



A Regional Profile of Colorado's Uninsured Population



In November 2008, the 2008–09 Colorado Household Survey (COHS) was conducted to collect information about the health insurance status of Coloradans. The COHS was sponsored by the Colorado Department of Health Care Policy and Financing and funded by The Colorado Trust in an effort to provide more accurate and timely estimates about health insurance coverage in Colorado and how coverage affects access to care, out of pocket expenses and health status, among other issues. Further, the COHS provides important baseline information in anticipation of state and national health reform efforts.

Do Colorado uninsured rates vary by geographic region? Using data from the COHS, this issue brief provides an analysis of regional differences in uninsured rates and examines the sociodemographic factors that may explain the observed differences. For example, some regions may have higher uninsured rates because their populations have higher poverty or unemployment rates, while other regions may have higher uninsured rates because of the age distribution of their population.

Methods

The 2008–09 COHS was a telephone survey of 10,000 randomly selected households in Colorado. Within each household, one member was randomly chosen and a series of questions regarding health insurance coverage, health status, access to health care, health care utilization, employment and income was asked about that individual. If the person answering the telephone was at least 18 years of age and able to do so, he or she answered all survey questions about the randomly selected individual and answered a subset of questions (demographics and health insurance) about all other members of the household. Otherwise, another adult household member who could answer these questions was interviewed. If the individual selected was under age 18, a knowledgeable adult answered on behalf of the child.

In addition, the growing trend of cell phone-only households precipitated the inclusion of 400 randomly selected individuals at least 18 years of age who live in a household where a cell phone is exclusively used for telecommunication. The household survey was completed in March 2009.

The COHS was stratified by the 21 Health Statistics Regions (HSRs) developed by the Colorado Department of Public Health and the Environment (CDPHE).¹ The regional stratification ensured that an adequate sample was collected across Colorado's geographically diverse regions, thereby ensuring that reliable sub-state estimates could be generated about the health and demographic characteristics of Colorado's population. For this issue brief, the uninsurance estimates are based on the individual being uninsured at the time of the survey. A limitation of the COHS is that it is not possible to determine the citizenship status of the population.

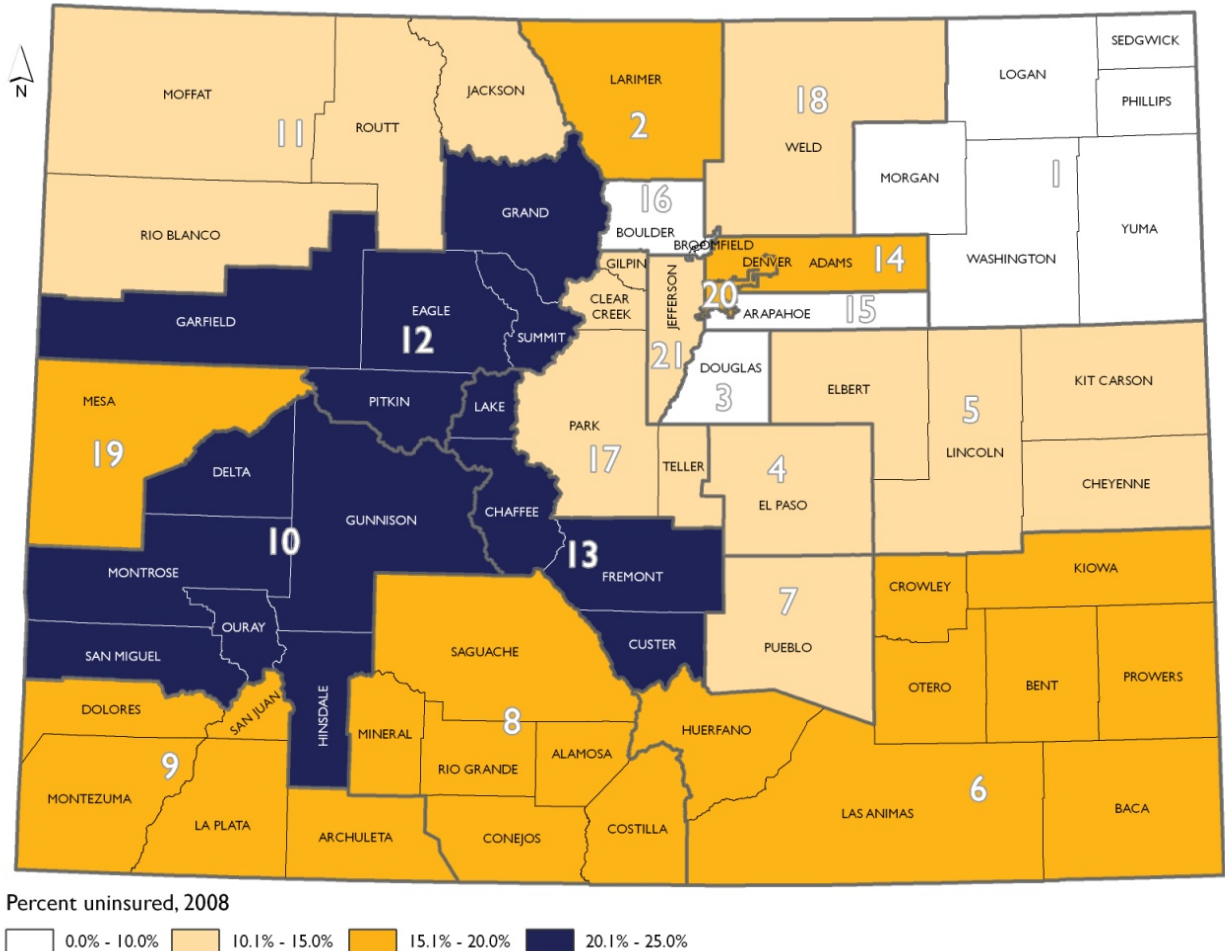
¹Regions were developed by CDPHE for public health planning purposes. The boundaries for the regions were determined by the size of the population in each county (counties with smaller populations were aggregated) and key demographic factors for each county. The regions were determined by the size of the population in each county (counