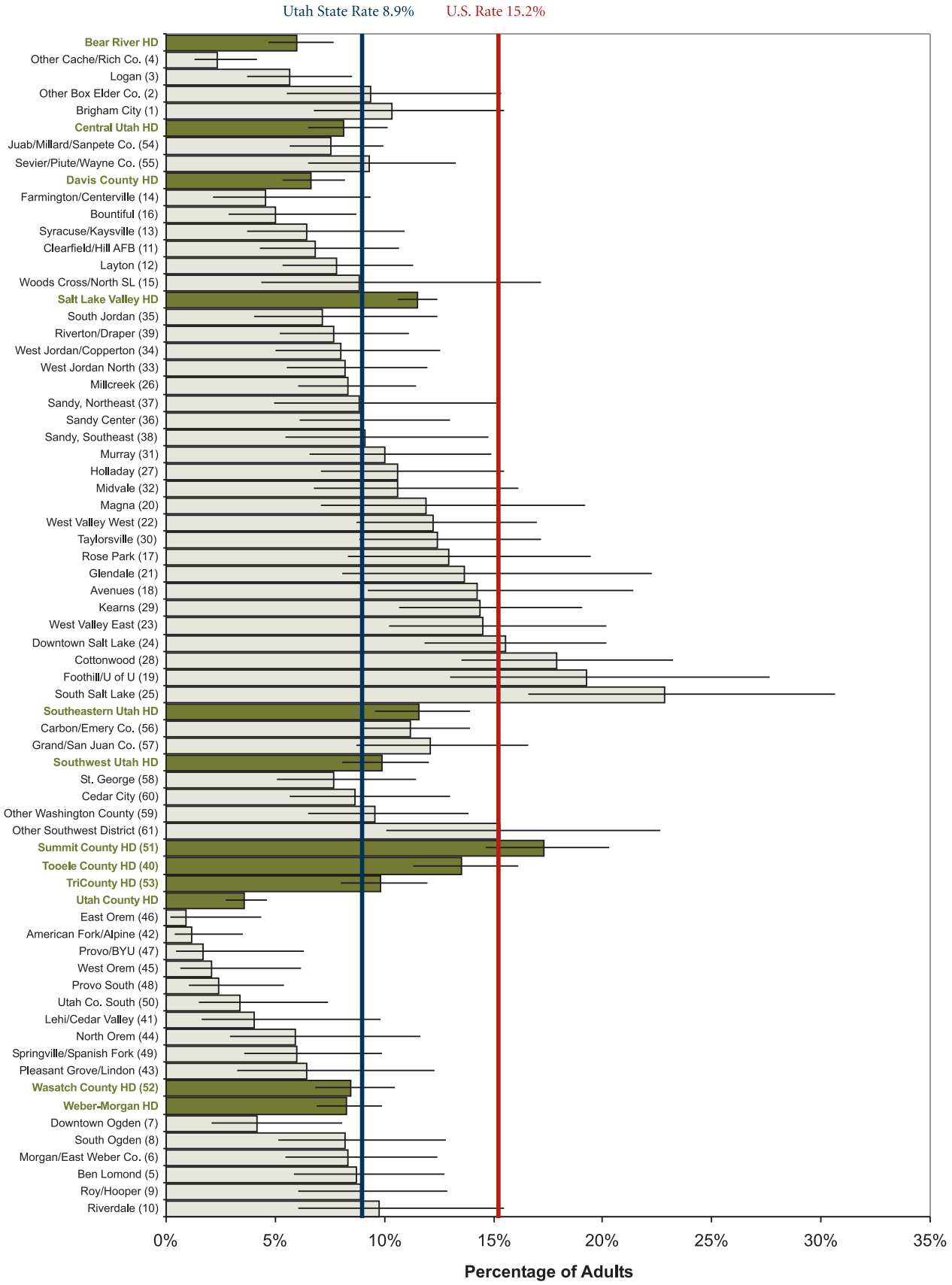


Prevention/Resources

Within Utah, there is a statewide service designed to provide referral and educational resources with respect to substance abuse. To speak with the referral service call toll-free 1-866-633-HOPE (4673). Within the Salt Lake City area, call 366-HOPE (4673). The Utah Department of Human Services, Division of Substance Abuse and Mental Health can be contacted at 801-538-3939 or accessed on the Internet at http://www.dsamh.utah.gov. Nationally, the United States Division of Health and Human Services (HHS) Substance Abuse and Mental Health Services Administration (SAMHSA) can be accessed by calling the toll-free referral helpline at 1-800-662-HELP (4357). A treatment facility locator is also available on the Internet at http://findtreatment.samhsa.gov/.

15. Binge Drinking

Figure 15.1: Percentage of Adults Reporting Binge Drinking by Local Health District and Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)



15. Binge Drinking

Table 15: Binge Drinking by Health District, Small Area, Utah, and U.S., 2001-2005

State Rank*	State, Health District, or Small Area	2003 Population 18+	Number of Adults Reporting Binge Drinking	Crude Rate	Age-adjusted Rate	95% Confidence Interval Lower	95% Confidence Interval Upper
	U.S.	217,803,051	32,757,579	15.0%	15.2%	15.1%	15.3%
	State of Utah	1,657,454	157,458	9.5%	8.9%	8.4%	9.4%
	Bear River HD	98,027	6,685	6.8%	6.0%	4.7%	7.7%
42	Brigham City (1)	14,566	1,910	13.1%	10.4%	6.8%	15.5%
12	Logan (3)	45,904	3,020	6.6%	5.6%	3.7%	8.5%
37	Other Box Elder Co. (2)	14,636	1,327	9.1%	9.3%	5.5%	15.3%
5	Other Cache/Rich Co. (4)	22,921	621	2.7%	2.4%	1.3%	4.2%
	Central Utah HD	47,558	3,947	8.3%	8.1%	6.5%	10.2%
19	Juab/Millard/Sanpete Co. (54)	31,637	2,499	7.9%	7.5%	5.7%	10.0%
36	Sevier/Piute/Wayne Co. (55)	15,921	1,434	9.0%	9.3%	6.5%	13.2%
	Davis County HD	175,027	12,742	7.3%	6.6%	5.3%	8.2%
11	Bountiful (16)	33,318	1,829	5.5%	5.0%	2.9%	8.7%
17	Clearfield/Hill AFB (11)	37,329	2,968	8.0%	6.8%	4.3%	10.7%
10	Farmington/Centerville (14)	19,034	839	4.4%	4.5%	2.1%	9.4%
22	Layton (12)	46,815	4,363	9.3%	7.8%	5.3%	11.3%
15	Syracuse/Kaysville (13)	24,542	1,723	7.0%	6.4%	3.7%	10.9%
32	Woods Cross/North SL (15)	13,989	1,223	8.7%	8.8%	4.3%	17.2%
	Salt Lake Valley HD	658,810	81,495	12.4%	11.5%	10.6%	12.4%
53	Avenues (18)	18,959	2,698	14.2%	14.3%	9.2%	21.4%
59	Cottonwood (28)	33,297	5,737	17.2%	17.9%	13.5%	23.2%
57	Downtown Salt Lake (24)	42,808	7,658	17.9%	15.5%	11.8%	20.2%
60	Foothill/U of U (19)	17,778	3,198	18.0%	19.3%	13.0%	27.6%
52	Glendale (21)	18,642	2,953	15.8%	13.7%	8.1%	22.2%
43	Holladay (27)	35,956	3,322	9.2%	10.6%	7.1%	15.5%
54	Kearns (29)	42,995	6,733	15.7%	14.3%	10.7%	19.0%
46	Magna (20)	15,623	2,073	13.3%	11.9%	7.1%	19.2%
44	Midvale (32)	21,672	2,815	13.0%	10.6%	6.8%	16.1%
27	Millcreek (26)	44,008	3,587	8.2%	8.4%	6.0%	11.5%
41	Murray (31)	24,072	2,516	10.5%	10.0%	6.6%	14.9%
20	Riverton/Draper (39)	41,391	3,949	9.5%	7.7%	5.2%	11.1%
50	Rose Park (17)	22,639	3,190	14.1%	12.9%	8.4%	19.5%
34	Sandy Center (36)	36,106	4,123	11.4%	9.0%	6.1%	13.0%
31	Sandy, Northeast (37)	18,245	1,467	8.0%	8.8%	5.0%	15.3%
35	Sandy, Southeast (38)	20,781	1,781	8.6%	9.1%	5.5%	14.8%
18	South Jordan (35)	20,931	1,746	8.3%	7.1%	4.0%	12.4%
61	South Salt Lake (25)	18,456	3,990	21.6%	22.9%	16.6%	30.7%
49	Taylorsville (30)	27,372	3,654	13.4%	12.4%	8.9%	17.2%
24	West Jordan North (33)	30,391	2,753	9.1%	8.2%	5.5%	12.0%
23	West Jordan/Copperton (34)	26,360	2,291	8.7%	8.0%	5.0%	12.6%
55	West Valley East (23)	35,527	5,244	14.8%	14.5%	10.2%	20.2%
48	West Valley West (22)	44,794	6,692	14.9%	12.2%	8.7%	17.0%
	Southeastern Utah HD	36,828	4,217	11.5%	11.5%	9.6%	13.9%
45	Carbon/Emery Co. (56)	21,451	2,377	11.1%	11.2%	9.0%	13.9%
47	Grand/San Juan Co. (57)	15,377	1,868	12.2%	12.1%	8.7%	16.6%
	Southwest Utah HD	116,150	10,988	9.5%	9.9%	8.1%	12.0%
29	Cedar City (60)	22,401	2,332	10.4%	8.6%	5.6%	13.0%
56	Other Southwest District (61)	15,384	2,045	13.3%	15.3%	10.1%	22.6%
38	Other Washington County (59)	32,503	3,088	9.5%	9.6%	6.5%	13.9%
21	St. George (58)	45,862	3,366	7.3%	7.7%	5.1%	11.4%
58	**Summit County HD (51)**	24,525	4,486	18.3%	17.3%	14.6%	20.3%
51	**Tooele County HD (40)**	32,458	4,603	14.2%	13.5%	11.3%	16.1%
40	**TriCounty HD (53)**	28,023	2,769	9.9%	9.8%	8.0%	12.0%
	Utah County HD	278,832	10,289	3.7%	3.5%	2.7%	4.6%
2	American Fork/Alpine (42)	26,819	351	1.3%	1.1%	0.4%	3.5%
1	East Orem (46)	14,955	132	0.9%	0.9%	0.2%	4.4%
8	Lehi/Cedar Valley (41)	18,752	729	3.9%	4.1%	1.6%	9.8%
13	North Orem (44)	25,965	1,615	6.2%	5.9%	2.9%	11.6%
16	Pleasant Grove/Lindon (43)	24,636	1,594	6.5%	6.4%	3.3%	12.3%
3	Provo/BYU (47)	39,401	567	1.4%	1.7%	0.4%	6.3%
6	Provo South (48)	48,138	1,122	2.3%	2.4%	1.1%	5.4%
14	Springville/Spanish Fork (49)	41,036	2,474	6.0%	6.0%	3.6%	9.9%
7	Utah Co. South (50)	17,363	764	4.4%	3.4%	1.5%	7.4%
4	West Orem (45)	21,774	729	3.4%	2.1%	0.7%	6.2%
28	**Wasatch County HD (52)**	12,514	1,139	9.1%	8.5%	6.8%	10.5%
	Weber-Morgan HD	148,702	12,878	8.7%	8.2%	6.9%	9.9%
30	Ben Lomond (5)	33,215	3,245	9.8%	8.7%	5.9%	12.8%
9	Downtown Ogden (7)	21,684	883	4.1%	4.2%	2.1%	8.1%
26	Morgan/East Weber Co. (6)	24,131	1,998	8.3%	8.3%	5.5%	12.5%
39	Riverdale (10)	15,522	1,577	10.2%	9.8%	6.0%	15.5%
33	Roy/Hooper (9)	27,898	2,873	10.3%	8.9%	6.1%	12.9%
25	South Ogden (8)	26,255	2,158	8.2%	8.2%	5.1%	12.8%

*State rank is by 61 small areas for age-adjusted rate; 1 is always the lowest rate in the state and 61 is always the highest rate in the state.

Figure 15.2: Binge Drinking by Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)

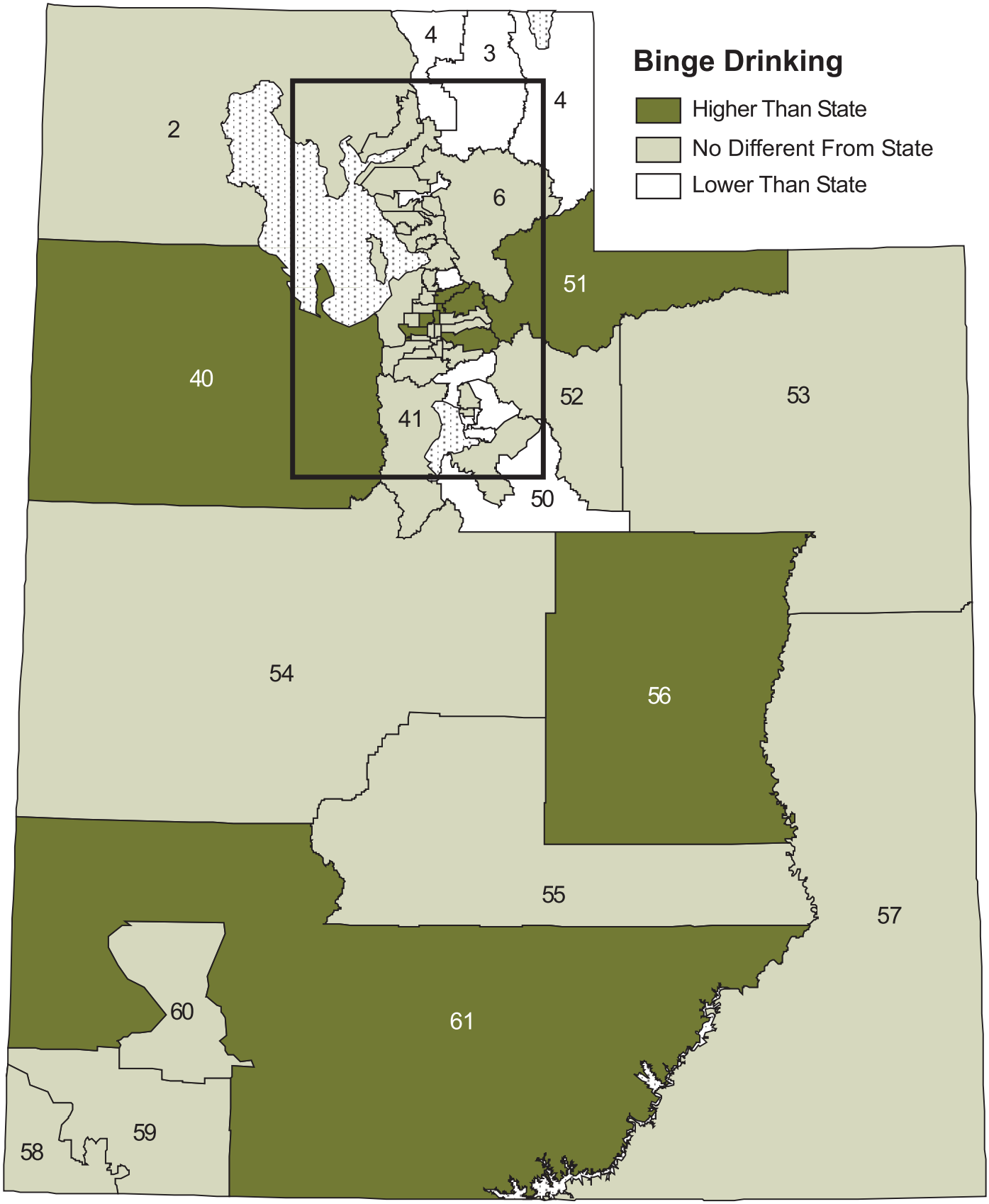
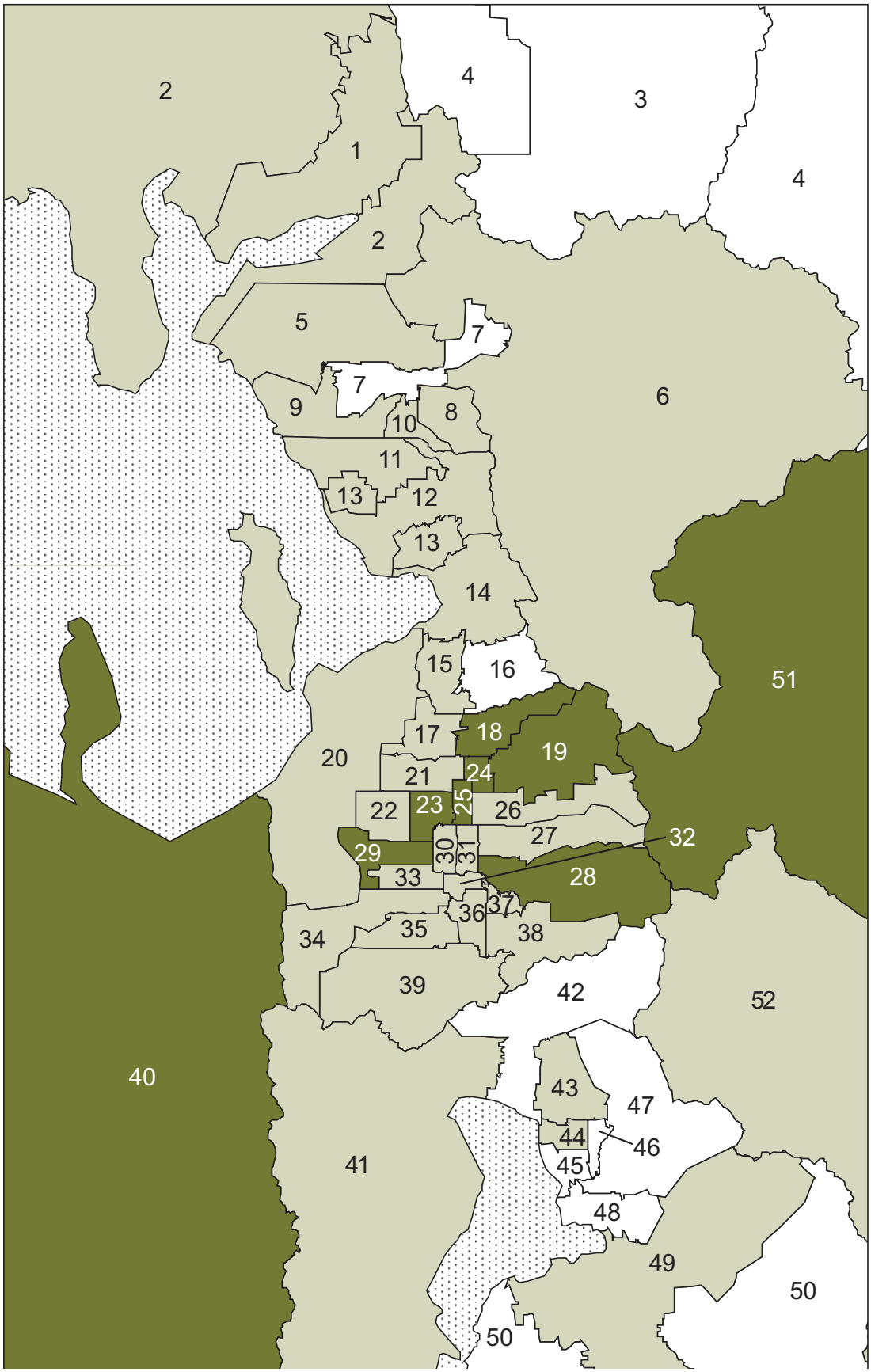


Figure 15.3: Binge Drinking by Small Area, Wasatch Front Adults Aged 18+, 2001–2005 (Age-adjusted)



16. Chronic Drinking

Measure Definition: *"A drink of alcohol is 1 can or bottle of beer, 1 glass of wine, 1 can or bottle of wine cooler, 1 cocktail, or 1 shot of liquor. During the past 30 days, how often have you had at least one drink of any alcoholic beverage? On the days when you drank, about how many drinks did you drink on the average?"* ***[One or more drinks per day on average for women and two or more drinks per day on average for men]***

Why is chronic drinking important to public health?

Chronic drinking is defined as consuming one or more drinks per day on average for women and two or more drinks per day on average for men. The lower cut-point is used for women because women are generally of smaller stature than men, and absorb and metabolize alcohol differently than men. Chronic drinking is associated with a number of chronic health conditions including chronic liver disease and cirrhosis, gastrointestinal cancers, heart disease, stroke, pancreatitis, depression, and a variety of social problems.[33]

Risk factors for chronic drinking

Generally, adults with an income less than $20,000, men, and Hispanic adults are more likely to report chronic drinking. In Utah, between 2001–2005, 4.6% of adults earning between $20,000 and $49,999 reported chronic drinking compared to 5.6% of adults earning less than $20,000 per year and 4.1% of adults earning $50,000 or more per year or more. More men reported chronic drinking (5.0%) compared to women (3.3%). The prevalence of chronic drinking among White, non-Hispanic adults was 4.1% compared to 4.8% for Hispanic adults and 4.4 for non-White, non-Hispanic adults.

Some chronic drinkers are also binge drinkers and/or cigarette smokers. In Utah between 2001–2005, 73.3% of chronic drinkers were also binge drinkers. In that same period, 42.1% of chronic drinkers also were current cigarette smokers, thus compounding their risk for adverse health outcomes.

Chronic drinking in Utah

The state's chronic drinking rate was significantly lower than the U.S. rate (2.9% versus 7.7%). More than 48,000 adult Utahns engaged in chronic drinking in 2003. The prevalence of chronic drinking varied by local health districts and ranged from a low of 0.7% (age-adjusted) to a high of 5.5%. Three local health districts had rates higher than the state rate, three local health districts had rates lower than the state rate, and six local health districts had rates similar to the state rate. Summit County (5.5%) had the highest prevalence of chronic drinking and Utah County (0.7%) had the lowest prevalence. In terms of small areas, there were eight small areas with chronic drinking rates higher than the state rate and seven small areas with chronic drinking rates lower than the state rate. The small areas with chronic drinking rates higher than the state rate were Avenues, Cottonwood, Foothill/U of U, Glendale, Kearns, South Salt Lake, Other Southwest District, and Summit County. Six of these small areas are in the Salt Lake Valley health district. The small areas with chronic drinking rates lower than the state rate were Other Cache/Rich, Farmington/Centerville, American Fork/Alpine, Lehi/Cedar Valley, Provo/BYU, Provo South, and Utah County South.

Overall, the small area with the highest rate of chronic drinking was South Salt Lake with a rate of 7.7% and the small area with the lowest rate was Utah County South with a rate of 0.0%.

Utah Objective: No objective listed.
HP2010 Objective (related) 26-13: Reduce the proportion of adults who exceed guidelines for low-risk drinking to 50%.

Chronic drinking in Utah (continued)

Figure 16.A: Chronic Drinking by Education, Utah Adults, 2001-2005

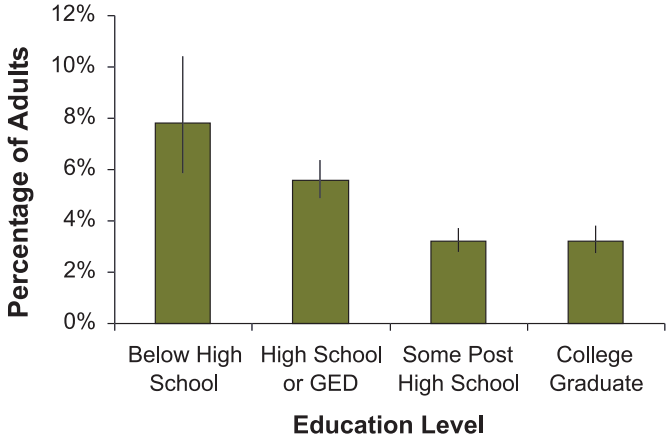
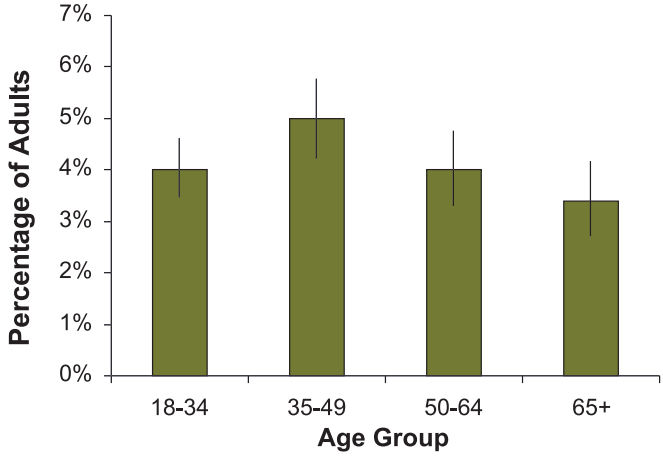


Figure 16.B: Chronic Drinking by Age, Utah Adults, 2001-2005

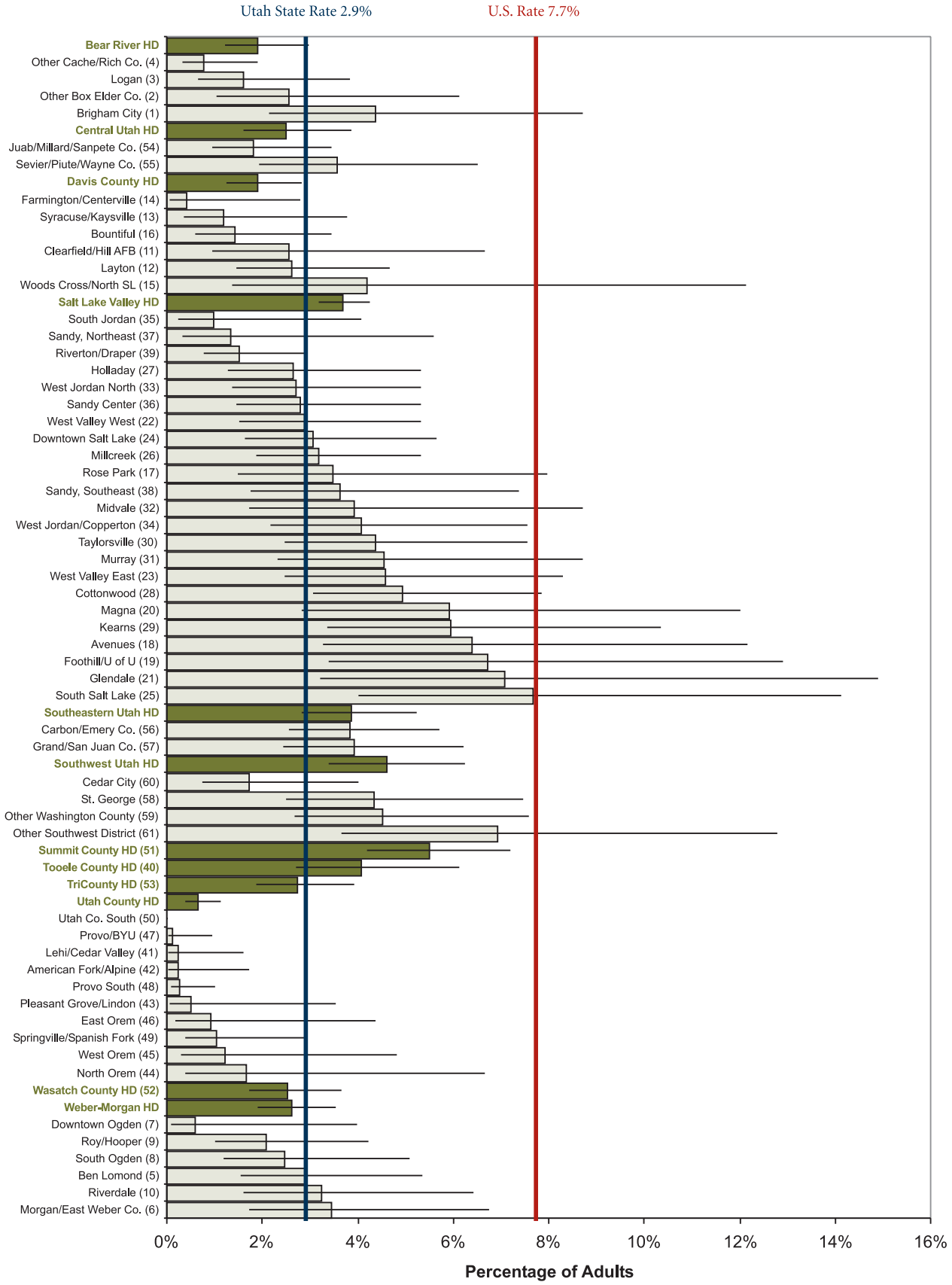


Prevention/Resources

Within Utah, there is a statewide service designed to provide referral and educational resources with respect to substance abuse. To speak with the referral service call toll-free 1-866-633-HOPE (4673). Within the Salt Lake City area, call 366-HOPE (4673). The Utah Department of Human Services, Division of Substance Abuse and Mental Health can be contacted at 801-538-3939 or accessed on the Internet at http://www.dsamh.utah.gov. Nationally, the United States Division of Health and Human Services (HHS) Substance Abuse and Mental Health Services Administration (SAMHSA) can be accessed by calling the toll-free referral helpline at 1-800-662-HELP (4357). A treatment facility locator is also available on the Internet at http://findtreatment.samhsa.gov/.

16. Chronic Drinking

Figure 16.1: Percentage of Adults Reporting Chronic Drinking by Local Health District and Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)



16. Chronic Drinking

Table 16: Chronic Drinking by Health District, Small Area, Utah, and U.S., 2001-2005

State Rank*	State, Health District, or Small Area	2003 Population 18+	Number of Adults Reporting Chronic Drinking	Crude Rate	Age-adjusted Rate	95% Confidence Interval Lower	95% Confidence Interval Upper
	U.S.	217,803,051	16,814,396	7.7%	7.7%	7.6%	7.8%
	State of Utah	1,657,454	48,729	2.9%	2.9%	2.6%	3.2%
	Bear River HD	98,027	1,921	2.0%	1.9%	1.2%	3.0%
49	Brigham City (1)	14,566	871	6.0%	4.4%	2.2%	8.7%
18	Logan (3)	45,904	523	1.1%	1.6%	0.7%	3.8%
26	Other Box Elder Co. (2)	14,636	362	2.5%	2.6%	1.0%	6.1%
9	Other Cache/Rich Co. (4)	22,921	174	0.8%	0.8%	0.3%	1.9%
	Central Utah HD	47,558	1,194	2.5%	2.5%	1.6%	3.9%
21	Juab/Millard/Sanpete Co. (54)	31,637	557	1.8%	1.8%	1.0%	3.5%
39	Sevier/Piute/Wayne Co. (55)	15,921	611	3.8%	3.6%	1.9%	6.5%
	Davis County HD	175,027	3,676	2.1%	1.9%	1.3%	2.8%
16	Bountiful (16)	33,318	450	1.4%	1.4%	0.6%	3.5%
25	Clearfield/Hill AFB (11)	37,329	825	2.2%	2.6%	1.0%	6.7%
6	Farmington/Centerville (14)	19,034	99	0.5%	0.4%	0.1%	2.8%
27	Layton (12)	46,815	1,503	3.2%	2.6%	1.5%	4.7%
13	Syracuse/Kaysville (13)	24,542	324	1.3%	1.2%	0.4%	3.8%
46	Woods Cross/North SL (15)	13,989	585	4.2%	4.2%	1.4%	12.1%
	Salt Lake Valley HD	658,810	25,035	3.8%	3.7%	3.2%	4.3%
57	Avenues (18)	18,959	1,170	6.2%	6.4%	3.3%	12.2%
53	Cottonwood (28)	33,297	1,858	5.6%	4.9%	3.1%	7.8%
34	Downtown Salt Lake (24)	42,808	1,687	3.9%	3.1%	1.6%	5.7%
58	Foothill/U of U (19)	17,778	1,260	7.1%	6.7%	3.4%	12.9%
60	Glendale (21)	18,642	1,236	6.6%	7.1%	3.2%	14.9%
28	Holladay (27)	35,956	834	2.3%	2.6%	1.3%	5.3%
56	Kearns (29)	42,995	2,335	5.4%	6.0%	3.4%	10.4%
55	Magna (20)	15,623	987	6.3%	5.9%	2.8%	12.0%
43	Midvale (32)	21,672	962	4.4%	3.9%	1.7%	8.7%
35	Millcreek (26)	44,008	1,197	2.7%	3.2%	1.9%	5.3%
51	Murray (31)	24,072	1,160	4.8%	4.6%	2.3%	8.7%
17	Riverton/Draper (39)	41,391	774	1.9%	1.5%	0.8%	2.9%
38	Rose Park (17)	22,639	881	3.9%	3.5%	1.5%	8.0%
31	Sandy Center (36)	36,106	1,105	3.1%	2.8%	1.5%	5.3%
15	Sandy, Northeast (37)	18,245	170	0.9%	1.3%	0.3%	5.6%
40	Sandy, Southeast (38)	20,781	727	3.5%	3.6%	1.8%	7.4%
11	South Jordan (35)	20,931	211	1.0%	1.0%	0.2%	4.1%
61	South Salt Lake (25)	18,456	1,312	7.1%	7.7%	4.0%	14.1%
48	Taylorsville (30)	27,372	1,213	4.4%	4.4%	2.5%	7.6%
29	West Jordan North (33)	30,391	769	2.5%	2.7%	1.4%	5.3%
44	West Jordan/Copperton (34)	26,360	920	3.5%	4.1%	2.2%	7.5%
52	West Valley East (23)	35,527	1,602	4.5%	4.6%	2.5%	8.3%
32	West Valley West (22)	44,794	1,353	3.0%	2.9%	1.5%	5.3%
	Southeastern Utah HD	36,828	1,388	3.8%	3.9%	2.8%	5.2%
41	Carbon/Emery Co. (56)	21,451	813	3.8%	3.8%	2.6%	5.7%
42	Grand/San Juan Co. (57)	15,377	577	3.8%	3.9%	2.5%	6.2%
	Southwest Utah HD	116,150	4,913	4.2%	4.6%	3.4%	6.2%
20	Cedar City (60)	22,401	547	2.4%	1.7%	0.7%	4.0%
59	Other Southwest District (61)	15,384	1,049	6.8%	6.9%	3.7%	12.8%
50	Other Washington County (59)	32,503	1,437	4.4%	4.5%	2.7%	7.6%
47	St. George (58)	45,862	1,816	4.0%	4.3%	2.5%	7.5%
54	**Summit County HD (51)**	24,525	1,386	5.7%	5.5%	4.2%	7.2%
45	**Tooele County HD (40)**	32,458	1,285	4.0%	4.1%	2.7%	6.1%
30	**TriCounty HD (53)**	28,023	790	2.8%	2.7%	1.9%	3.9%
	Utah County HD	278,832	2,565	0.9%	0.7%	0.4%	1.2%
4	American Fork/Alpine (42)	26,819	62	0.2%	0.2%	0.0%	1.7%
10	East Orem (46)	14,955	132	0.9%	0.9%	0.2%	4.4%
3	Lehi/Cedar Valley (41)	18,752	34	0.2%	0.2%	0.0%	1.6%
19	North Orem (44)	25,965	428	1.7%	1.7%	0.4%	6.7%
7	Pleasant Grove/Lindon (43)	24,636	145	0.6%	0.5%	0.1%	3.5%
2	Provo/BYU (47)	39,401	181	0.5%	0.1%	0.0%	1.0%
5	Provo South (48)	48,138	539	1.1%	0.3%	0.1%	1.0%
12	Springville/Spanish Fork (49)	41,036	472	1.2%	1.1%	0.4%	2.9%
1	Utah Co. South (50)	17,363	-	0.0%	0.0%	.	.
14	West Orem (45)	21,774	440	2.0%	1.2%	0.3%	4.8%
24	**Wasatch County HD (52)**	12,514	325	2.6%	2.5%	1.7%	3.7%
	Weber-Morgan HD	148,702	3,955	2.7%	2.6%	1.9%	3.5%
33	Ben Lomond (5)	33,215	996	3.0%	2.9%	1.6%	5.4%
8	Downtown Ogden (7)	21,684	115	0.5%	0.6%	0.1%	4.0%
37	Morgan/East Weber Co. (6)	24,131	888	3.7%	3.4%	1.7%	6.8%
36	Riverdale (10)	15,522	489	3.2%	3.2%	1.6%	6.4%
22	Roy/Hooper (9)	27,898	725	2.6%	2.1%	1.0%	4.2%
23	South Ogden (8)	26,255	651	2.5%	2.5%	1.2%	5.1%

*State rank is by 61 small areas for age-adjusted rate; 1 is always the lowest rate in the state and 61 is always the highest rate in the state.

Figure 16.2: Chronic Drinking by Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)

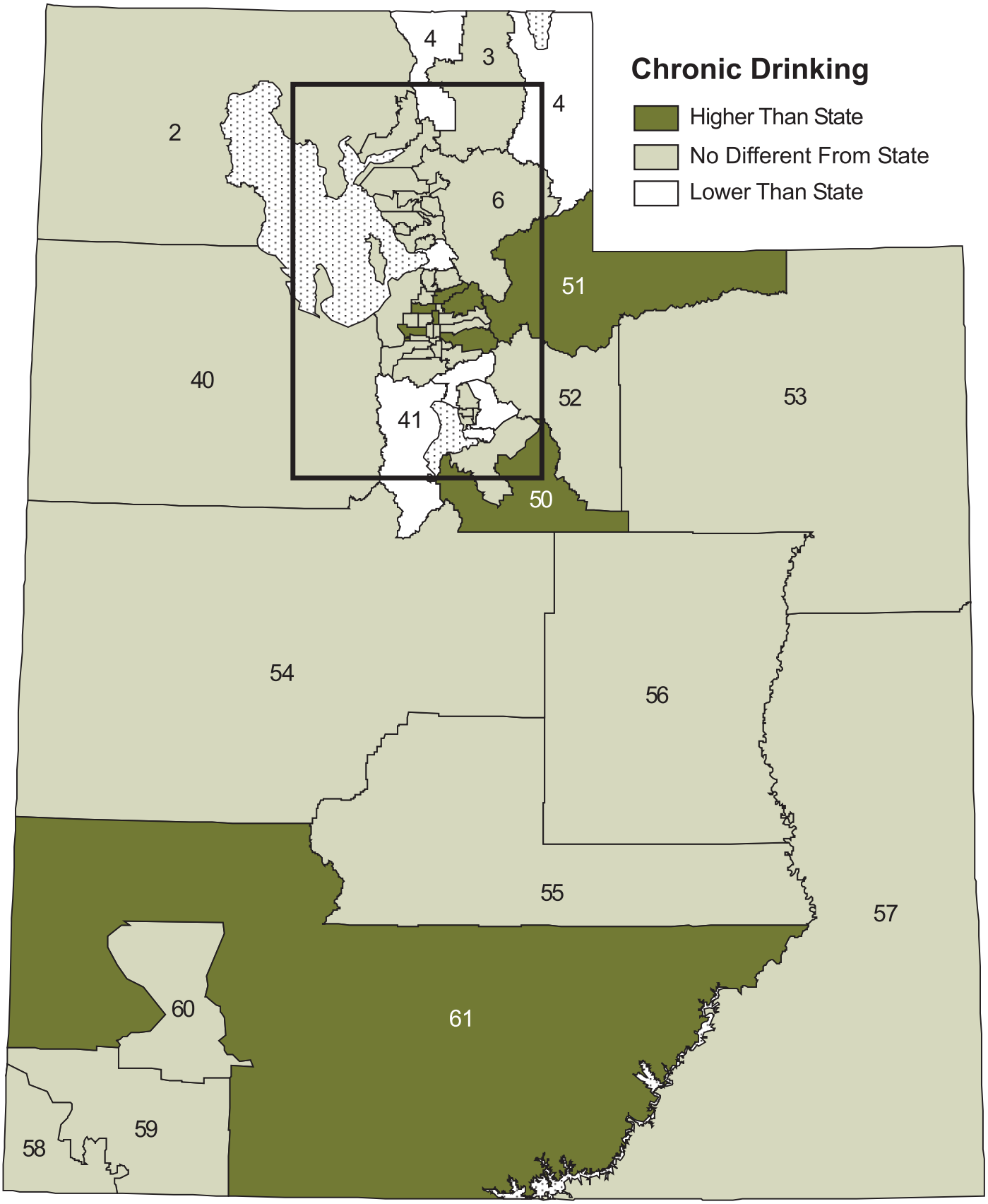
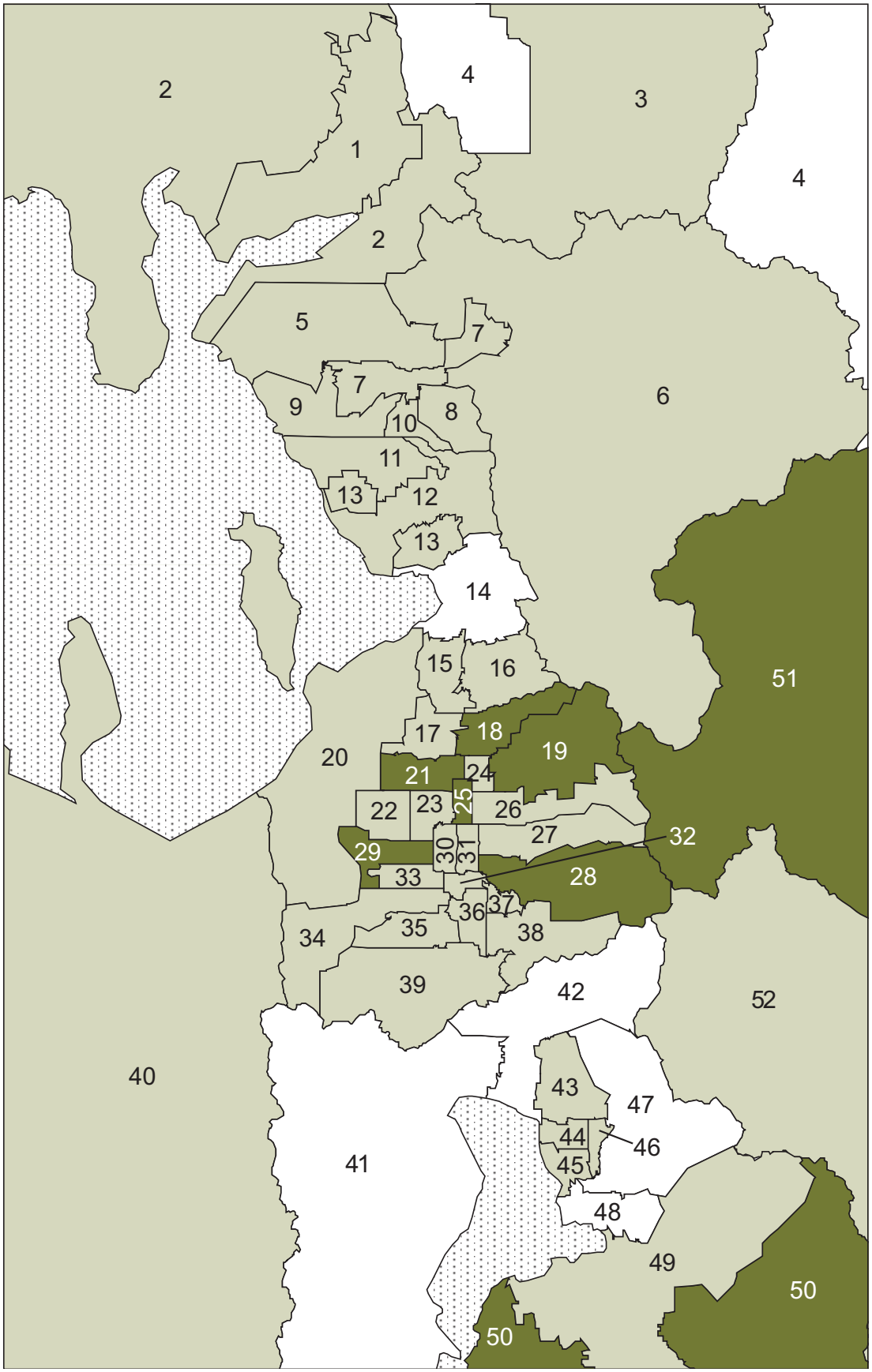


Figure 16.3: Chronic Drinking by Small Area, Wasatch Front Adults Aged 18+, 2001–2005 (Age-adjusted)



17. Physical Inactivity

Measure Definition: *"During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?" [**Yes**]*

Why is physical inactivity important to public health?

Physical inactivity is a modifiable risk factor for cardiovascular disease and a growing variety of other chronic diseases, including diabetes, cancer, obesity, hypertension, bone and joint diseases, and depression.[9,34] One study found that over 13% of total medical expenditures for cardiovascular disease was attributable to physical inactivity.[35] Even small increases in physical activity have been shown to significantly reduce the risk of morbidity and mortality from chronic disease.[36]

For this report, physical inactivity was defined as the percentage of adults aged 18 and over who reported getting no leisure-time physical activity in the past month.

Risk factors associated with physical inactivity

Workplaces are increasingly automated, many jobs are sedentary, and cars are used for short trips. The number of trips the average American adult takes on foot each year decreased 42% between 1975 and 1995.[37,38] Individuals who live in both rural and urban areas are at risk for physical inactivity because of community design. Most communities are designed to accommodate cars and lack walkways and bikeways. People living in compact communities are more likely to walk in their leisure time than those in sprawling communities. In addition, walking for utilitarian purposes, such as to reach a destination like school, work, or shopping, is more likely in compact, mixed-use communities.[38,39]

Physical inactivity in Utah

Nearly one in five (18.8%) adult Utahns reported physical inactivity based on data from 2001–2005. This was slightly better than the U.S. rate of nearly one in four (24.9%). Central Utah (22.5%), Southeastern Utah (23.8%), Tooele County (24.1%), and TriCounty health districts (25.6%) all had higher age-adjusted rates of physical inactivity than the state rate. Only Summit County health district (14.1%) had a rate of physical inactivity that was significantly lower than the state rate. Only Summit County health district met the Utah target of no more than 15% of adults being physically inactive.

Eighteen small areas had age-adjusted rates that met the Utah target of no more than 15% of adults who engage in no leisure-time physical activity. Woods Cross/North SL had the lowest rate of 8.7%, and Glendale had the highest rate of 31.2%. In addition to Glendale, Magna, Rose Park, Carbon/Emery Co., TriCounty health district, Utah Co. South, and Downtown Ogden had reported rates of physical inactivity greater than one fourth of their populations. Fewer than one in ten residents of Woods Cross/North SL and Foothill/U of U reported physical inactivity.

Physical inactivity increases as adults age. Utahns aged 65 and older had twice the rate of reported physical inactivity as Utahns aged 18–24 (Figure 17.A). White, non-Hispanic Utahns had lower rates of physical inactivity than Hispanic and non-White, non-Hispanic Utahns (BRFSS 2001–2005). About one third of Utahns with

Utah Objective: Reduce the proportion of adults who engage in no leisure-time physical activity to no more than 15% (age-adjusted to the 2000 standard population).
HP2010 Objective 22-1: Reduce the proportion of adults who engage in no leisure-time physical activity to no more than 20% (age-adjusted to the 2000 standard population).

Physical inactivity in Utah (continued)

incomes of less than $20,000 or with less than a high school education reported physical inactivity, while only 11% of those with incomes over $50,000 or with a college degree reported physical inactivity. Those reporting seven or more days of poor mental health had twice the rate (31.1%) of physical inactivity as those reporting fewer than seven days (16.2%) of poor mental health.

Engaging in physical activity is extremely important for persons to maintain a healthy weight. When the rate of physical inactivity for Utah's 61 small areas was plotted with the rate of obesity (BMI≥30) for the same small areas, a strong relationship was seen. Small areas with low rates of physical inactivity tended to have lower rates of obesity and small areas with high rates of physical inactivity tended to have higher rates of obesity (Figure 17.B). It is important for individuals to remember that even small increases in physical activity can help maintain ideal weight and reduce chronic disease risk factors.

Figure 17.A: Physical Inactivity by Age and Sex, Utah Adults, 2001-2005

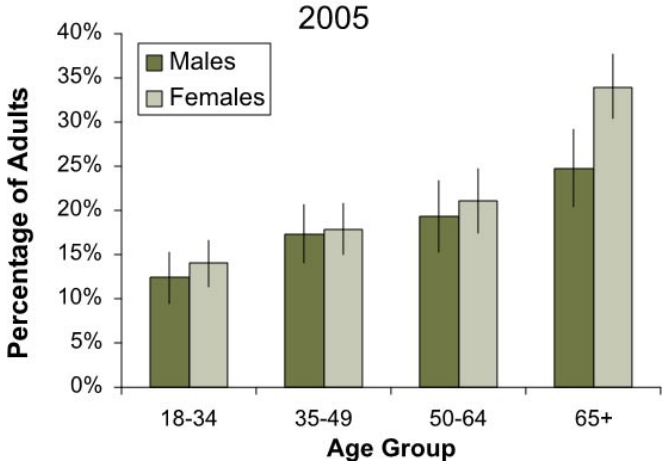
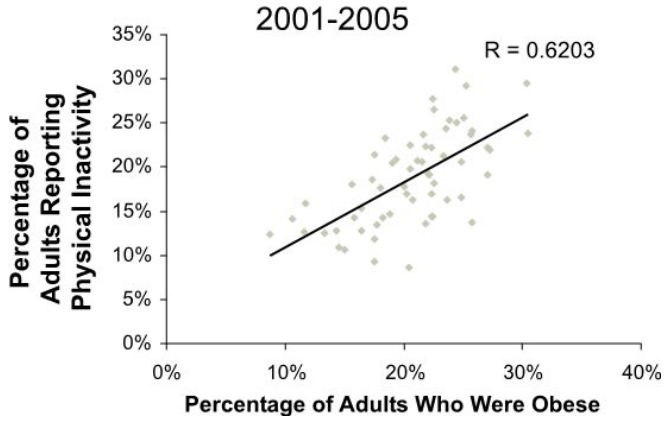


Figure 17.B: Scatterplot of Physical Inactivity and Obesity for Each Small Area, Utah Adults, 2001-2005



Prevention/Resources

A list of resources can be found in Appendix G of the report *Tipping the Scales Toward a Healthier Population in Utah* (http://health.utah.gov/obesity/resources.html).

UtahWalks is a website that features suggestions for creating places for people to walk and bicycle, and identifies places that already exist. For more information, visit www.utahwalks.org.

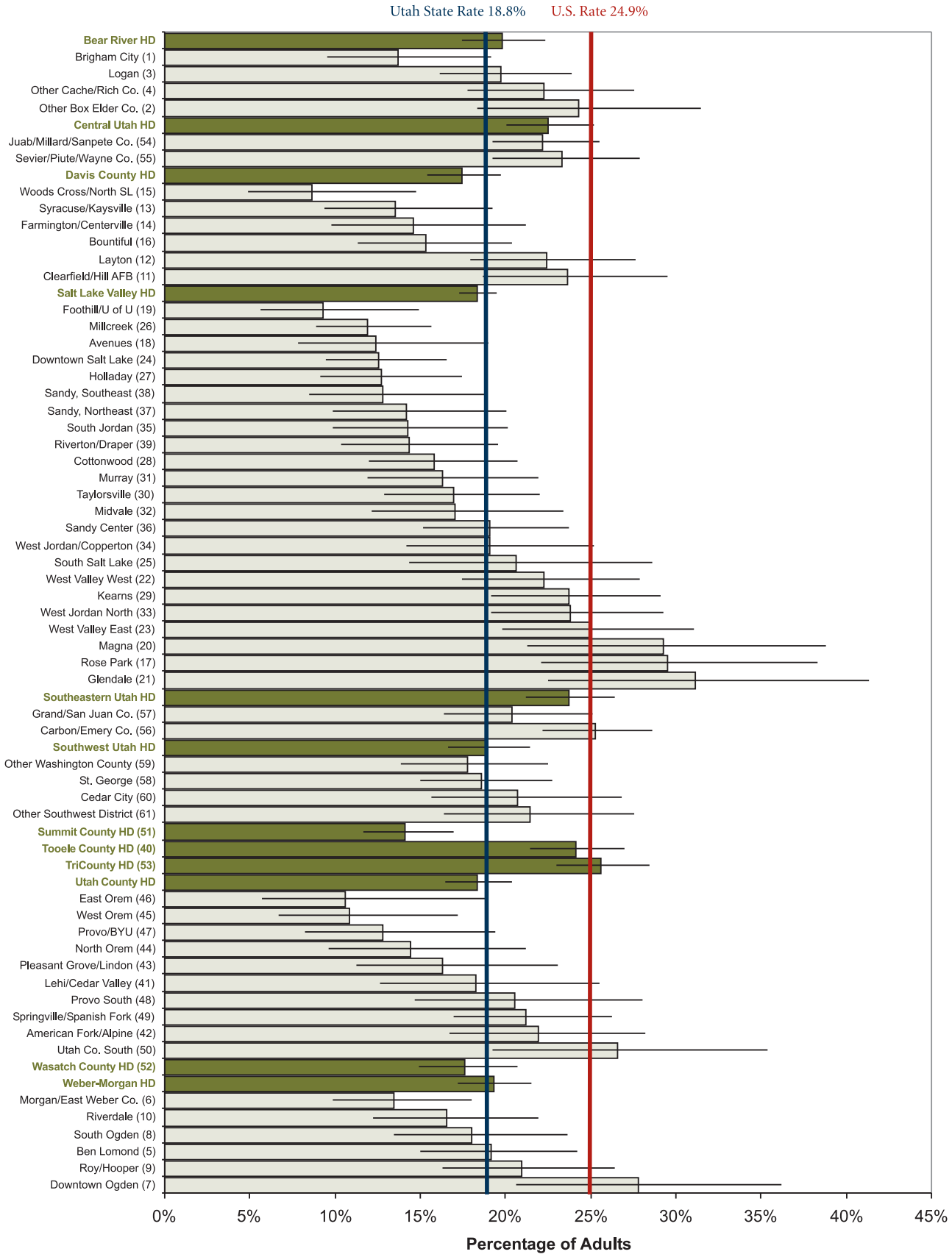
Check Your Health offers sensible, current information like Workouts on the Web to help Utah families live a healthy, active lifestyle (www.checkyourhealth.org).

CDC's Active Community Environments Initiative (ACES) promotes walking, bicycling, and the development of accessible recreation facilities. It was developed in response to data from a variety of disciplines, including public health, urban design, and transportation planning (www.cdc.gov/nccdphp/dnpa/aces.htm).

A worksite health promotion online resource directory is available at http://health.utah.gov/worksitewellness/resources.html.

17. Physical Inactivity

Figure 17.1: Percentage of Adults Reporting Physical Inactivity by Local Health District and Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)



17. Physical Inactivity

Table 17: Physical Inactivity by Health District, Small Area, Utah, and U.S., 2001-2005

State Rank*	State, Health District, or Small Area	2003 Population 18+	Number of Adults Reporting Physical Inactivity	Crude Rate	Age-adjusted Rate	95% Confidence Interval Lower	95% Confidence Interval Upper
	U.S.	217,803,051	54,124,058	24.9%	24.9%	24.8%	25.1%
	State of Utah	1,657,454	292,043	17.6%	18.8%	18.2%	19.5%
	Bear River HD	98,027	17,625	18.0%	19.8%	17.5%	22.3%
13	Brigham City (1)	14,566	1,962	13.5%	13.7%	9.6%	19.1%
35	Logan (3)	45,904	7,280	15.9%	19.7%	16.2%	23.9%
53	Other Box Elder Co. (2)	14,636	3,584	24.5%	24.3%	18.4%	31.5%
46	Other Cache/Rich Co. (4)	22,921	4,905	21.4%	22.3%	17.8%	27.6%
	Central Utah HD	47,558	10,563	22.2%	22.5%	20.0%	25.1%
44	Juab/Millard/Sanpete Co. (54)	31,637	6,805	21.5%	22.2%	19.2%	25.5%
48	Sevier/Piute/Wayne Co. (55)	15,921	3,735	23.5%	23.3%	19.3%	27.9%
	Davis County HD	175,027	27,917	16.0%	17.4%	15.4%	19.7%
20	Bountiful (16)	33,318	4,681	14.1%	15.3%	11.4%	20.4%
49	Clearfield/Hill AFB (11)	37,329	7,428	19.9%	23.6%	18.6%	29.5%
19	Farmington/Centerville (14)	19,034	2,452	12.9%	14.6%	9.8%	21.2%
47	Layton (12)	46,815	9,279	19.8%	22.4%	18.0%	27.6%
12	Syracuse/Kaysville (13)	24,542	3,163	12.9%	13.6%	9.4%	19.3%
1	Woods Cross/North SL (15)	13,989	1,241	8.9%	8.7%	4.9%	14.7%
	Salt Lake Valley HD	658,810	114,501	17.4%	18.4%	17.3%	19.5%
6	Avenues (18)	18,959	2,292	12.1%	12.4%	7.8%	19.0%
21	Cottonwood (28)	33,297	5,121	15.4%	15.8%	12.0%	20.7%
7	Downtown Salt Lake (24)	42,808	4,842	11.3%	12.6%	9.5%	16.6%
2	Foothill/U of U (19)	17,778	1,867	10.5%	9.3%	5.7%	14.9%
61	Glendale (21)	18,642	5,654	30.3%	31.2%	22.5%	41.3%
8	Holladay (27)	35,956	4,764	13.3%	12.7%	9.1%	17.4%
50	Kearns (29)	42,995	9,480	22.1%	23.8%	19.1%	29.1%
59	Magna (20)	15,623	3,634	23.3%	29.2%	21.3%	38.8%
26	Midvale (32)	21,672	3,543	16.4%	17.0%	12.1%	23.4%
5	Millcreek (26)	44,008	5,624	12.8%	11.9%	8.9%	15.7%
22	Murray (31)	24,072	3,837	15.9%	16.3%	11.9%	21.9%
17	Riverton/Draper (39)	41,391	5,315	12.8%	14.3%	10.3%	19.6%
60	Rose Park (17)	22,639	6,667	29.5%	29.5%	22.1%	38.3%
32	Sandy Center (36)	36,106	5,918	16.4%	19.1%	15.2%	23.7%
15	Sandy, Northeast (37)	18,245	2,412	13.2%	14.2%	9.9%	20.1%
9	Sandy, Southeast (38)	20,781	1,970	9.5%	12.8%	8.5%	18.8%
16	South Jordan (35)	20,931	2,926	14.0%	14.3%	9.9%	20.2%
38	South Salt Lake (25)	18,456	3,700	20.1%	20.6%	14.4%	28.6%
25	Taylorsville (30)	27,372	4,434	16.2%	17.0%	12.9%	22.0%
51	West Jordan North (33)	30,391	6,519	21.5%	23.8%	19.2%	29.2%
33	West Jordan/Copperton (34)	26,360	4,790	18.2%	19.1%	14.2%	25.2%
54	West Valley East (23)	35,527	8,619	24.3%	25.0%	19.8%	31.1%
45	West Valley West (22)	44,794	9,631	21.5%	22.3%	17.5%	27.9%
	Southeastern Utah HD	36,828	8,736	23.7%	23.8%	21.3%	26.6%
55	Carbon/Emery Co. (56)	21,451	5,393	25.1%	25.3%	22.2%	28.6%
36	Grand/San Juan Co. (57)	15,377	3,228	21.0%	20.4%	16.4%	25.1%
	Southwest Utah HD	116,150	21,650	18.6%	18.9%	16.7%	21.4%
39	Cedar City (60)	22,401	4,008	17.9%	20.7%	15.7%	26.9%
42	Other Southwest District (61)	15,384	3,538	23.0%	21.4%	16.4%	27.5%
28	Other Washington County (59)	32,503	5,821	17.9%	17.8%	13.9%	22.5%
31	St. George (58)	45,862	8,035	17.5%	18.5%	15.0%	22.8%
14	**Summit County HD (51)**	24,525	3,041	12.4%	14.1%	11.7%	16.9%
52	**Tooele County HD (40)**	32,458	7,274	22.4%	24.1%	21.4%	27.0%
56	**TriCounty HD (53)**	28,023	7,123	25.4%	25.6%	23.0%	28.4%
	Utah County HD	278,832	43,526	15.6%	18.3%	16.4%	20.3%
43	American Fork/Alpine (42)	26,819	5,364	20.0%	22.0%	16.7%	28.2%
3	East Orem (46)	14,955	1,473	9.9%	10.6%	5.7%	18.9%
30	Lehi/Cedar Valley (41)	18,752	2,933	15.6%	18.2%	12.7%	25.5%
18	North Orem (44)	25,965	3,539	13.6%	14.4%	9.6%	21.2%
23	Pleasant Grove/Lindon (43)	24,636	3,375	13.7%	16.3%	11.2%	23.1%
10	Provo/BYU (47)	39,401	4,689	11.9%	12.8%	8.2%	19.4%
37	Provo South (48)	48,138	6,219	12.9%	20.5%	14.7%	28.0%
41	Springville/Spanish Fork (49)	41,036	7,637	18.6%	21.2%	16.9%	26.2%
57	Utah Co. South (50)	17,363	4,245	24.5%	26.6%	19.3%	35.4%
4	West Orem (45)	21,774	2,552	11.7%	10.9%	6.7%	17.2%
27	**Wasatch County HD (52)**	12,514	2,122	17.0%	17.6%	14.9%	20.7%
	Weber-Morgan HD	148,702	27,703	18.6%	19.3%	17.3%	21.6%
34	Ben Lomond (5)	33,215	6,248	18.8%	19.2%	15.0%	24.2%
58	Downtown Ogden (7)	21,684	6,061	28.0%	27.8%	20.7%	36.2%
11	Morgan/East Weber Co. (6)	24,131	3,229	13.4%	13.4%	9.9%	18.0%
24	Riverdale (10)	15,522	2,321	15.0%	16.5%	12.3%	22.0%
40	Roy/Hooper (9)	27,898	5,276	18.9%	20.9%	16.3%	26.4%
29	South Ogden (8)	26,255	4,750	18.1%	18.0%	13.4%	23.7%

*State rank is by 61 small areas for age-adjusted rate; 1 is always the lowest rate in the state and 61 is always the highest rate in the state.

Figure 17.2: Physical Inactivity by Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)

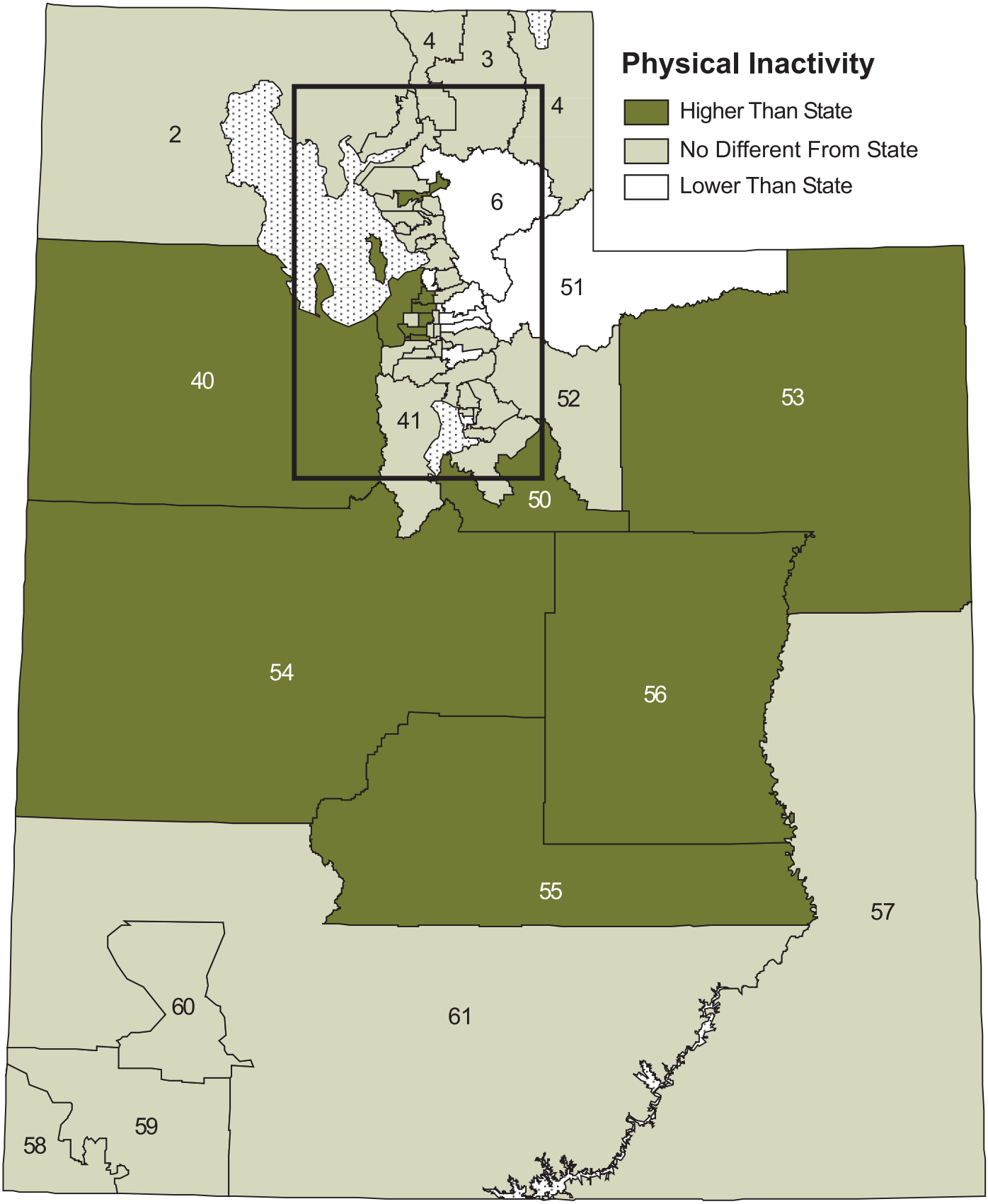
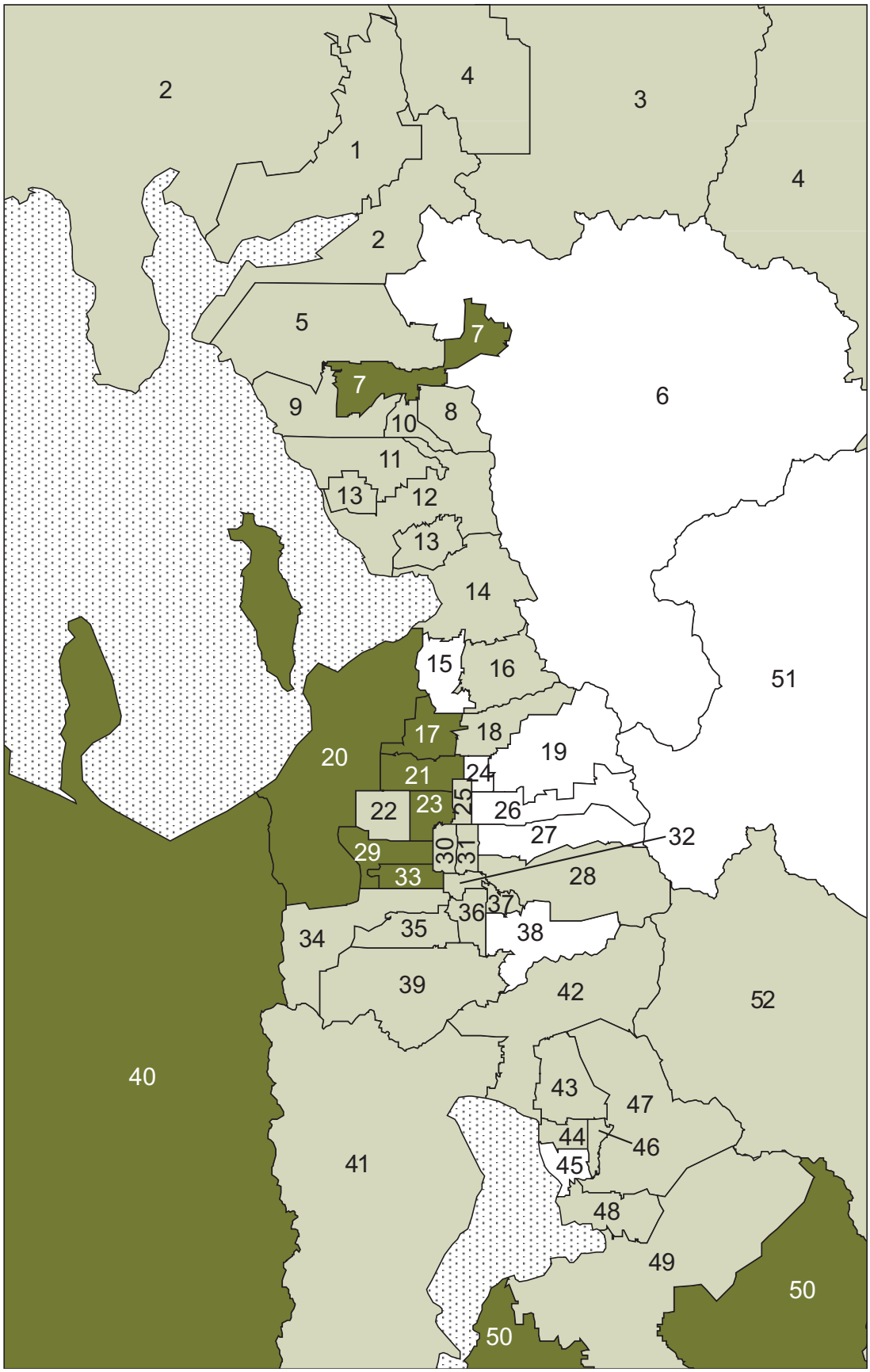


Figure 17.3: Physical Inactivity by Small Area, Wasatch Front Adults Aged 18+, 2001–2005 (Age-adjusted)



18. Recommended Physical Activity

Measure Definition: *Based on a set of questions measuring frequency and duration of physical activity (see Appendix G).* ***[Participated in moderate physical activity for at least 30 minutes/day and 5 days/week or vigorous physical activity for at least 20 minutes/day and three days/week]***

Why is physical activity important to public health?

Physical activity has been shown to reduce the risk of coronary heart disease, hypertension, some types of cancer, and diabetes.[9] In fact, physical activity has been shown to prevent the onset of diabetes and can be twice as effective as medication.[40] In addition, physical activity has been associated with improved quality of life among people with arthritis.[41] Physical activity is also known to improve affective disorders such as depression and anxiety, and increase quality of life and independent living among the elderly.[42]

For this report, recommended physical activity was defined as the percentage of adults aged 18 and over who reported participating in moderate physical activity for at least 30 minutes per day and five days per week or vigorous physical activity for at least 20 minutes per day and three days per week.

Risk factors associated with lack of recommended physical activity

Engaging in physical activity depends in part on the availability and proximity of community facilities and environments conducive to physical activity. Studies of adult participation in physical activity have shown that facility use generally decreases as the distance from a person's residence increases. People are unlikely to use community resources located more than a few miles away by car or more than a few minutes away by cycling or walking.[38] Similarly, a lack of active community environments (ACEs) has been shown to be a barrier to adults engaging in physical activity. Most communities are designed to accommodate cars and lack walkways and bikeways. Even where walkways and bikeways exist, wide roads and intersections, large parking lots, and drive-through businesses create environments that are unpleasant and unsafe for non-motorists, thus discouraging physical activity.[38]

Physical activity in Utah

More than half (54.1%) of adult Utahns reported getting the recommended amount of physical activity based on data from 2001, 2003, and 2005. This was higher than the comparable rate for the U.S. during the same period (46.5%). The age-adjusted percentage of adults getting the recommended amount of physical activity varied only slightly by local health district. Tooele County had the lowest rate at 48.6%, and Summit County had the highest rate at 64.2%. Only Summit County had a rate that was statistically different than the state rate. None of Utah's local health districts met the Utah target of at least 65% of adults getting the recommended amount of physical activity.

There were differences within local health districts by small area. Along the Wasatch Front, Salt Lake Valley and Utah County health districts had small areas with age-adjusted rates less than 45% (Glendale, Magna, South Salt Lake, Lehi/Cedar Valley). Davis County, Salt Lake Valley, Utah County, Southwest Utah, and Weber-Morgan health districts all had small areas with rates over 60% (Farmington/Centerville, Woods Cross/North SL,

Utah Objective (related): Increase the proportion of adults who engage regularly, preferably daily, in moderate physical activity for at least 30 minutes per day to 65%.
HP2010 Objective (related) 22-2: Increase the proportion of adults who engage regularly, preferably daily, in moderate physical activity for at least 30 minutes per day to 50% (age-adjusted to the U.S. 2000 standard population).

Physical activity in Utah (continued)

Sandy, Southeast, Foothill/U of U, Other Southwest District, East Orem, Morgan/East Weber Co., Riverdale). Foothill/U of U had the highest rate of any small area in the state at 68.4%. Magna had the lowest rate at 41.5%.

Rates of recommended physical activity did not differ by sex. However, as adults in Utah aged, the percentage of persons getting the recommended amount of physical activity declined from about 60% among those aged 18–24 to just over 40% among adults aged 65 and over (Figure 18.A). Physical activity increases with education level. Only 43.3% of adults without a high school degree reported getting the recommended amount of physical activity, while 57.6% of college graduates reported getting the recommended amount of physical activity (Figure 18.B). Overweight or obese adults with a body mass index of greater than 25, and those reporting seven or more days of poor mental health, also reported lower rates of recommended physical activity than those at an ideal weight or who reported fewer than seven days of poor mental health (not shown).

Figure 18.A: Recommended Physical Activity by Age and Sex, Utah Adults, 2001, 2003, 2005

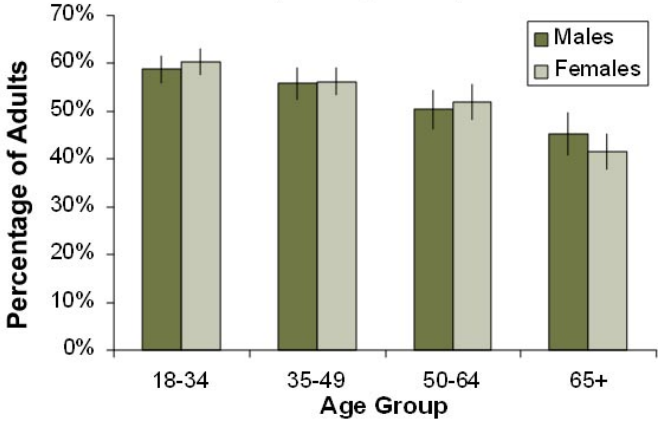
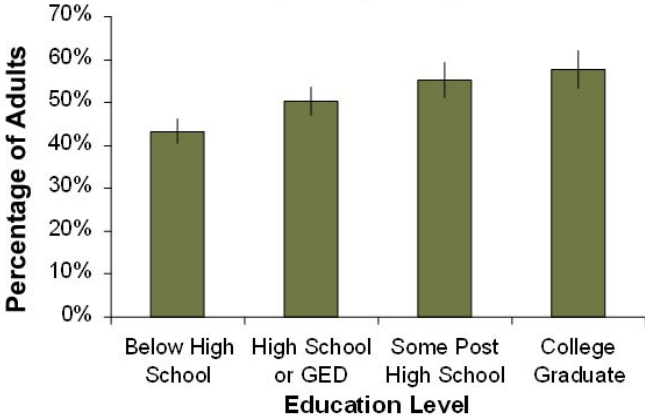


Figure 18.B: Recommended Physical Activity by Education, Utah Adults, 2001, 2003, 2005



Prevention/Resources

A list of resources can be found in Appendix G of the report *Tipping the Scales Toward a Healthier Population in Utah* (http://health.utah.gov/obesity/resources.html).

UtahWalks is a website that features suggestions for creating places for people to walk and bicycle, and identifies places that already exist. For more information, visit www.utahwalks.org.

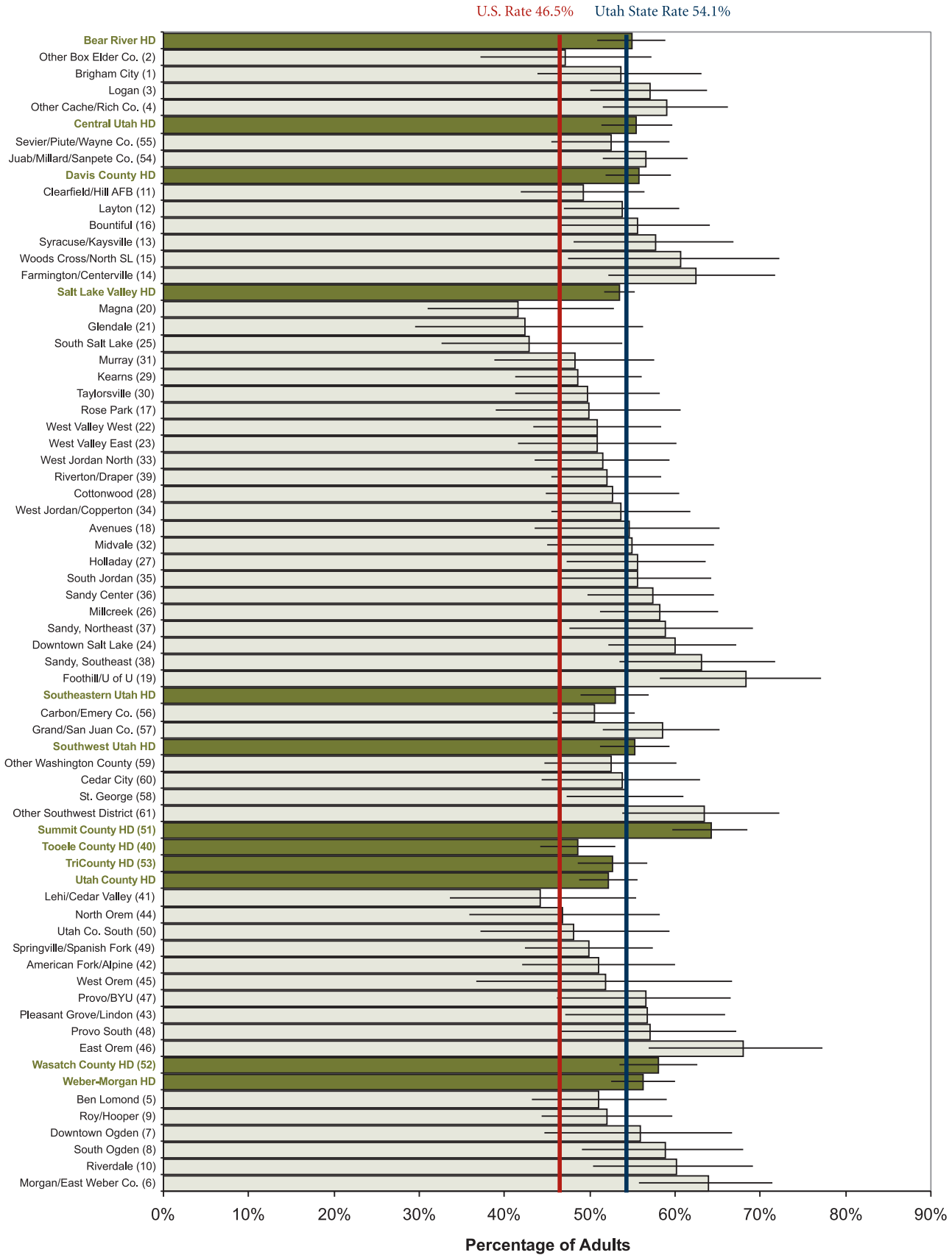
Check Your Health offers sensible, current information like Workouts on the Web to help Utah families live a healthy, active lifestyle (www.checkyourhealth.org).

CDC's Active Community Environments Initiative (ACES) promotes walking, bicycling, and the development of accessible recreation facilities. It was developed in response to data from a variety of disciplines, including public health, urban design, and transportation planning (www.cdc.gov/nccdphp/dnpa/aces.htm).

A worksite health promotion online resource directory is available at http://health.utah.gov/worksitewellness/resources.html.

18. Recommended Physical Activity

Figure 18.1: Percentage of Adults Reporting Recommended Physical Activity by Local Health District and Small Area, Utah Adults Aged 18+, 2001, 2003, 2005 (Age-adjusted)



18. Recommended Physical Activity

Table 18: Rec. Physical Activity by Health District, Small Area, Utah, and U.S., 2001, 2003, 2005

State Rank*	State, Health District, or Small Area	2003 Population 18+	Number of Adults Reporting Recommended Physical Activity	Crude Rate	Age-adjusted Rate	95% Confidence Interval Lower	95% Confidence Interval Upper
	U.S.	217,803,051	101,496,222	46.6%	46.5%	46.3%	46.7%
	State of Utah	1,657,454	916,406	55.3%	54.1%	53.0%	55.2%
	Bear River HD	98,027	56,591	57.7%	55.0%	50.9%	58.9%
28	Brigham City (1)	14,566	8,016	55.0%	53.6%	43.9%	63.1%
42	Logan (3)	45,904	28,713	62.6%	57.1%	50.1%	63.8%
6	Other Box Elder Co. (2)	14,636	6,886	47.1%	47.1%	37.2%	57.3%
51	Other Cache/Rich Co. (4)	22,921	13,180	57.5%	59.0%	51.5%	66.1%
	Central Utah HD	47,558	26,385	55.5%	55.6%	51.4%	59.7%
39	Juab/Millard/Sanpete Co. (54)	31,637	18,248	57.7%	56.5%	51.5%	61.5%
24	Sevier/Piute/Wayne Co. (55)	15,921	8,201	51.5%	52.5%	45.5%	59.4%
	Davis County HD	175,027	100,903	57.7%	55.8%	51.9%	59.5%
36	Bountiful (16)	33,318	19,191	57.6%	55.5%	46.6%	64.1%
11	Clearfield/Hill AFB (11)	37,329	20,300	54.4%	49.2%	41.9%	56.5%
55	Farmington/Centerville (14)	19,034	11,826	62.1%	62.5%	52.2%	71.7%
31	Layton (12)	46,815	27,448	58.6%	53.8%	46.9%	60.6%
45	Syracuse/Kaysville (13)	24,542	13,866	56.5%	57.8%	48.2%	66.8%
54	Woods Cross/North SL (15)	13,989	8,614	61.6%	60.6%	47.5%	72.3%
	Salt Lake Valley HD	658,810	356,877	54.2%	53.4%	51.6%	55.3%
33	Avenues (18)	18,959	9,421	49.7%	54.6%	43.5%	65.2%
27	Cottonwood (28)	33,297	17,498	52.6%	52.7%	44.8%	60.5%
52	Downtown Salt Lake (24)	42,808	26,331	61.5%	59.9%	52.2%	67.2%
61	Foothill/U of U (19)	17,778	11,904	67.0%	68.4%	58.1%	77.1%
2	Glendale (21)	18,642	10,632	57.0%	42.3%	29.5%	56.2%
35	Holladay (27)	35,956	19,873	55.3%	55.5%	47.2%	63.5%
10	Kearns (29)	42,995	21,442	49.9%	48.6%	41.2%	56.1%
1	Magna (20)	15,623	7,318	46.8%	41.5%	31.0%	52.9%
34	Midvale (32)	21,672	11,831	54.6%	55.0%	45.1%	64.5%
47	Millcreek (26)	44,008	23,980	54.5%	58.3%	51.2%	65.1%
8	Murray (31)	24,072	11,622	48.3%	48.2%	38.9%	57.6%
22	Riverton/Draper (39)	41,391	23,949	57.9%	52.0%	45.5%	58.5%
13	Rose Park (17)	22,639	10,586	46.8%	49.8%	39.0%	60.7%
44	Sandy Center (36)	36,106	21,100	58.4%	57.3%	49.8%	64.6%
49	Sandy, Northeast (37)	18,245	10,684	58.6%	58.8%	47.6%	69.2%
56	Sandy, Southeast (38)	20,781	13,767	66.3%	63.1%	53.5%	71.7%
37	South Jordan (35)	20,931	11,294	54.0%	55.6%	46.6%	64.2%
3	South Salt Lake (25)	18,456	7,860	42.6%	42.8%	32.6%	53.8%
12	Taylorsville (30)	27,372	13,900	50.8%	49.7%	41.2%	58.1%
20	West Jordan North (33)	30,391	17,052	56.1%	51.6%	43.6%	59.4%
29	West Jordan/Copperton (34)	26,360	14,472	54.9%	53.7%	45.5%	61.8%
17	West Valley East (23)	35,527	18,023	50.7%	50.9%	41.6%	60.1%
16	West Valley West (22)	44,794	23,194	51.8%	50.9%	43.4%	58.4%
	Southeastern Utah HD	36,828	19,559	53.1%	52.9%	48.9%	56.8%
15	Carbon/Emery Co. (56)	21,451	11,004	51.3%	50.5%	45.7%	55.3%
48	Grand/San Juan Co. (57)	15,377	8,774	57.1%	58.5%	51.5%	65.3%
	Southwest Utah HD	116,150	63,720	54.9%	55.3%	51.1%	59.3%
30	Cedar City (60)	22,401	12,925	57.7%	53.8%	44.4%	62.9%
57	Other Southwest District (61)	15,384	9,630	62.6%	63.5%	53.8%	72.2%
25	Other Washington County (59)	32,503	16,661	51.3%	52.5%	44.7%	60.2%
32	St. George (58)	45,862	24,330	53.1%	54.2%	47.3%	61.0%
59	**Summit County HD (51)**	24,525	16,052	65.5%	64.2%	59.7%	68.5%
9	**Tooele County HD (40)**	32,458	16,047	49.4%	48.6%	44.2%	53.1%
26	**TriCounty HD (53)**	28,023	15,020	53.6%	52.7%	48.5%	56.8%
	Utah County HD	278,832	152,326	54.6%	52.2%	48.9%	55.6%
18	American Fork/Alpine (42)	26,819	14,203	53.0%	51.1%	42.1%	60.0%
60	East Orem (46)	14,955	10,413	69.6%	67.9%	56.9%	77.3%
4	Lehi/Cedar Valley (41)	18,752	8,770	46.8%	44.2%	33.5%	55.4%
5	North Orem (44)	25,965	12,058	46.4%	46.8%	35.9%	58.1%
41	Pleasant Grove/Lindon (43)	24,636	14,853	60.3%	56.7%	47.1%	65.8%
40	Provo/BYU (47)	39,401	23,002	58.4%	56.6%	46.1%	66.5%
43	Provo South (48)	48,138	30,423	63.2%	57.1%	46.4%	67.2%
14	Springville/Spanish Fork (49)	41,036	21,318	52.0%	49.9%	42.5%	57.3%
7	Utah Co. South (50)	17,363	8,145	46.9%	48.2%	37.2%	59.4%
21	West Orem (45)	21,774	10,584	48.6%	51.9%	36.7%	66.7%
46	**Wasatch County HD (52)**	12,514	7,407	59.2%	58.1%	53.5%	62.5%
	Weber-Morgan HD	148,702	85,682	57.6%	56.2%	52.5%	59.9%
19	Ben Lomond (5)	33,215	17,033	51.3%	51.1%	43.2%	59.0%
38	Downtown Ogden (7)	21,684	11,781	54.3%	56.0%	44.7%	66.7%
58	Morgan/East Weber Co. (6)	24,131	15,881	65.8%	64.0%	55.8%	71.5%
53	Riverdale (10)	15,522	9,445	60.9%	60.2%	50.4%	69.2%
23	Roy/Hooper (9)	27,898	15,213	54.5%	52.0%	44.3%	59.6%
50	South Ogden (8)	26,255	15,532	59.2%	58.9%	49.1%	68.0%

*State rank is by 61 small areas for age-adjusted rate; 1 is always the lowest rate in the state and 61 is always the highest rate in the state.

Figure 18.2: Recommended Physical Activity by Small Area, Utah Adults Aged 18+, 2001, 2003, 2005 (Age-adjusted)

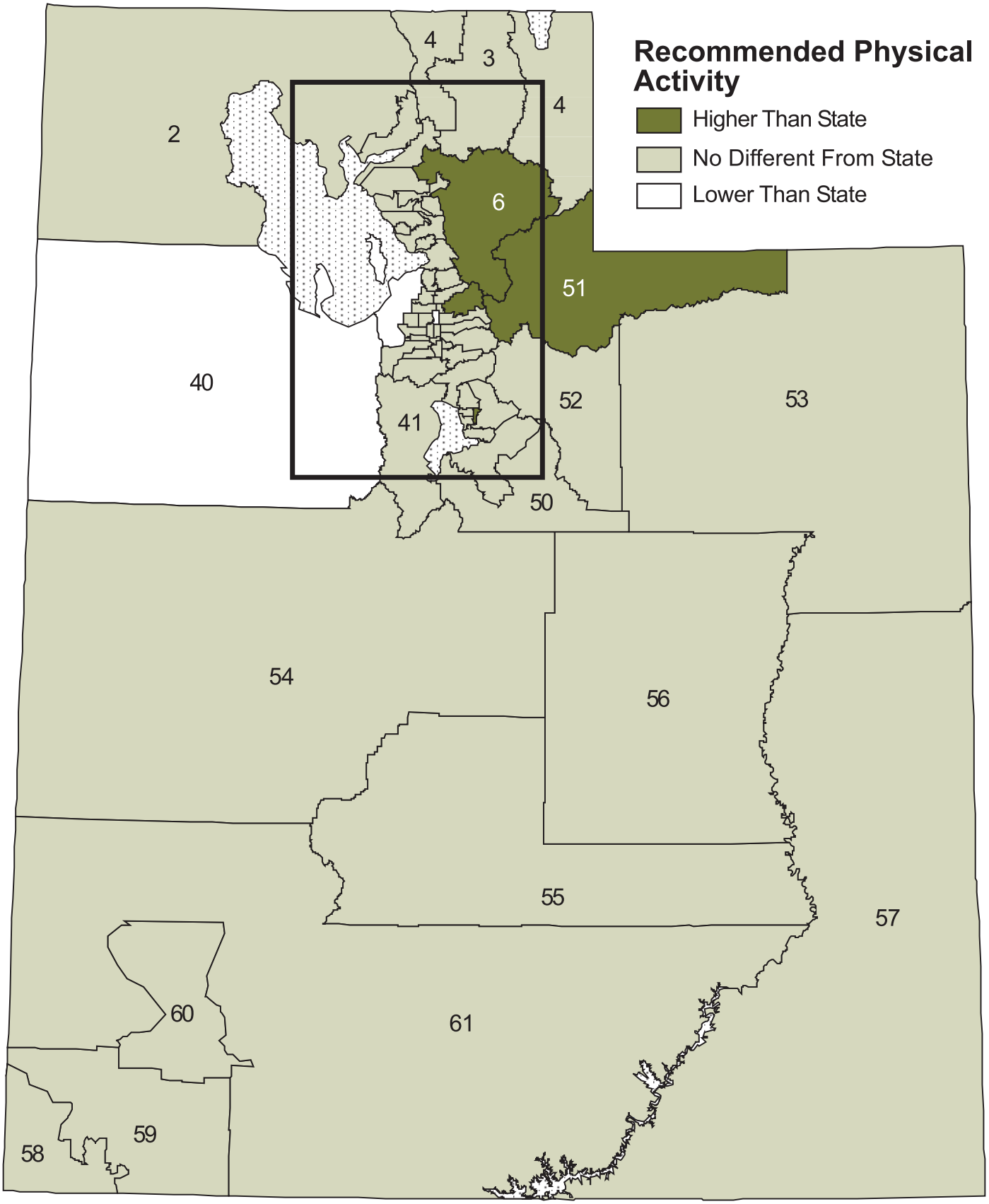
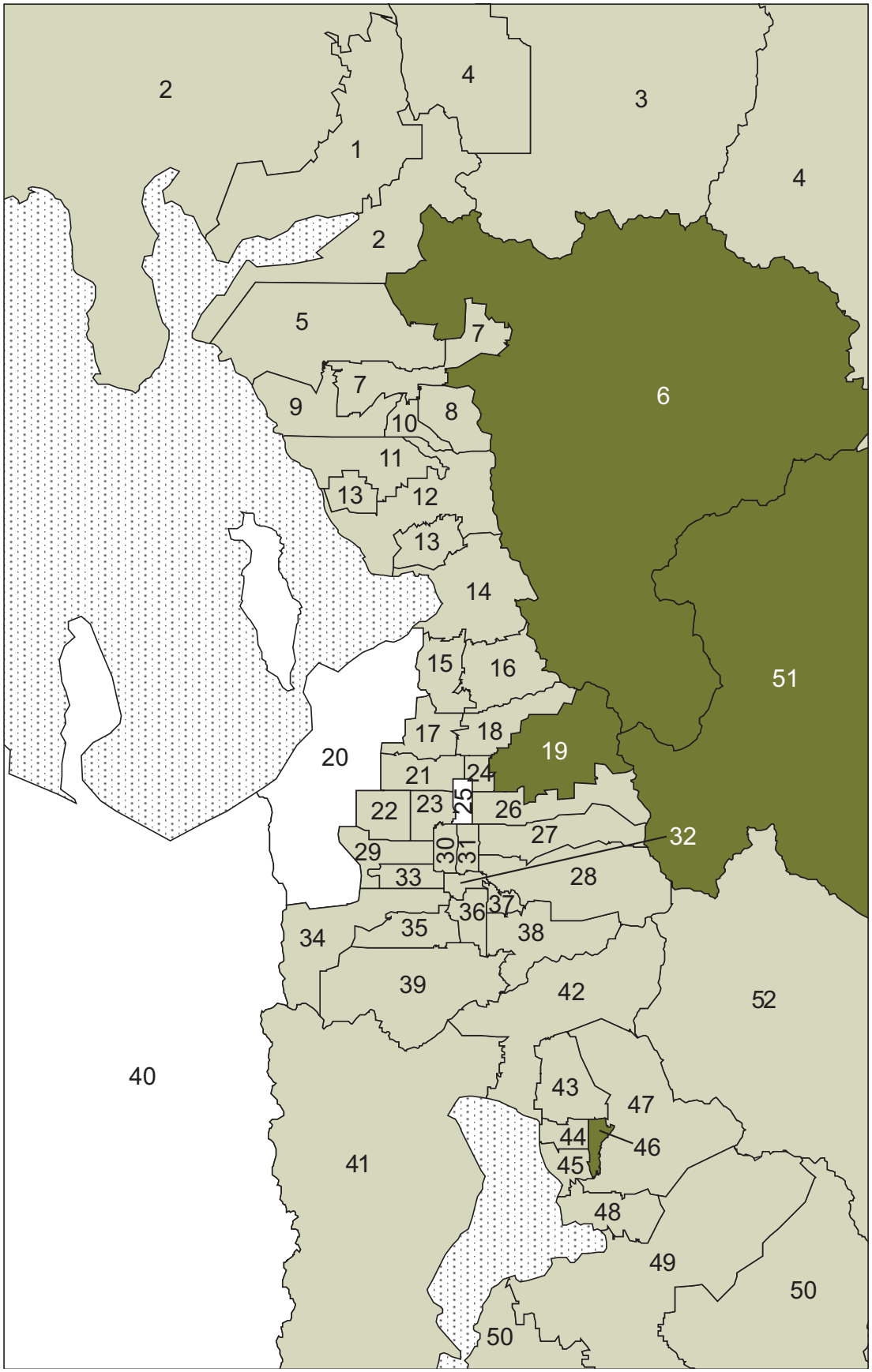


Figure 18.3: Recommended Physical Activity by Small Area, Wasatch Front Adults, 2001, 2003, 2005 (Age-adjusted)



19. Overweight or Obese

Measure Definition: *"About how much do you weigh without shoes? About how tall are you without shoes?"* ***[BMI≥25 calculated from reported height and weight]***

Why is overweight and obesity important to public health?

Maintenance of healthy weight is a goal in the effort to reduce the burden of illness and its consequent reduction in quality of life and life expectancy. The relationship of body mass index (BMI, weight (kg)/height (m^2)) to health outcomes generally supports that a BMI of less than 25 is the upper limit of the healthy weight range.[43,44] Overweight (BMI=25 to 29.9) and obese (BMI≥30) individuals are at increased risk for diabetes, hypertension, stroke, heart disease, arthritis, asthma, and some cancers.[18]

Risk factors for overweight and obesity

Overweight and obesity may be caused by many factors. These factors include inherited, metabolic, behavioral, environmental, cultural, and socioeconomic components. Changes in modifiable and potentially modifiable factors, which include all of the above except the inherited component, may result in changed BMI as a consequence of changes in energy balance. In other words, BMI will increase as a result of increased energy consumption (calories eaten), decreased energy expenditure (calories burned), or a combination of these.

Factors shown to increase energy consumption include: increased marketing and consumption of high calorie and low nutrient foods and beverages; increased availability of high calorie and low nutrient foods and beverages in schools, workplaces, and homes; increased food and beverage portion sizes; and a decrease in meals prepared and eaten at home. Factors shown to decrease energy expenditure include decreased breastfeeding duration (for the mother) and decreased physical activity. Physical activity is negatively influenced by increased daily screen time (television, computers, video games); number of neighborhoods without sidewalks and that are perceived as unsafe; and time spent in automobiles. Also, physical activity is reduced as a result of decreased physical education in public schools and other informal physical activity opportunities.

Overweight and obesity in Utah

On average, during the years 2001–2005, more than half (57.0%) of Utah adults were overweight or obese (914,252 adults). Prevalence was higher in Utah adult males than in Utah adult females. The combined rate has increased steadily from 39.5% in 1989.

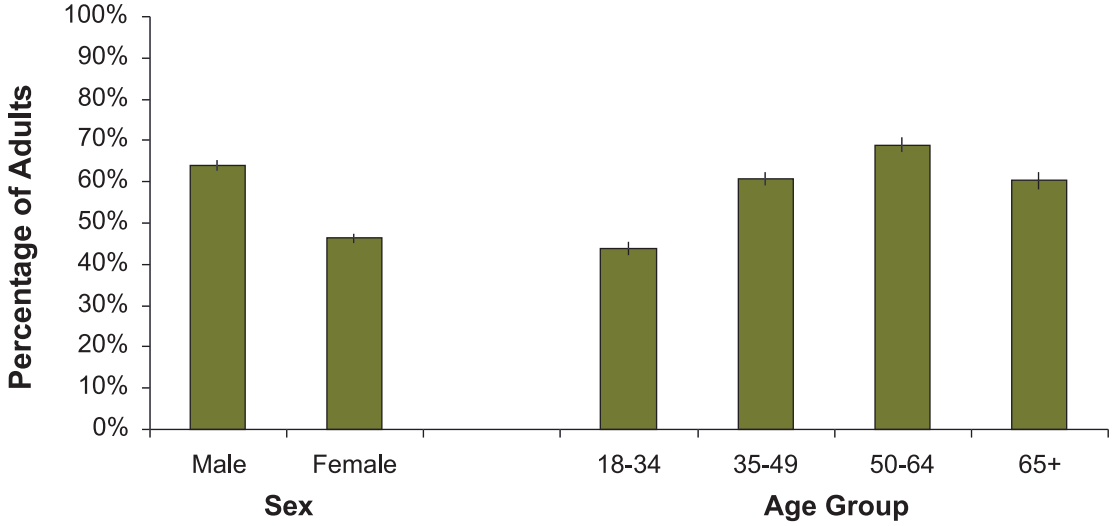
After adjusting for age, Tooele County and TriCounty health districts had a higher prevalence of overweight and obesity (63.0% and 63.8% respectively), while Summit County had a lower prevalence (42.9%) when compared to the state rate. There were also several small areas with higher and lower prevalence rates of overweight and obesity relative to the state rate. Those with higher rates include Clearfield/Hill AFB (64.4%), Kearns (64.6%), West Jordan North (66.3%), and West Valley West (65.4%). Those with lower rates include Avenues (38.9%), Bountiful (45.3%), Downtown Salt Lake (48.7%), Holladay (44.8%), Provo/BYU (46.9%), and Sandy Southeast (45.2%). Data sources other than BRFSS suggest that overweight and obesity are not limited to Utah adults. Overweight in Utah third graders increased dramatically from 1993 (boys 6.9%, girls 6.8%) to 2002 (boys 15.1%, girls 9.5%). In 2002, an estimated 25.5% of Utah kindergarten–eighth grade students were overweight or at risk of becoming overweight. The percentage of Utah high school students

Utah Objective: Same as HP2010 objective.
HP2010 Objective (related) 19-1: Increase the proportion of adults aged 20 years and older who are at a healthy weight to 60% (age-adjusted to the U.S. 2000 standard population).

Overweight and obese in Utah (continued)

who are overweight or at risk for overweight is increasing (1999, 5.4% and 9.1%, respectively; 2003, 7.0% and 11.3%, respectively).[38]

Figure 19.A: Overweight or Obese by Sex and Age, Utah Adults, 2001-2005



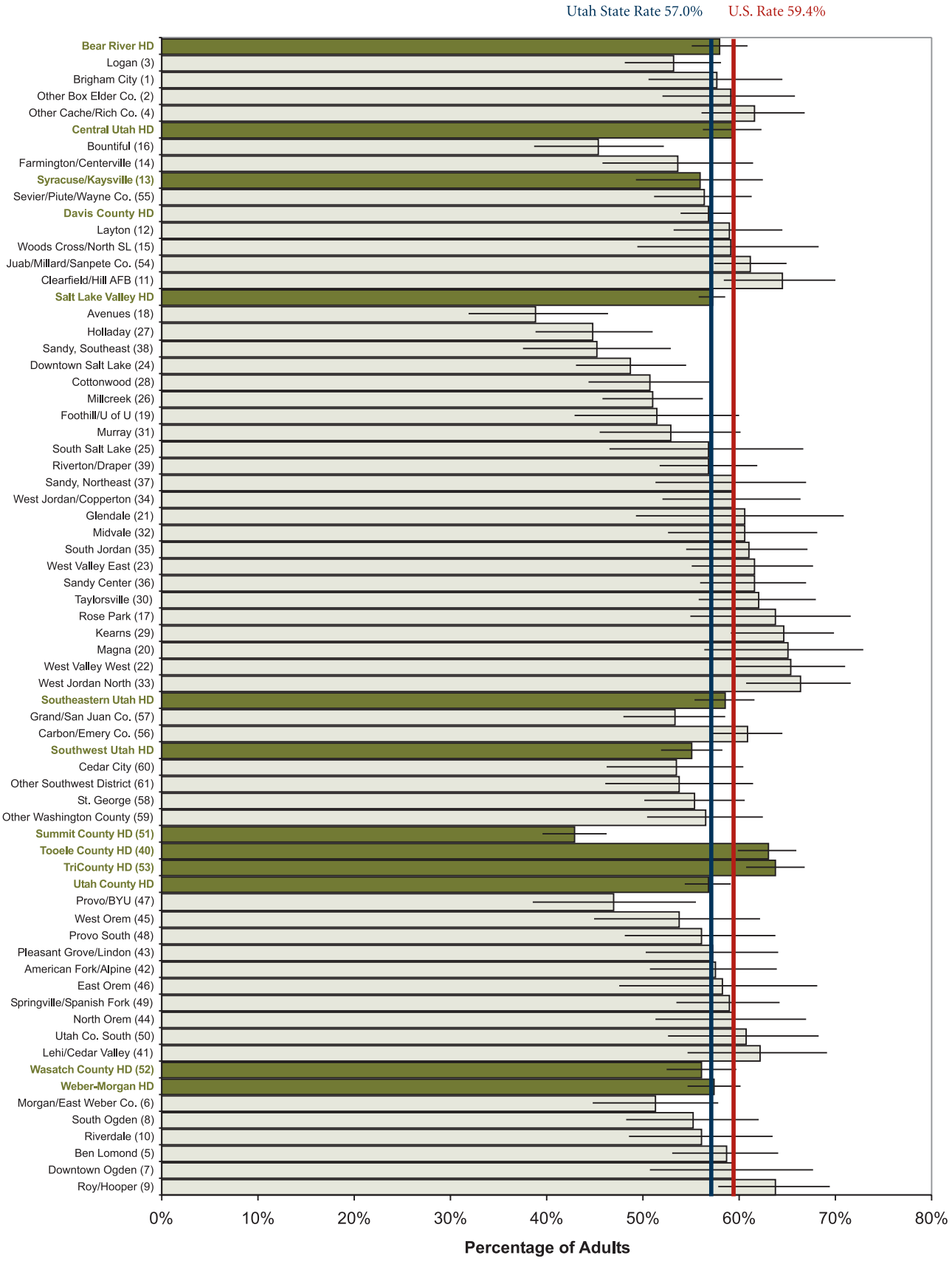
Prevention/Resources

While maintaining or achieving a healthy body weight is a challenge for many, there are clear factors that influence success and there are resources available to individuals, families, and communities to help them achieve success.

The Utah Department of Health (UDOH) Obesity website (http://health.utah.gov/obesity/) has comprehensive information, including *Tipping the Scales Toward a Healthier Population: A Report on Overweight and Obesity in Utah* (the report), and *Tipping the Scales Toward a Healthier Population: The Utah Blueprint to Promote Healthy Weight for Children, Youth and Adults* (the blueprint). In the report you will find comprehensive data on obesity prevalence, risk, co-existing conditions, and successes to manage a healthy weight. In the blueprint you will find Utah's objectives and strategies to impact overweight and obesity in seven critical settings: families, schools, communities, work sites, health care, media, and government. Also on this website you will find current overweight and obesity information and resources on the breaking news page. Other resources include the UDOH Gold Medal Mile program (http://utahwalks.org/gmm/index.php) and the UDOH Gold Medal Schools program (http://www.hearthighway.org/gms/).

19. Overweight or Obese

Figure 19.1: Percentage of Adults Who Were Overweight or Obese by Local Health District and Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)



19. Overweight or Obese

Table 19: Overweight or Obese by Health District, Small Area, Utah, and U.S., 2001-2005

State Rank*	State, Health District, or Small Area	2003 Population 18+	Number of Adults Who Were Overweight/Obese	Crude Rate	Age-adjusted Rate	95% Confidence Interval Lower	95% Confidence Interval Upper
	U.S.	217,803,051	129,875,959	59.6%	59.4%	59.3%	59.6%
	State of Utah	1,657,454	914,252	55.2%	57.0%	56.1%	57.8%
	Bear River HD	98,027	52,739	53.8%	58.0%	55.1%	60.9%
31	Brigham City (1)	14,566	8,671	59.5%	57.7%	50.6%	64.5%
13	Logan (3)	45,904	20,634	45.0%	53.2%	48.2%	58.1%
36	Other Box Elder Co. (2)	14,636	8,643	59.1%	59.1%	52.0%	65.8%
49	Other Cache/Rich Co. (4)	22,921	14,094	61.5%	61.6%	56.1%	66.8%
	Central Utah HD	47,558	27,921	58.7%	59.3%	56.2%	62.4%
47	Juab/Millard/Sanpete Co. (54)	31,637	19,153	60.5%	61.2%	57.4%	64.9%
25	Sevier/Piute/Wayne Co. (55)	15,921	8,830	55.5%	56.3%	51.1%	61.4%
	Davis County HD	175,027	96,492	55.1%	56.8%	53.9%	59.6%
5	Bountiful (16)	33,318	15,659	47.0%	45.3%	38.7%	52.1%
57	Clearfield/Hill AFB (11)	37,329	22,890	61.3%	64.4%	58.4%	70.1%
16	Farmington/Centerville (14)	19,034	10,265	53.9%	53.7%	45.7%	61.4%
35	Layton (12)	46,815	26,095	55.7%	58.9%	53.2%	64.5%
21	Syracuse/Kaysville (13)	24,542	13,638	55.6%	55.9%	49.3%	62.4%
37	Woods Cross/North SL (15)	13,989	7,922	56.6%	59.2%	49.4%	68.3%
	Salt Lake Valley HD	658,810	370,185	56.2%	57.3%	55.9%	58.7%
1	Avenues (18)	18,959	7,267	38.3%	38.9%	31.9%	46.4%
8	Cottonwood (28)	33,297	16,908	50.8%	50.7%	44.4%	57.0%
7	Downtown Salt Lake (24)	42,808	19,893	46.5%	48.7%	43.0%	54.5%
11	Foothill/U of U (19)	17,778	9,056	50.9%	51.5%	42.9%	60.0%
42	Glendale (21)	18,642	10,810	58.0%	60.6%	49.3%	70.8%
3	Holladay (27)	35,956	16,504	45.9%	44.8%	38.8%	51.0%
58	Kearns (29)	42,995	27,366	63.7%	64.6%	59.1%	69.8%
59	Magna (20)	15,623	9,335	59.8%	65.1%	56.3%	72.9%
43	Midvale (32)	21,672	12,412	57.3%	60.7%	52.7%	68.1%
9	Millcreek (26)	44,008	22,127	50.3%	51.1%	45.9%	56.3%
12	Murray (31)	24,072	12,688	52.7%	52.9%	45.5%	60.2%
28	Riverton/Draper (39)	41,391	23,531	56.9%	56.9%	51.7%	61.9%
54	Rose Park (17)	22,639	14,389	63.6%	63.7%	55.0%	71.6%
50	Sandy Center (36)	36,106	20,598	57.1%	61.6%	56.0%	67.0%
38	Sandy, Northeast (37)	18,245	10,792	59.2%	59.4%	51.3%	67.0%
4	Sandy, Southeast (38)	20,781	9,516	45.8%	45.2%	37.6%	52.9%
46	South Jordan (35)	20,931	12,753	60.9%	61.0%	54.5%	67.1%
27	South Salt Lake (25)	18,456	10,549	57.2%	56.8%	46.5%	66.6%
51	Taylorsville (30)	27,372	16,535	60.4%	62.1%	55.8%	68.0%
61	West Jordan North (33)	30,391	18,891	62.2%	66.3%	60.7%	71.5%
39	West Jordan/Copperton (34)	26,360	15,993	60.7%	59.4%	52.1%	66.3%
48	West Valley East (23)	35,527	22,325	62.8%	61.6%	55.0%	67.7%
60	West Valley West (22)	44,794	29,851	66.6%	65.4%	59.4%	71.0%
	Southeastern Utah HD	36,828	21,695	58.9%	58.6%	55.5%	61.6%
45	Carbon/Emery Co. (56)	21,451	13,156	61.3%	60.9%	57.1%	64.5%
14	Grand/San Juan Co. (57)	15,377	8,345	54.3%	53.4%	48.0%	58.6%
	Southwest Utah HD	116,150	63,104	54.3%	55.0%	51.8%	58.2%
15	Cedar City (60)	22,401	11,160	49.8%	53.4%	46.3%	60.5%
18	Other Southwest District (61)	15,384	8,707	56.6%	53.8%	46.0%	61.4%
26	Other Washington County (59)	32,503	18,380	56.6%	56.5%	50.4%	62.5%
20	St. George (58)	45,862	24,761	54.0%	55.4%	50.2%	60.5%
2	**Summit County HD (51)**	24,525	10,359	42.2%	42.9%	39.5%	46.3%
53	**Tooele County HD (40)**	32,458	20,179	62.2%	63.0%	59.9%	65.9%
56	**TriCounty HD (53)**	28,023	18,013	64.3%	63.8%	60.7%	66.8%
	Utah County HD	278,832	141,228	50.7%	56.7%	54.3%	59.1%
30	American Fork/Alpine (42)	26,819	14,694	54.8%	57.5%	50.8%	63.9%
32	East Orem (46)	14,955	8,832	59.1%	58.2%	47.6%	68.2%
52	Lehi/Cedar Valley (41)	18,752	10,377	55.3%	62.2%	54.7%	69.2%
40	North Orem (44)	25,965	14,730	56.7%	59.4%	51.3%	67.0%
29	Pleasant Grove/Lindon (43)	24,636	13,242	53.8%	57.3%	50.2%	64.0%
6	Provo/BYU (47)	39,401	14,945	37.9%	46.9%	38.5%	55.6%
23	Provo South (48)	48,138	19,467	40.4%	56.1%	48.1%	63.8%
34	Springville/Spanish Fork (49)	41,036	22,960	56.0%	58.9%	53.4%	64.2%
44	Utah Co. South (50)	17,363	10,025	57.7%	60.8%	52.7%	68.3%
17	West Orem (45)	21,774	9,866	45.3%	53.7%	45.0%	62.2%
22	**Wasatch County HD (52)**	12,514	6,978	55.8%	56.1%	52.4%	59.6%
	Weber-Morgan HD	148,702	84,403	56.8%	57.5%	54.8%	60.3%
33	Ben Lomond (5)	33,215	18,806	56.6%	58.7%	53.0%	64.1%
41	Downtown Ogden (7)	21,684	12,798	59.0%	59.5%	50.8%	67.7%
10	Morgan/East Weber Co. (6)	24,131	12,560	52.1%	51.3%	44.7%	57.9%
24	Riverdale (10)	15,522	8,354	53.8%	56.1%	48.5%	63.5%
55	Roy/Hooper (9)	27,898	17,821	63.9%	63.8%	57.8%	69.4%
19	South Ogden (8)	26,255	14,033	53.5%	55.2%	48.2%	62.0%

*State rank is by 61 small areas for age-adjusted rate; 1 is always the lowest rate in the state and 61 is always the highest rate in the state.

Figure 19.2: Overweight or Obese by Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)

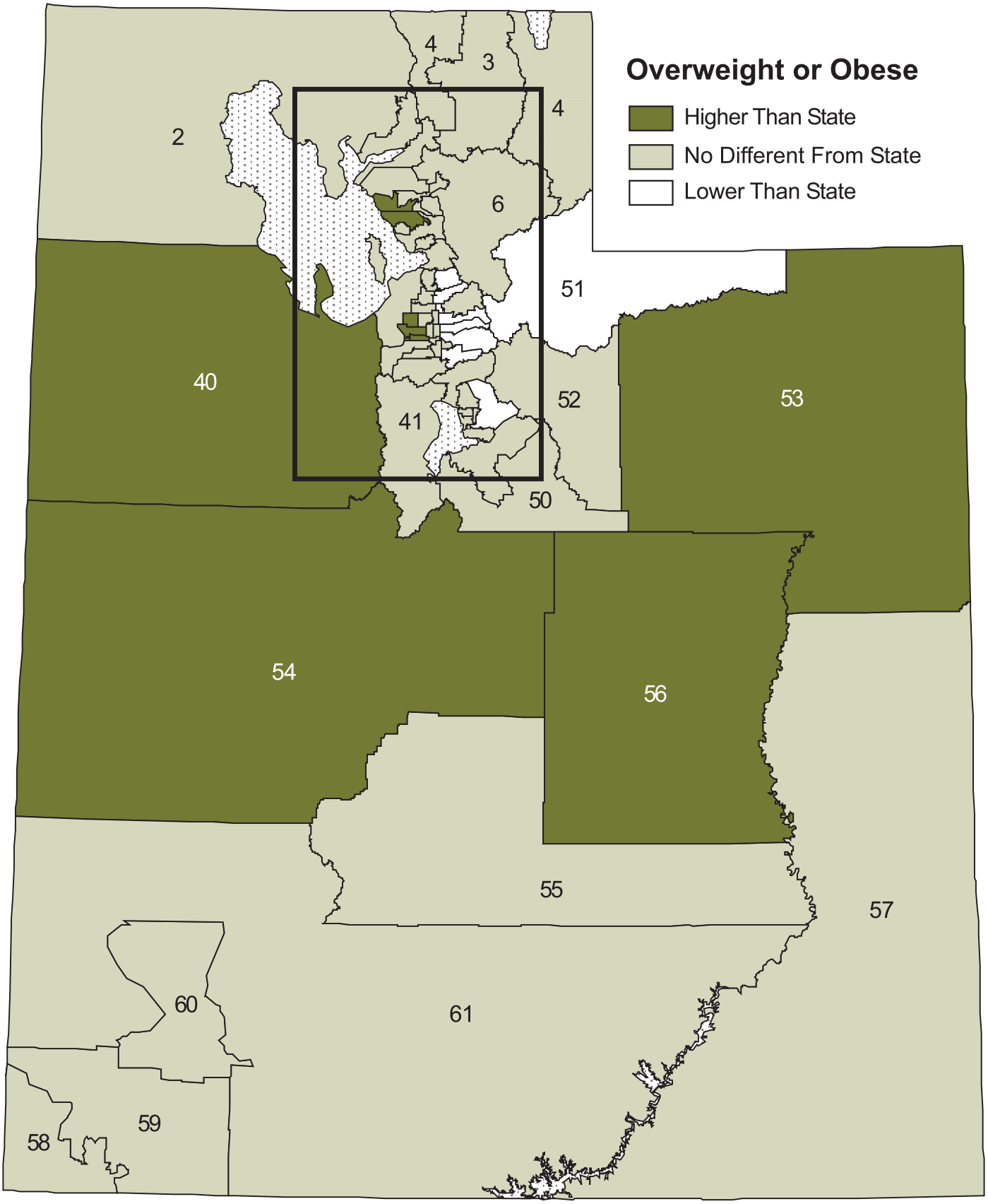
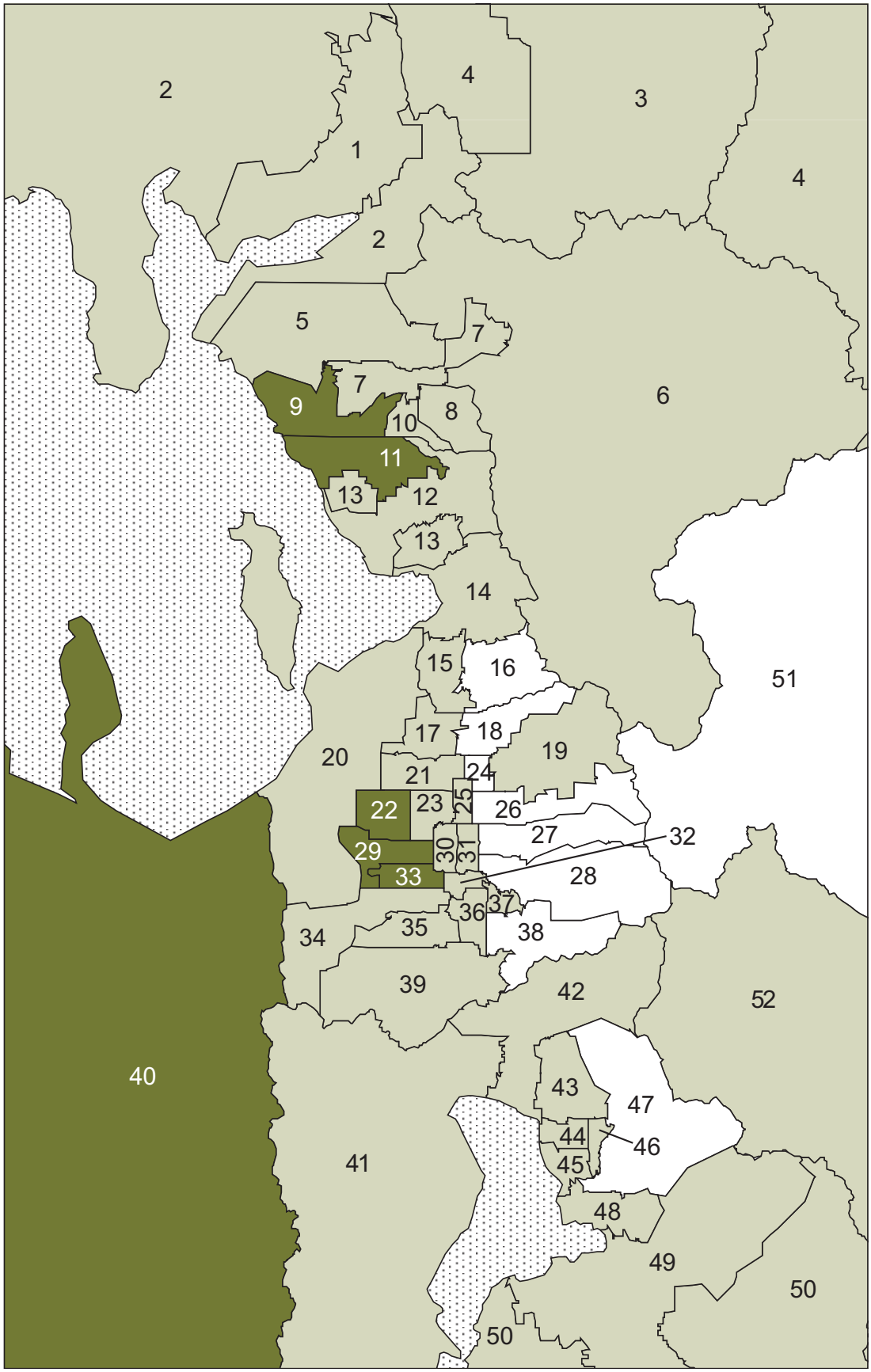


Figure 19.3: Overweight or Obese by Small Area, Wasatch Front Adults Aged 18+, 2001–2005 (Age-adjusted)



20. Obese

Measure Definition: *"About how much do you weigh without shoes? About how tall are you without shoes?"* ***[BMI≥30 calculated from reported height and weight]***

Why is obesity important to public health?

Maintenance of a healthy weight is a major goal in the effort to reduce the burden of illness and its consequent reduction in quality of life and life expectancy. The relationship of body mass index (BMI, weight (kg)/height (m^2)) to health outcomes generally supports that a BMI of less than 25 is the upper limit of the healthy weight range.[43,44] Obese (BMI≥30) individuals are at increased risk for diabetes, hypertension, stroke, heart disease, arthritis, asthma, and some cancers. Nationally an estimated 300,000 deaths per year may be attributable to obesity, and individuals who are obese have a 50% to 100% increased risk of premature death from all causes compared to individuals with a healthy weight.[18]

Risk factors for obesity

Obesity is caused by an energy imbalance due to consumption of too many calories and/or expenditure of too few calories. Factors that may contribute include inherited, metabolic, behavioral, environmental, cultural, and socioeconomic components. Changes to potentially modifiable factors, which include all of the above except the inherited component, may result in changed BMI as a consequence of changes in energy balance.

Overweight adolescents have a 70% chance of becoming overweight or obese adults.[18] This rate increases to 80% if one or more parents are overweight or obese.[18] The risk of being an obese adult is 1.3 times higher for those who were overweight at one or two years of age compared with those who were not overweight at that age.[45] The risk for being an obese adult is 17.5 times higher for those who are overweight at 15 to 17 years of age.[45]

Obesity in Utah

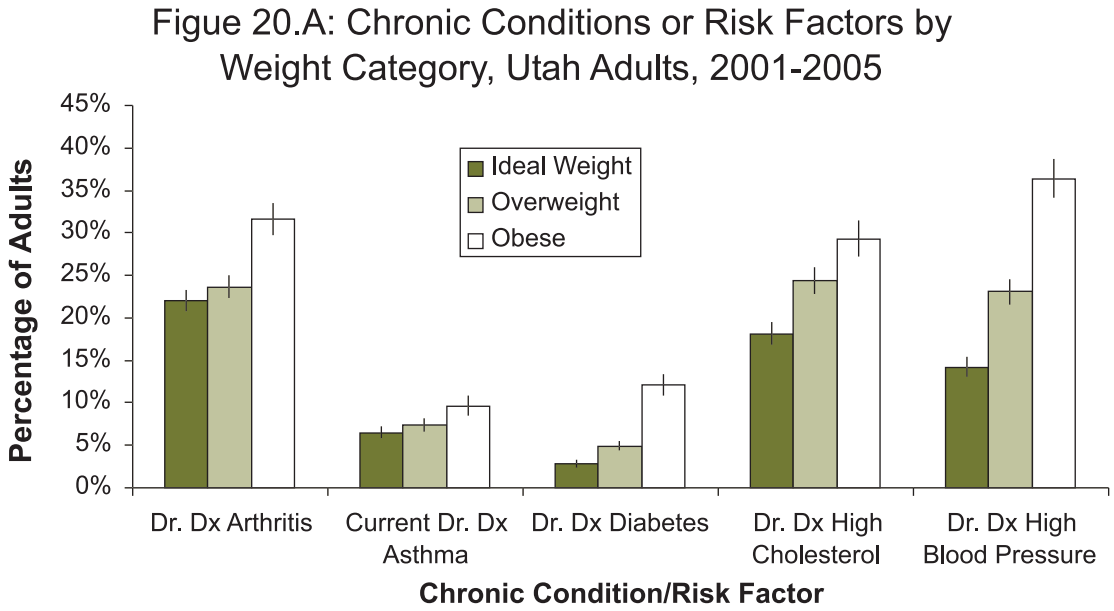
On average, during the years 2001–2005, about one in five Utah adults were obese (19.9%, or 329,005 Utah adults). Prevalence was higher in Utah adult males than in Utah adult females. The combined rate has increased steadily from 10.4% in 1989 to 22.1% in 2005, an increase of 112%.

These trends are similar to those observed nationally. In the U.S., the mean obesity rate has increased from 11.3% in 1989 to 24.4% in 2005, an increase of 116%.

After adjusting for age, Tooele County and TriCounty health districts had a higher prevalence of obesity (25.8% and 25.1% respectively), while Summit County had a lower prevalence of obesity (10.7%) when compared to the state rate. There were also several small areas with higher and lower prevalence rates of obesity relative to the state rate. Those with higher rates included American Fork/Alpine (27.3%), Rose Park (30.4%), Sandy Center (27.1%), and West Jordan North (30.5%). Those with lower rates included Avenues (8.7%), Cottonwood (11.8%), Downtown Salt Lake (13.3%), and Holladay (11.7%).

Utah Objective: Same as HP2010 objective.
HP2010 Objective 19-2 (related): Reduce the proportion of adults aged 20 years and older who are obese to 15% (age-adjusted to the U.S. 2000 standard population).

Obesity in Utah (continued)



Prevention/Resources

The Utah Department of Health (UDOH) Obesity website (http://health.utah.gov/obesity/) has comprehensive information, including *Tipping the Scales Toward a Healthier Population: A Report on Overweight and Obesity in Utah* (the Report), and *Tipping the Scales Toward a Healthier Population: The Utah Blueprint to Promote Healthy Weight for Children, Youth and Adults* (the Blueprint). In the Report you will find comprehensive data on obesity prevalence, risk, co-existing conditions, and successes to manage a healthy weight. In the Blueprint you will find Utah's objectives and strategies to impact overweight and obesity in seven critical settings: families, schools, communities, work sites, health care, media, and government. Also on this website you will find current overweight and obesity information and resources on the breaking news page. Other resources include the UDOH Gold Medal Mile program (http://utahwalks.org/gmm/index.php) and the UDOH Gold Medal Schools program (http://www.hearthighway.org/gms/)

20. Obese

Figure 20.1: Percentage of Adults Who Were Obese by Local Health District and Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)

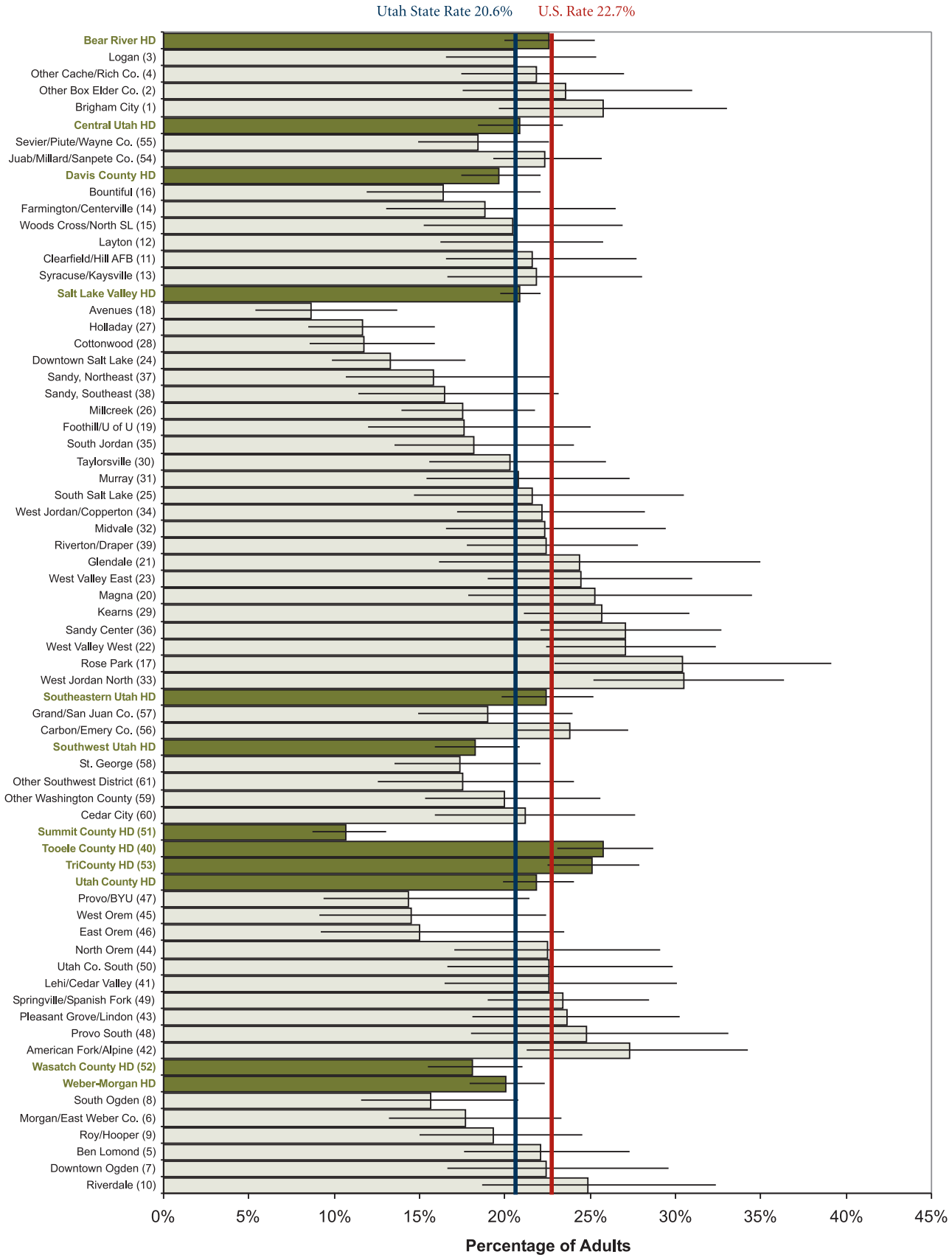


Table 20: Obese by Health District, Small Area, Utah, and U.S., 2001-2005

State Rank*	State, Health District, or Small Area	2003 Population 18+	Number of Adults Who Were Obese	Crude Rate	Age-adjusted Rate	95% Confidence Interval Lower	95% Confidence Interval Upper
	U.S.	217,803,051	49,789,777	22.9%	22.7%	22.6%	22.9%
	State of Utah	1,657,454	329,005	19.9%	20.6%	19.9%	21.3%
	Bear River HD	98,027	20,213	20.6%	22.5%	20.0%	25.3%
55	Brigham City (1)	14,566	3,905	26.8%	25.8%	19.7%	33.0%
28	Logan (3)	45,904	7,478	16.3%	20.6%	16.5%	25.3%
45	Other Box Elder Co. (2)	14,636	3,391	23.2%	23.6%	17.5%	31.0%
34	Other Cache/Rich Co. (4)	22,921	5,038	22.0%	21.8%	17.4%	27.0%
	Central Utah HD	47,558	9,626	20.2%	20.8%	18.5%	23.4%
38	Juab/Millard/Sanpete Co. (54)	31,637	6,815	21.5%	22.3%	19.3%	25.7%
20	Sevier/Piute/Wayne Co. (55)	15,921	2,855	17.9%	18.4%	14.9%	22.6%
	Davis County HD	175,027	32,520	18.6%	19.6%	17.4%	22.1%
11	Bountiful (16)	33,318	5,454	16.4%	16.4%	11.9%	22.1%
32	Clearfield/Hill AFB (11)	37,329	7,779	20.8%	21.6%	16.6%	27.7%
21	Farmington/Centerville (14)	19,034	3,736	19.6%	18.9%	13.0%	26.5%
27	Layton (12)	46,815	8,272	17.7%	20.6%	16.2%	25.8%
33	Syracuse/Kaysville (13)	24,542	5,038	20.5%	21.8%	16.7%	28.0%
26	Woods Cross/North SL (15)	13,989	2,186	15.6%	20.4%	15.2%	26.9%
	Salt Lake Valley HD	658,810	134,331	20.4%	20.9%	19.8%	22.1%
1	Avenues (18)	18,959	1,653	8.7%	8.7%	5.4%	13.7%
4	Cottonwood (28)	33,297	4,002	12.0%	11.8%	8.6%	15.9%
5	Downtown Salt Lake (24)	42,808	5,415	12.7%	13.3%	9.9%	17.7%
16	Foothill/U of U (19)	17,778	3,013	17.0%	17.6%	12.0%	25.0%
48	Glendale (21)	18,642	4,634	24.9%	24.4%	16.2%	35.0%
3	Holladay (27)	35,956	4,570	12.7%	11.7%	8.5%	15.9%
54	Kearns (29)	42,995	10,581	24.6%	25.7%	21.1%	30.8%
53	Magna (20)	15,623	3,759	24.1%	25.3%	17.9%	34.4%
37	Midvale (32)	21,672	4,577	21.1%	22.3%	16.5%	29.4%
14	Millcreek (26)	44,008	7,534	17.1%	17.5%	13.9%	21.8%
29	Murray (31)	24,072	4,896	20.3%	20.7%	15.4%	27.3%
39	Riverton/Draper (39)	41,391	8,796	21.3%	22.4%	17.8%	27.8%
60	Rose Park (17)	22,639	6,740	29.8%	30.4%	22.9%	39.1%
57	Sandy Center (36)	36,106	8,554	23.7%	27.1%	22.1%	32.7%
10	Sandy, Northeast (37)	18,245	2,810	15.4%	15.8%	10.7%	22.8%
12	Sandy, Southeast (38)	20,781	3,387	16.3%	16.5%	11.4%	23.2%
19	South Jordan (35)	20,931	4,172	19.9%	18.2%	13.5%	24.0%
31	South Salt Lake (25)	18,456	4,097	22.2%	21.6%	14.7%	30.5%
25	Taylorsville (30)	27,372	5,639	20.6%	20.3%	15.6%	26.0%
61	West Jordan North (33)	30,391	8,482	27.9%	30.5%	25.2%	36.3%
36	West Jordan/Copperton (34)	26,360	5,973	22.7%	22.2%	17.2%	28.2%
49	West Valley East (23)	35,527	8,807	24.8%	24.5%	19.0%	31.0%
58	West Valley West (22)	44,794	12,542	28.0%	27.1%	22.4%	32.4%
	Southeastern Utah HD	36,828	8,330	22.6%	22.4%	19.8%	25.2%
47	Carbon/Emery Co. (56)	21,451	5,174	24.1%	23.8%	20.7%	27.2%
22	Grand/San Juan Co. (57)	15,377	3,035	19.7%	19.0%	14.9%	24.0%
	Southwest Utah HD	116,150	20,977	18.1%	18.2%	15.9%	20.8%
30	Cedar City (60)	22,401	3,882	17.3%	21.2%	15.9%	27.6%
15	Other Southwest District (61)	15,384	2,980	19.4%	17.6%	12.5%	24.0%
24	Other Washington County (59)	32,503	6,582	20.3%	20.0%	15.4%	25.6%
13	St. George (58)	45,862	7,521	16.4%	17.4%	13.5%	22.1%
2	**Summit County HD (51)**	24,525	2,602	10.6%	10.7%	8.7%	13.0%
56	**Tooele County HD (40)**	32,458	8,407	25.9%	25.8%	23.1%	28.7%
52	**TriCounty HD (53)**	28,023	7,163	25.6%	25.1%	22.5%	27.9%
	Utah County HD	278,832	51,974	18.6%	21.8%	19.9%	24.0%
59	American Fork/Alpine (42)	26,819	6,968	26.0%	27.3%	21.3%	34.2%
8	East Orem (46)	14,955	1,937	13.0%	15.0%	9.3%	23.4%
43	Lehi/Cedar Valley (41)	18,752	3,692	19.7%	22.6%	16.5%	30.1%
41	North Orem (44)	25,965	5,209	20.1%	22.5%	17.1%	29.1%
46	Pleasant Grove/Lindon (43)	24,636	5,223	21.2%	23.7%	18.1%	30.3%
6	Provo/BYU (47)	39,401	4,669	11.9%	14.4%	9.3%	21.4%
50	Provo South (48)	48,138	8,183	17.0%	24.8%	18.0%	33.1%
44	Springville/Spanish Fork (49)	41,036	8,769	21.4%	23.4%	19.0%	28.5%
42	Utah Co. South (50)	17,363	3,815	22.0%	22.5%	16.6%	29.8%
7	West Orem (45)	21,774	2,474	11.4%	14.6%	9.1%	22.4%
18	**Wasatch County HD (52)**	12,514	2,304	18.4%	18.1%	15.5%	21.1%
	Weber-Morgan HD	148,702	30,038	20.2%	20.2%	18.1%	22.5%
35	Ben Lomond (5)	33,215	7,281	21.9%	22.1%	17.6%	27.3%
40	Downtown Ogden (7)	21,684	4,762	22.0%	22.4%	16.6%	29.6%
17	Morgan/East Weber Co. (6)	24,131	4,479	18.6%	17.7%	13.2%	23.3%
51	Riverdale (10)	15,522	3,798	24.5%	24.9%	18.7%	32.3%
23	Roy/Hooper (9)	27,898	5,401	19.4%	19.3%	15.0%	24.6%
9	South Ogden (8)	26,255	4,293	16.4%	15.7%	11.6%	20.8%

*State rank is by 61 small areas for age-adjusted rate; 1 is always the lowest rate in the state and 61 is always the highest rate in the state.

Figure 20.2: Obese by Small Area, Utah Adults Aged 18+, 2001–2005 (Age-adjusted)

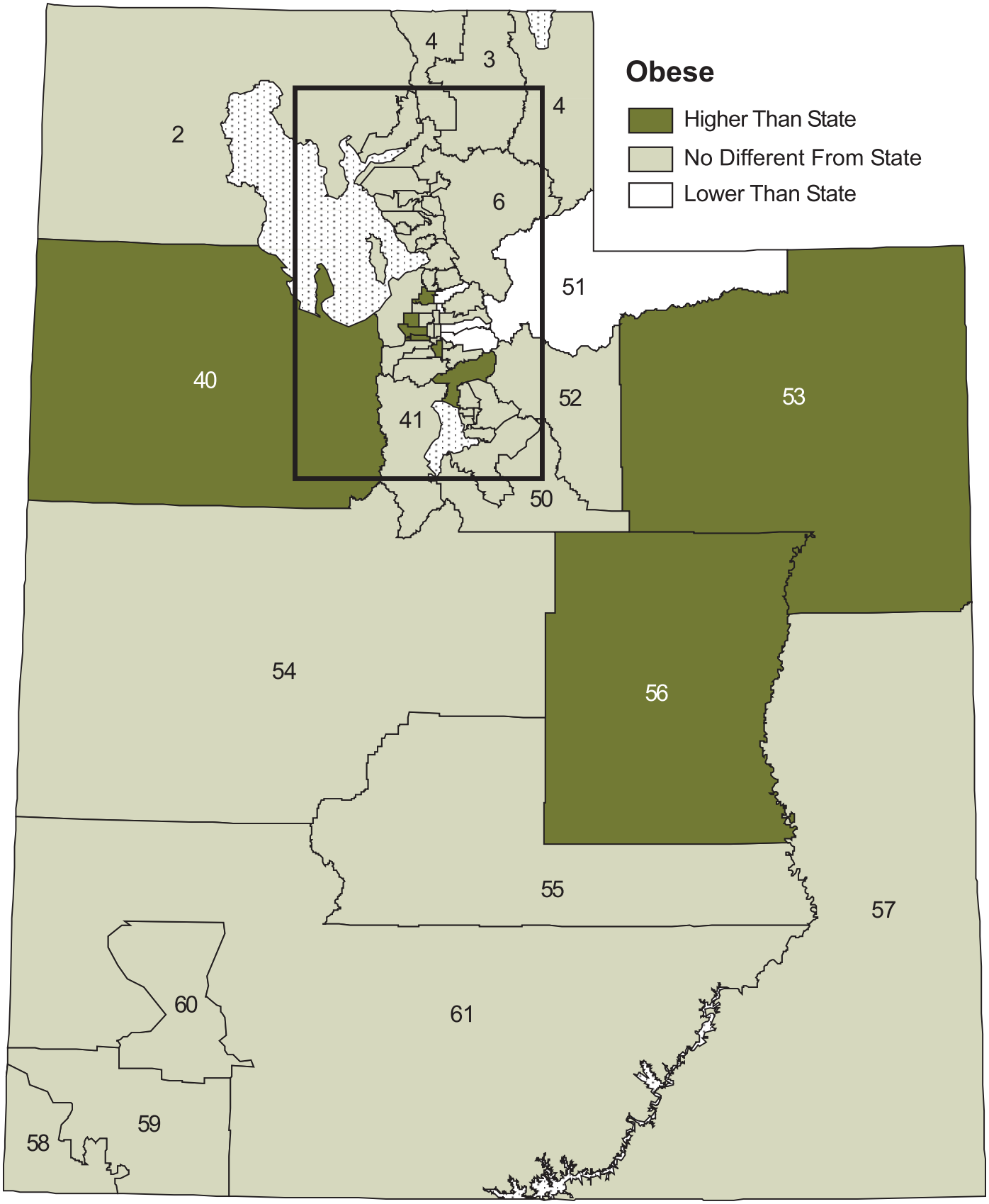
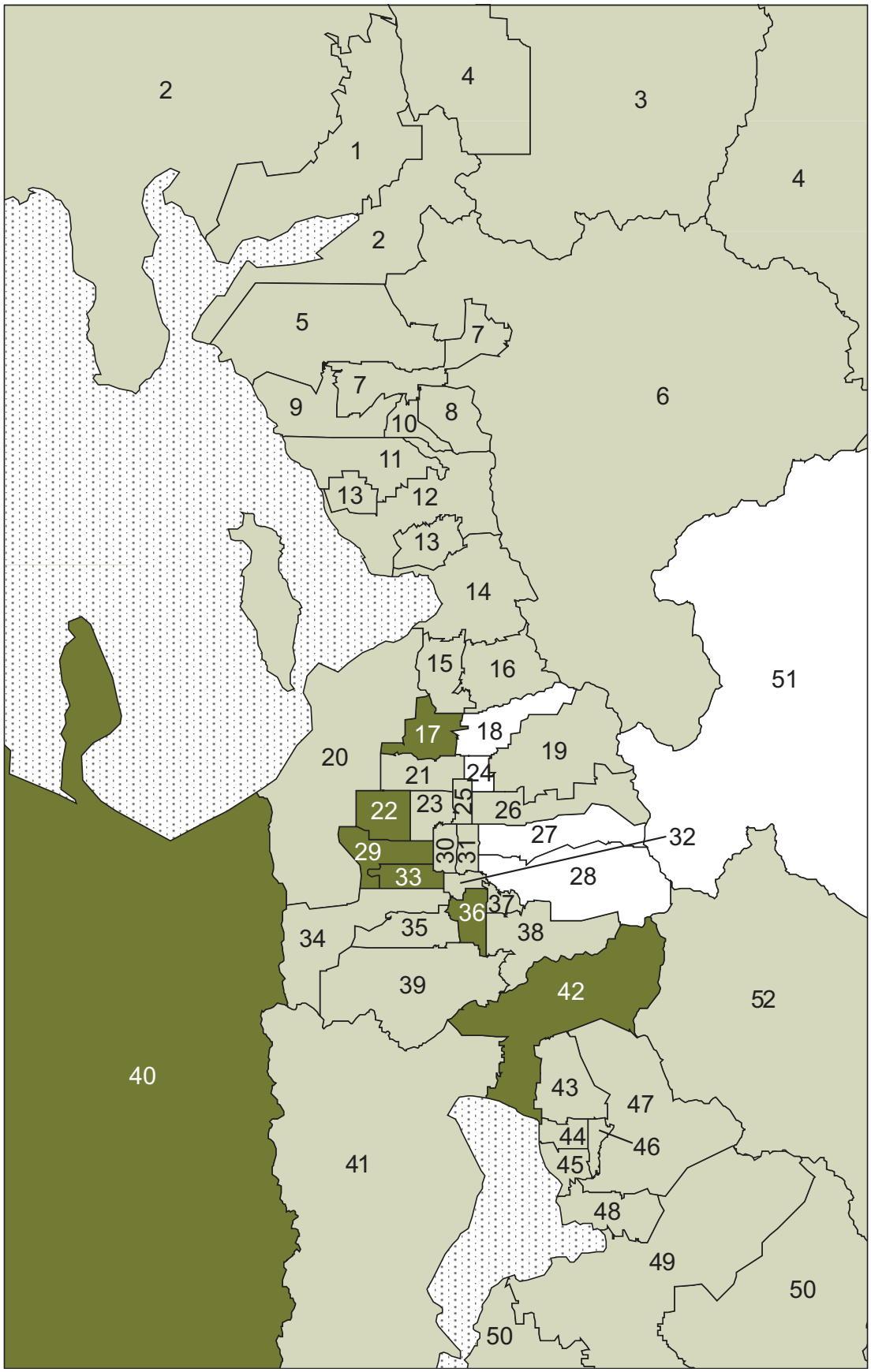


Figure 20.3: Obese by Small Area, Wasatch Front Adults Aged 18+, 2001–2005 (Age-adjusted)



21. Two or More Fruits per Day

Measure Definition: *"How often do you eat fruit? How often do you drink juices such as orange, grapefruit, or tomato juice?"* ***[Eat at least two fruits per day]***

Why is eating two or more fruits per day important to public health?

The 2005 Dietary Guidelines for Americans recommends a person eat 5 to 13 servings of fruits and vegetables each day, depending on their caloric level, for better health.[17] Two cups of fruit per day are recommended for a reference 2,000-calorie intake. Fruits provide a variety of micronutrients and phytochemicals that help the body fight off infection and aid in cell reproduction, and other cell functions. The guidelines recommend that whole fruits, such as fresh, canned, frozen, or dried fruits be consumed rather than fruit juice to ensure adequate fiber intake. Fruits are good sources of nutrients such as vitamin A (carotenoids), which is found in orange fruits; vitamin C, which is found in citrus fruits, kiwi fruit, strawberries, guava, papaya, and cantaloupe; folate, which is found in oranges; and potassium, which is found in bananas, oranges, cantaloupe, honeydew melons, and many dried fruits.[17]

Comparisons between people who include few fruits and vegetables in their diet, and people who include generous amounts of fruits and vegetables as part of a healthful diet show that a higher intake of fruits and vegetables is likely to reduce the risk for chronic diseases, type 2 diabetes, and cancers in specific sites (oral cavity and pharynx, larynx, lung, esophagus, stomach, and colon-rectum).[17] Also, diets rich in foods containing fiber, like fruits, may reduce the risk of coronary heart disease by helping to remove cholesterol from the bloodstream and reduce blood lipid levels.[17,46]

Risk factors for fewer than two fruits per day

Only 20% of Americans eat five or more servings of vegetables and fruits a day. Teen boys, men 45 and older, and women 55 and older are the heaviest fruit and vegetable consumers. Older people consume fruits and vegetables more frequently, partially because they consume more meals at home, and men and teen boys consume larger portions. Among families with children, only 13% eat at least five or more servings. It appears that both parents and children drive this non-achievement; all members of the family eat about 10% fewer fruits and vegetables when the mother works outside the home.[47]

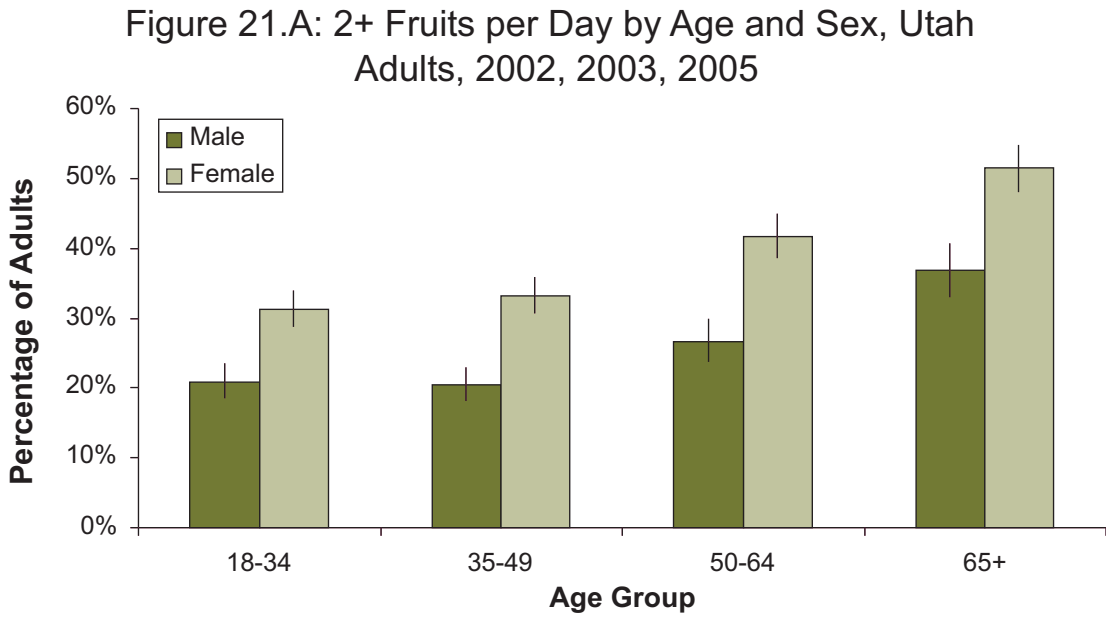
Two or more fruits per day in Utah

Rates of people who eat at least two fruits a day have remained relatively unchanged over the past decade. Between 2001–2005, the age-adjusted percentage of Utah adults who ate at least two fruits per day was 31.2%. The rate varied by local health district, from a low of 25.3% to a high of 34.5%. None of the local health districts had an age-adjusted rate that was higher than the state rate, but four had rates lower than the state rate. Summit County and Tooele County health districts had the highest and lowest rates in the state, respectively. Seven of Utah's 61 small areas had age-adjusted rates that were significantly lower than the state rate, and three small areas had rates that were significantly higher than the state rate. Overall, Utah's rate was lower than the U.S. rate.

Women were significantly more likely to eat at least two fruits per day ($p<0.001$) across all age groups. Consumption of at least two fruits per day also increased with age for people 35 years and older.

Utah Objective: Same as HP2010 objective.
HP2010 Objective (related) 19-5: Increase the proportion of persons aged 2 years and older who consume at least two daily servings of fruit to 75% (age-adjusted to the U.S. 2000 standard population).

Two or more fruits per day in Utah (continued)

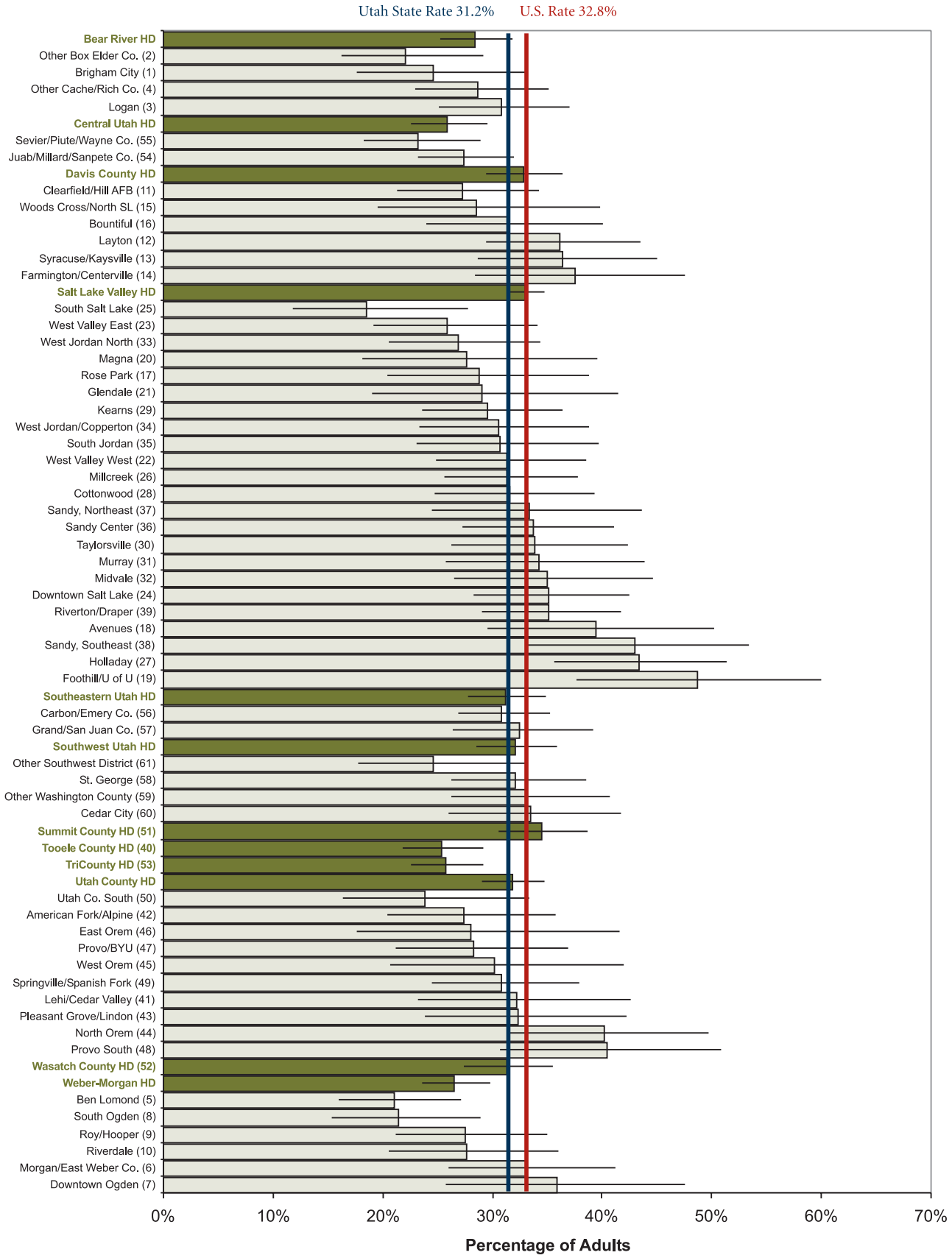


Prevention/Resources

The Heart Disease and Stroke Prevention Program at the Utah Department of Health works with various public and private partners promoting the 5 A Day message in schools, communities, health care settings, and families. The message to increase intake of vegetables is incorporated into the Gold Medal Schools Program, 5 A Day school newsletter, Grocery Store Tours for third grade students, and the website www.hearthighway.org. The Check Your Health Campaign provides 5 A Day messages intended for families at www.checkyourhealth.org. Additional nutrition information can be found at www.mypyramid.gov.

21. Two or More Fruits per Day

Figure 21.1: Percentage of Adults Who Reported Two or More Fruits per Day by Local Health District and Small Area, Utah Adults Aged 18+, 2002, 2003, 2005 (Age-adjusted)



21. Two or More Fruits per Day

Table 21: 2+ Fruits per Day by Health District, Small Area, Utah, and U.S., 2002, 2003, 2005

State Rank*	State, Health District, or Small Area	2003 Population 18+	Number of Adults Reporting 2+ Fruits per Day	Crude Rate	Age-adjusted Rate	95% Confidence Interval	
						Lower	Upper
	U.S.	217,803,051	71,395,840	32.8%	32.8%	32.6%	33.0%
	State of Utah	1,657,454	499,059	30.1%	31.2%	30.2%	32.3%
	Bear River HD	98,027	26,644	27.2%	28.4%	25.2%	31.9%
7	Brigham City (1)	14,566	3,330	22.9%	24.6%	17.6%	33.2%
29	Logan (3)	45,904	13,454	29.3%	30.8%	25.2%	37.1%
4	Other Box Elder Co. (2)	14,636	3,284	22.4%	22.0%	16.3%	29.1%
22	Other Cache/Rich Co. (4)	22,921	6,583	28.7%	28.6%	22.9%	35.1%
	Central Utah HD	47,558	12,237	25.7%	25.9%	22.6%	29.5%
14	Juab/Millard/Sanpete Co. (54)	31,637	8,498	26.9%	27.4%	23.2%	32.0%
5	Sevier/Piute/Wayne Co. (55)	15,921	3,780	23.7%	23.2%	18.3%	28.9%
	Davis County HD	175,027	55,134	31.5%	32.8%	29.4%	36.3%
35	Bountiful (16)	33,318	9,646	29.0%	31.5%	24.0%	40.1%
13	Clearfield/Hill AFB (11)	37,329	9,168	24.6%	27.3%	21.3%	34.2%
55	Farmington/Centerville (14)	19,034	7,496	39.4%	37.5%	28.4%	47.6%
53	Layton (12)	46,815	16,320	34.9%	36.1%	29.4%	43.5%
54	Syracuse/Kaysville (13)	24,542	8,558	34.9%	36.4%	28.6%	45.0%
21	Woods Cross/North SL (15)	13,989	4,044	28.9%	28.6%	19.5%	39.8%
	Salt Lake Valley HD	658,810	210,095	31.9%	32.9%	31.3%	34.7%
56	Avenues (18)	18,959	8,082	42.6%	39.4%	29.6%	50.3%
36	Cottonwood (28)	33,297	10,758	32.3%	31.6%	24.8%	39.3%
50	Downtown Salt Lake (24)	42,808	14,157	33.1%	35.1%	28.3%	42.5%
61	Foothill/U of U (19)	17,778	8,738	49.2%	48.8%	37.7%	60.0%
24	Glendale (21)	18,642	5,891	31.6%	29.0%	19.0%	41.5%
60	Holladay (27)	35,956	16,029	44.6%	43.3%	35.7%	51.4%
25	Kearns (29)	42,995	10,826	25.2%	29.6%	23.6%	36.4%
18	Magna (20)	15,623	4,039	25.9%	27.6%	18.2%	39.6%
49	Midvale (32)	21,672	7,290	33.6%	35.0%	26.5%	44.6%
34	Millcreek (26)	44,008	13,959	31.7%	31.4%	25.6%	37.7%
47	Murray (31)	24,072	8,115	33.7%	34.3%	25.8%	43.9%
51	Riverton/Draper (39)	41,391	13,883	33.5%	35.1%	29.0%	41.8%
23	Rose Park (17)	22,639	7,120	31.5%	28.8%	20.5%	38.9%
45	Sandy Center (36)	36,106	11,742	32.5%	33.8%	27.2%	41.0%
43	Sandy, Northeast (37)	18,245	6,240	34.2%	33.4%	24.5%	43.7%
59	Sandy, Southeast (38)	20,781	8,849	42.6%	43.0%	33.2%	53.5%
28	South Jordan (35)	20,931	6,302	30.1%	30.7%	23.1%	39.7%
1	South Salt Lake (25)	18,456	3,883	21.0%	18.5%	11.8%	27.8%
46	Taylorsville (30)	27,372	8,094	29.6%	33.8%	26.2%	42.3%
12	West Jordan North (33)	30,391	7,440	24.5%	26.9%	20.5%	34.4%
27	West Jordan/Copperton (34)	26,360	6,877	26.1%	30.5%	23.4%	38.8%
11	West Valley East (23)	35,527	8,949	25.2%	25.9%	19.1%	34.1%
33	West Valley West (22)	44,794	13,752	30.7%	31.3%	24.9%	38.6%
	Southeastern Utah HD	36,828	11,251	30.6%	31.3%	27.9%	35.0%
31	Carbon/Emery Co. (56)	21,451	6,459	30.1%	30.9%	26.8%	35.2%
40	Grand/San Juan Co. (57)	15,377	4,824	31.4%	32.5%	26.4%	39.2%
	Southwest Utah HD	116,150	38,306	33.0%	32.1%	28.5%	35.9%
44	Cedar City (60)	22,401	7,309	32.6%	33.4%	26.0%	41.8%
8	Other Southwest District (61)	15,384	4,617	30.0%	24.6%	17.7%	33.0%
41	Other Washington County (59)	32,503	10,209	31.4%	33.1%	26.3%	40.7%
37	St. George (58)	45,862	16,217	35.4%	32.1%	26.3%	38.6%
48	**Summit County HD (51)**	24,525	8,142	33.2%	34.5%	30.6%	38.7%
9	**Tooele County HD (40)**	32,458	7,761	23.9%	25.3%	21.9%	29.1%
10	**TriCounty HD (53)**	28,023	7,070	25.2%	25.7%	22.5%	29.2%
	Utah County HD	278,832	79,885	28.7%	31.7%	29.0%	34.7%
15	American Fork/Alpine (42)	26,819	7,386	27.5%	27.4%	20.4%	35.8%
19	East Orem (46)	14,955	2,740	18.3%	28.1%	17.6%	41.6%
38	Lehi/Cedar Valley (41)	18,752	5,429	29.0%	32.2%	23.2%	42.6%
57	North Orem (44)	25,965	8,844	34.1%	40.2%	31.4%	49.7%
39	Pleasant Grove/Lindon (43)	24,636	7,578	30.8%	32.3%	23.8%	42.2%
20	Provo/BYU (47)	39,401	11,986	30.4%	28.3%	21.1%	36.8%
58	Provo South (48)	48,138	15,245	31.7%	40.4%	30.7%	50.9%
30	Springville/Spanish Fork (49)	41,036	11,966	29.2%	30.8%	24.5%	38.0%
6	Utah Co. South (50)	17,363	3,424	19.7%	23.8%	16.4%	33.4%
26	West Orem (45)	21,774	6,195	28.5%	30.2%	20.6%	41.9%
32	**Wasatch County HD (52)**	12,514	3,799	30.4%	31.3%	27.3%	35.5%
	Weber-Morgan HD	148,702	38,588	26.0%	26.5%	23.5%	29.7%
2	Ben Lomond (5)	33,215	6,879	20.7%	21.0%	15.9%	27.2%
52	Downtown Ogden (7)	21,684	7,837	36.1%	35.9%	25.8%	47.6%
42	Morgan/East Weber Co. (6)	24,131	7,845	32.5%	33.1%	26.0%	41.2%
17	Riverdale (10)	15,522	4,484	28.9%	27.6%	20.5%	36.0%
16	Roy/Hooper (9)	27,898	6,757	24.2%	27.5%	21.2%	35.0%
3	South Ogden (8)	26,255	5,563	21.2%	21.4%	15.4%	28.9%

*State rank is by 61 small areas for age-adjusted rate; 1 is always the lowest rate in the state and 61 is always the highest rate in the state.

Figure 21.2: 2+ Fruits per Day by Small Area, Utah Adults Aged 18+, 2002, 2003, 2005 (Age-adjusted)

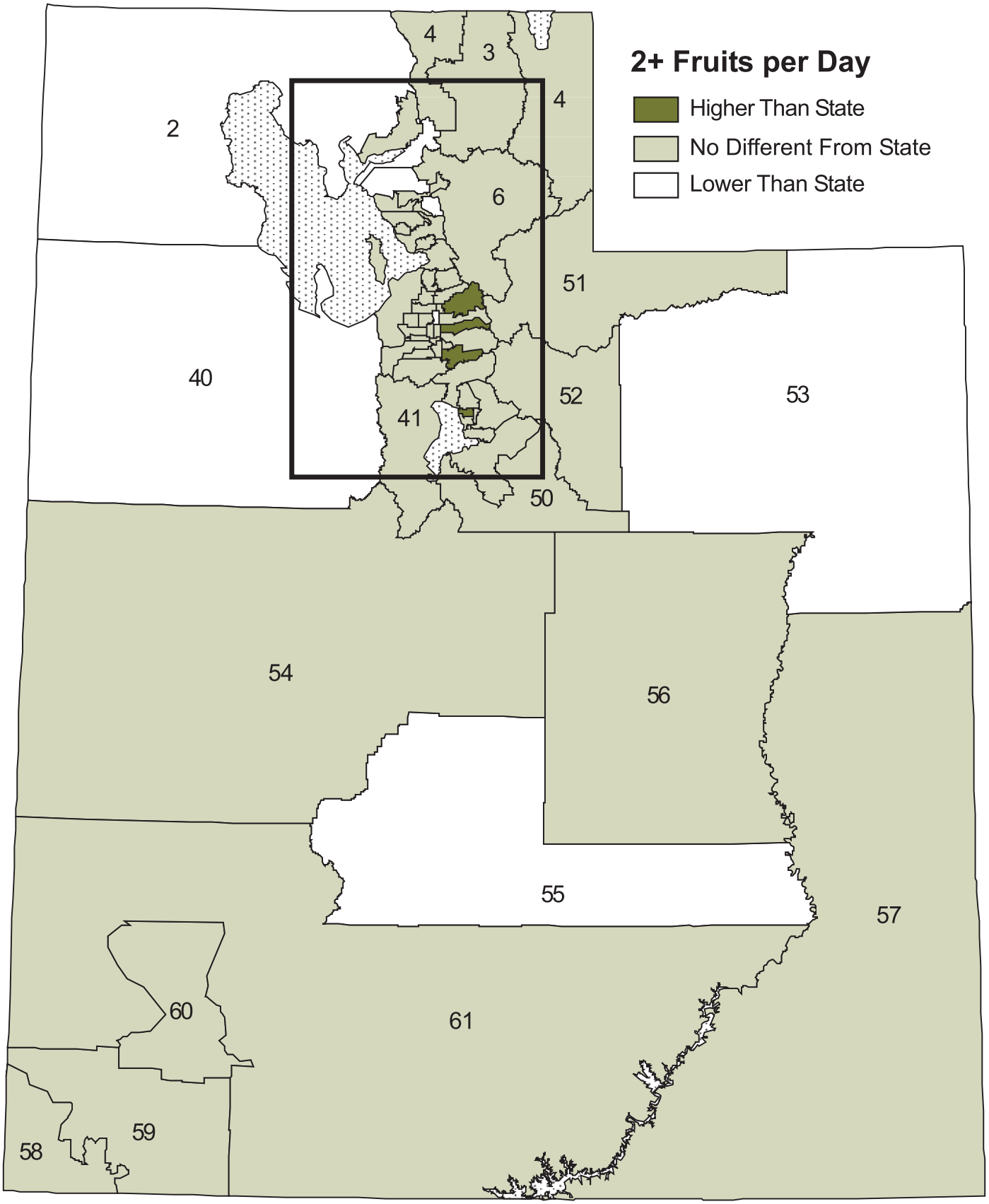
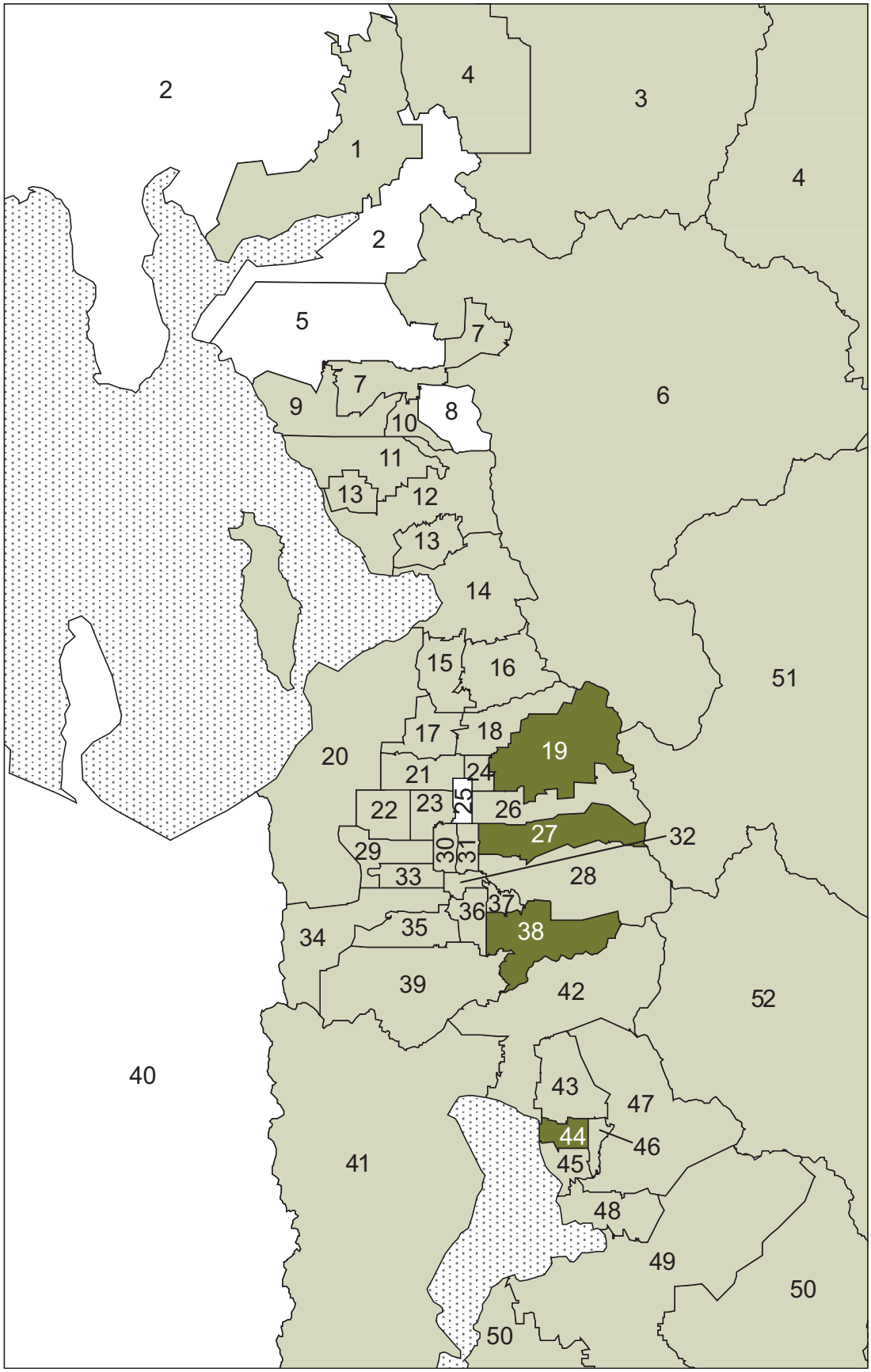


Figure 21.3: 2+ Fruits per Day by Small Area, Wasatch Front Adults 18+, 2002, 2003, 2005 (Age-adjusted)



22. Three or More Vegetables per Day

Measure Definition: "*How often do you eat vegetables including carrots, potatoes, green salad, or other vegetables?*" ***[Eat at least three vegetables per day]***

Why is three or more vegetables per day important to public health?

The 2005 Dietary Guidelines for Americans recommends a person eat 5 to 13 servings of fruits and vegetables each day, depending on their caloric level, for better health.[17] For example, 2½ cups of vegetables per day are recommended for a reference 2,000-calorie intake. Vegetables provide a variety of micronutrients and phytochemicals that help the body fight off infection and aid in cell reproduction and other cell functions. The guidelines recommend that a variety of vegetables be consumed including vegetables from each of the five subgroups: dark green vegetables, orange vegetables, legumes (dry beans), starchy vegetables, and other vegetables.[17]

Comparisons between people who include few fruits and vegetables in their diet and people who include generous amounts of fruits and vegetables as part of a healthful diet show that people with a higher intake of fruits and vegetables are likely to have reduced risk for chronic diseases, type 2 diabetes, and cancers (oral cavity and pharynx, larynx, lung, esophagus, stomach, and colon-rectum).[17] Additionally, diets rich in foods containing fiber, like vegetables, may reduce the risk of coronary heart disease by helping to remove cholesterol from the bloodstream thus reducing blood lipid levels.[17,46]

Risk factors for fewer than three vegetables per day

Only 20% of Americans eat five of more servings of vegetables and fruits a day. Teen boys, men 45 and older, and women 55 and older consume more fruits and vegetables daily. Older people consume fruits and vegetables more frequently, partially because they consume more meals at home, and men and teen boys simply consume a large volume of food by consuming larger portions. Of families with children, only 13% eat at least five or more servings. It appears that both parents and children contribute to this non-achievement. Additionally, all family members eat about 10% fewer fruits and vegetables when the mother works outside the home.[47]

Three or more vegetables per day in Utah

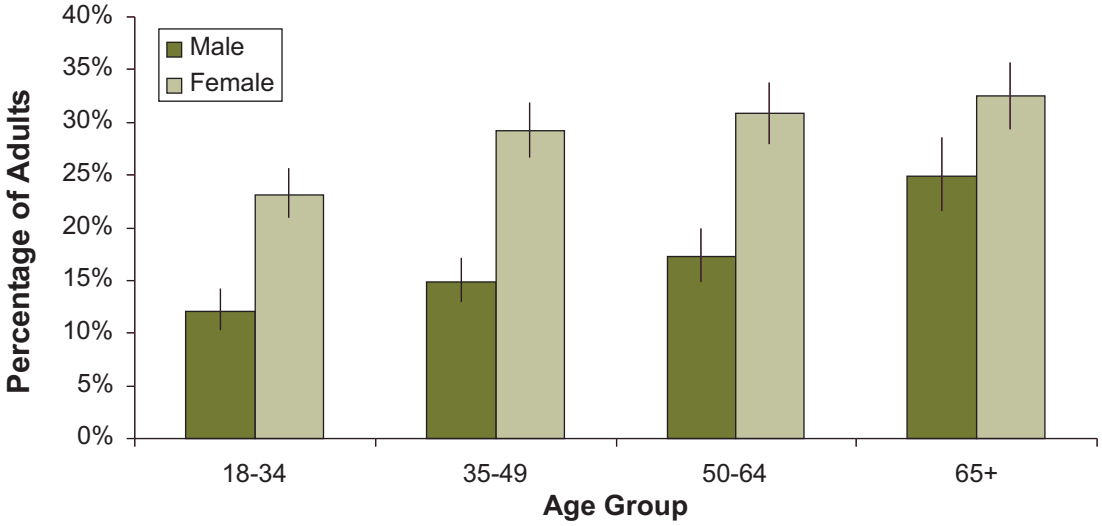
Rates of people who eat at least three vegetables a day have remained relatively unchanged over the past decade. Data collected between 2001–2005 show that the age-adjusted percentage of Utah adults who ate at least three vegetables a day was 22.2%. The rate varied by local health district, from a low of 9.7% to a high of 32.8%. Two local health districts had a rate that was significantly higher than the state rate. Summit County and Tooele County had the highest and lowest rates in the state, respectively. Nine of Utah's 61 small areas had age-adjusted rates that were significantly lower than the state rate, and two small areas had rates that were significantly higher than the state rate. Overall, Utah's rate was significantly lower than the U.S. rate.

Women were significantly more likely to eat at least three vegetables per day ($p<0.001$) for all age groups. Consumption of at least three vegetables per day also increased with age.

Utah Objective: Same as HP2010 objective.
HP2010 Objective (related) 19-6: Increase the proportion of persons aged 2 years and older who consume at least three daily servings of vegetables, with at least one-third being dark green or orange vegetables to 50% (age-adjusted to the U.S. 2000 standard population).

Three or more vegetables per day in Utah (continued)

Figure 22.A: 3+ Vegetables per Day by Age and Sex, Utah Adults, 2002, 2003, 2005

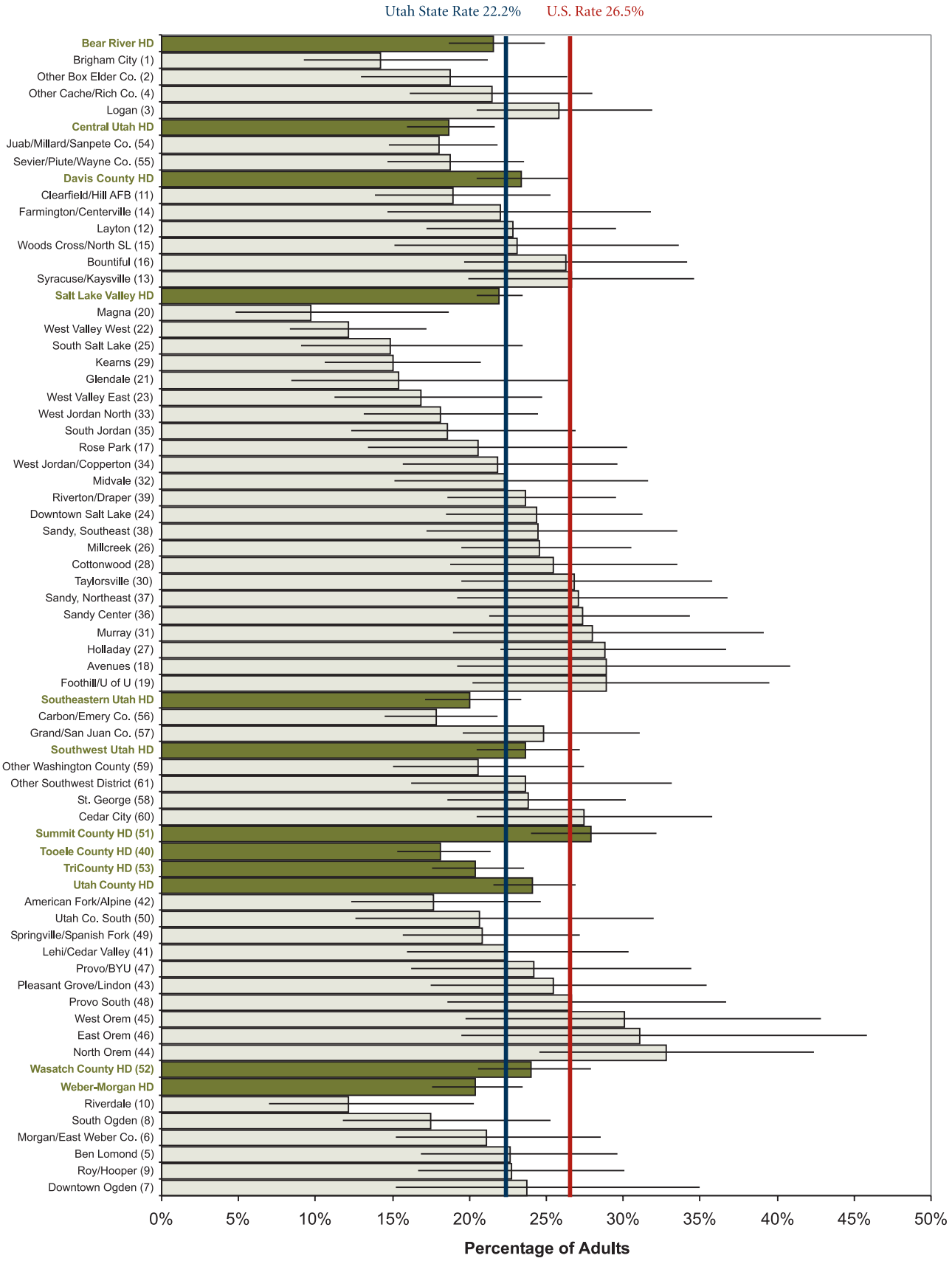


Prevention/Resources

The Heart Disease and Stroke Prevention Program at the Utah Department of Health works with various public and private partners promoting the 5 A Day message in schools, communities, health care settings, and families. The message to increase intake of vegetables is incorporated into the Gold Medal Schools Program, 5 A Day school newsletter, Grocery Store Tours for third grade students, and the website www.hearthighway.org. The Check Your Health Campaign provides 5 A Day messages intended for families at www.checkyourhealth.org. Additional nutrition information can be found at www.mypyramid.gov.

22. Three or More Vegetables per Day

Figure 22.1: Percentage of Adults Reporting Three or More Vegetables per Day by Local Health District and Small Area, Utah Adults Aged 18+, 2002, 2003, 2005 (Age-adjusted)



22. Three or More Vegetables per Day

Table 22: 3+ Vegetables per Day by Health District, Small Area, Utah, and U.S., 2002, 2003, 2005

State Rank*	State, Health District, or Small Area	2003 Population 18+	Number of Adults Reporting 3+ Vegetables per Day	Crude Rate	Age-adjusted Rate	95% Confidence Interval Lower	95% Confidence Interval Upper
	U.S.	217,803,051	57,848,490	26.6%	26.5%	26.3%	26.7%
	State of Utah	1,657,454	354,198	21.4%	22.2%	21.3%	23.2%
	Bear River HD	98,027	20,125	20.5%	21.6%	18.7%	24.9%
4	Brigham City (1)	14,566	1,984	13.6%	14.2%	9.2%	21.2%
46	Logan (3)	45,904	10,861	23.7%	25.8%	20.5%	31.9%
17	Other Box Elder Co. (2)	14,636	2,784	19.0%	18.8%	13.0%	26.4%
25	Other Cache/Rich Co. (4)	22,921	4,600	20.1%	21.4%	16.1%	28.0%
	Central Utah HD	47,558	8,689	18.3%	18.6%	15.9%	21.6%
12	Juab/Millard/Sanpete Co. (54)	31,637	5,669	17.9%	18.0%	14.8%	21.9%
16	Sevier/Piute/Wayne Co. (55)	15,921	3,009	18.9%	18.7%	14.7%	23.5%
	Davis County HD	175,027	38,873	22.2%	23.4%	20.5%	26.5%
47	Bountiful (16)	33,318	8,196	24.6%	26.3%	19.7%	34.1%
18	Clearfield/Hill AFB (11)	37,329	6,458	17.3%	18.9%	13.9%	25.3%
27	Farmington/Centerville (14)	19,034	4,218	22.2%	22.0%	14.7%	31.8%
32	Layton (12)	46,815	10,613	22.7%	22.8%	17.2%	29.6%
48	Syracuse/Kaysville (13)	24,542	6,096	24.8%	26.6%	19.9%	34.6%
33	Woods Cross/North SL (15)	13,989	3,360	24.0%	23.1%	15.1%	33.6%
	Salt Lake Valley HD	658,810	139,141	21.1%	21.9%	20.4%	23.4%
57	Avenues (18)	18,959	5,360	28.3%	28.9%	19.2%	40.9%
45	Cottonwood (28)	33,297	8,264	24.8%	25.4%	18.7%	33.5%
40	Downtown Salt Lake (24)	42,808	9,675	22.6%	24.3%	18.5%	31.3%
58	Foothill/U of U (19)	17,778	4,425	24.9%	28.9%	20.2%	39.5%
7	Glendale (21)	18,642	2,207	11.8%	15.4%	8.4%	26.6%
56	Holladay (27)	35,956	10,967	30.5%	28.8%	22.0%	36.7%
6	Kearns (29)	42,995	5,430	12.6%	15.0%	10.6%	20.7%
1	Magna (20)	15,623	1,564	10.0%	9.7%	4.8%	18.6%
28	Midvale (32)	21,672	4,950	22.8%	22.3%	15.1%	31.7%
42	Millcreek (26)	44,008	10,425	23.7%	24.6%	19.5%	30.5%
55	Murray (31)	24,072	6,473	26.9%	27.9%	18.9%	39.2%
34	Riverton/Draper (39)	41,391	8,916	21.5%	23.6%	18.6%	29.5%
21	Rose Park (17)	22,639	4,652	20.6%	20.6%	13.4%	30.3%
52	Sandy Center (36)	36,106	9,525	26.4%	27.3%	21.3%	34.4%
51	Sandy, Northeast (37)	18,245	4,461	24.5%	27.1%	19.2%	36.8%
41	Sandy, Southeast (38)	20,781	6,070	29.2%	24.5%	17.2%	33.5%
15	South Jordan (35)	20,931	3,954	18.9%	18.5%	12.3%	26.9%
5	South Salt Lake (25)	18,456	3,078	16.7%	14.8%	9.0%	23.4%
50	Taylorsville (30)	27,372	6,112	22.3%	26.8%	19.5%	35.8%
13	West Jordan North (33)	30,391	5,759	19.0%	18.1%	13.1%	24.5%
26	West Jordan/Copperton (34)	26,360	4,985	18.9%	21.9%	15.6%	29.7%
8	West Valley East (23)	35,527	5,944	16.7%	16.9%	11.2%	24.7%
2	West Valley West (22)	44,794	5,380	12.0%	12.1%	8.4%	17.2%
	Southeastern Utah HD	36,828	7,244	19.7%	20.0%	17.0%	23.3%
11	Carbon/Emery Co. (56)	21,451	3,805	17.7%	17.8%	14.5%	21.8%
43	Grand/San Juan Co. (57)	15,377	3,566	23.2%	24.9%	19.6%	31.0%
	Southwest Utah HD	116,150	27,957	24.1%	23.7%	20.5%	27.2%
53	Cedar City (60)	22,401	5,869	26.2%	27.4%	20.4%	35.8%
35	Other Southwest District (61)	15,384	4,080	26.5%	23.6%	16.2%	33.2%
20	Other Washington County (59)	32,503	6,806	20.9%	20.5%	15.0%	27.4%
37	St. George (58)	45,862	11,759	25.6%	23.9%	18.5%	30.2%
54	**Summit County HD (51)**	24,525	6,624	27.0%	27.9%	24.0%	32.2%
14	**Tooele County HD (40)**	32,458	5,696	17.6%	18.1%	15.3%	21.4%
19	**TriCounty HD (53)**	28,023	5,644	20.1%	20.4%	17.6%	23.6%
	Utah County HD	278,832	62,124	22.3%	24.1%	21.5%	26.9%
10	American Fork/Alpine (42)	26,819	4,739	17.7%	17.6%	12.3%	24.7%
60	East Orem (46)	14,955	3,872	25.9%	31.1%	19.4%	45.8%
29	Lehi/Cedar Valley (41)	18,752	3,942	21.0%	22.4%	16.0%	30.4%
61	North Orem (44)	25,965	7,483	28.8%	32.8%	24.5%	42.4%
44	Pleasant Grove/Lindon (43)	24,636	5,957	24.2%	25.4%	17.5%	35.4%
39	Provo/BYU (47)	39,401	10,453	26.5%	24.1%	16.2%	34.4%
49	Provo South (48)	48,138	10,003	20.8%	26.7%	18.5%	36.7%
23	Springville/Spanish Fork (49)	41,036	7,982	19.5%	20.8%	15.7%	27.1%
22	Utah Co. South (50)	17,363	2,967	17.1%	20.6%	12.6%	32.0%
59	West Orem (45)	21,774	5,581	25.6%	30.1%	19.8%	42.8%
38	**Wasatch County HD (52)**	12,514	2,975	23.8%	24.0%	20.5%	27.9%
	Weber-Morgan HD	148,702	29,517	19.9%	20.3%	17.5%	23.4%
30	Ben Lomond (5)	33,215	7,191	21.7%	22.6%	16.9%	29.7%
36	Downtown Ogden (7)	21,684	5,332	24.6%	23.7%	15.3%	35.0%
24	Morgan/East Weber Co. (6)	24,131	4,636	19.2%	21.1%	15.2%	28.5%
3	Riverdale (10)	15,522	2,080	13.4%	12.1%	7.0%	20.3%
31	Roy/Hooper (9)	27,898	5,900	21.2%	22.7%	16.7%	30.1%
9	South Ogden (8)	26,255	4,781	18.2%	17.5%	11.8%	25.2%

*State rank is by 61 small areas for age-adjusted rate; 1 is always the lowest rate in the state and 61 is always the highest rate in the state.

Figure 22.2: 3+ Vegetables per Day by Small Area, Utah Adults Aged 18+, 2002, 2003, 2005 (Age-adjusted)

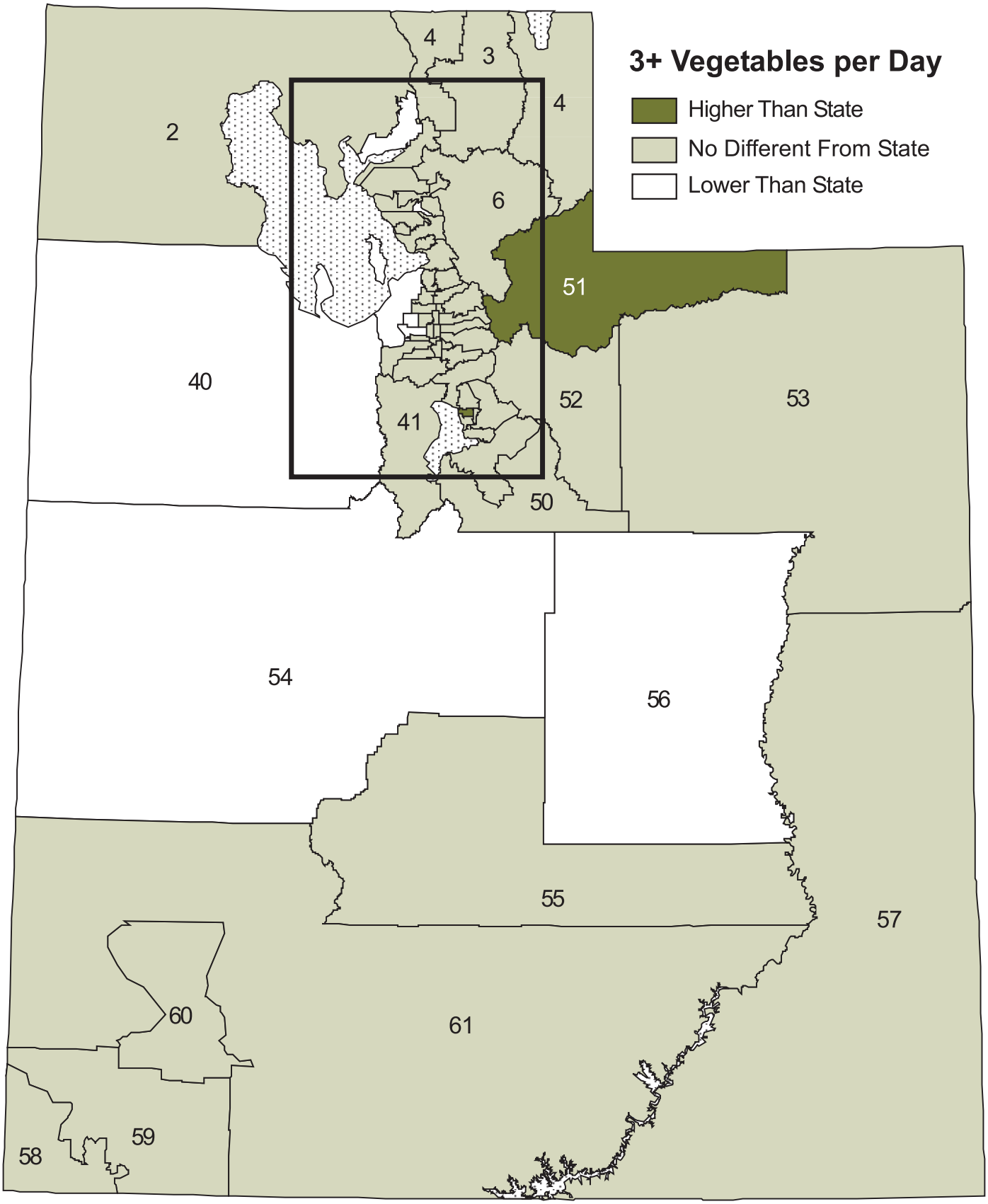
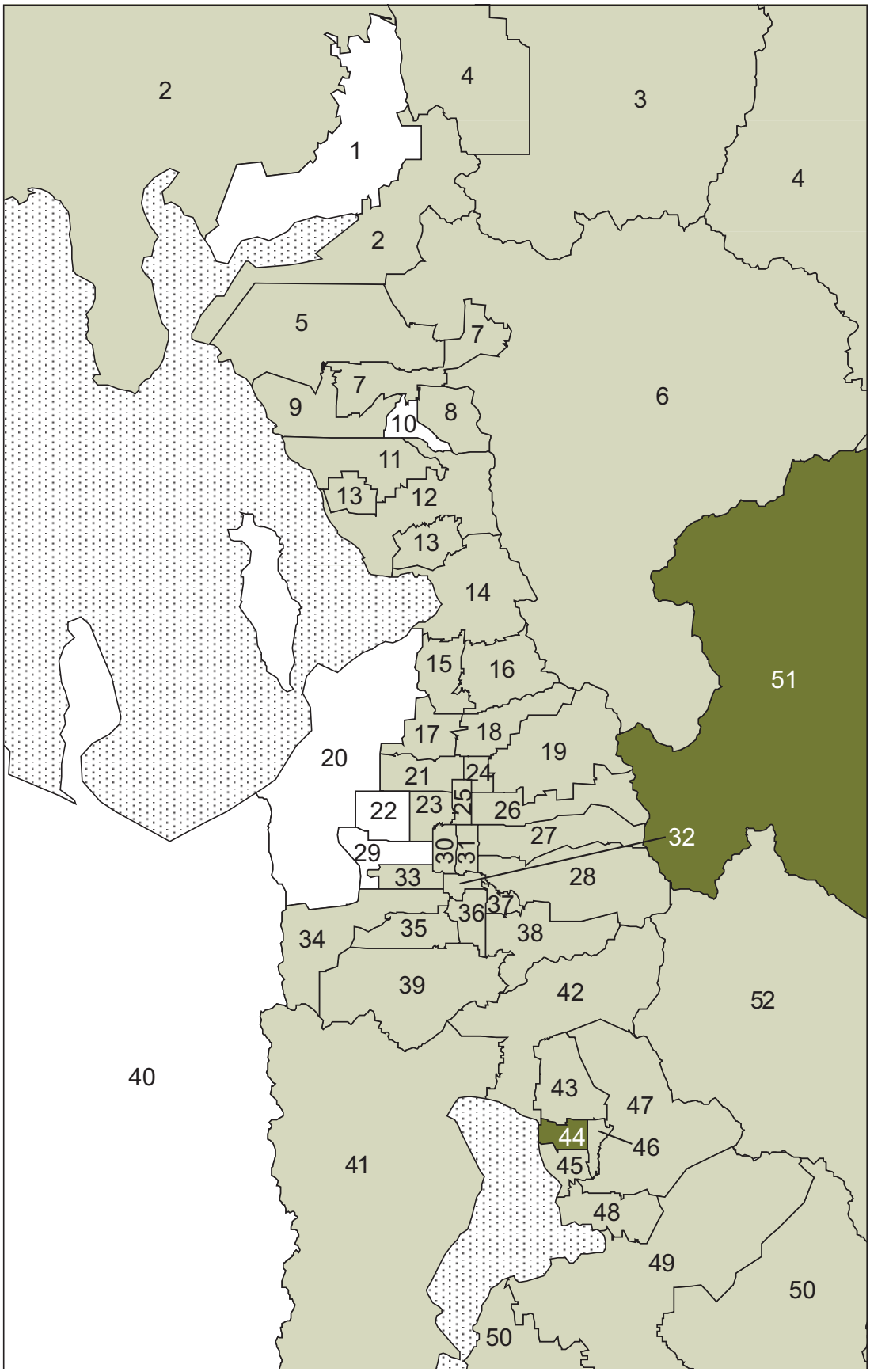



Figure 22.3: 3+ Vegetables per Day by Small Area, Wasatch Front Adults 18+, 2002, 2003, 2005 (Age-adjusted)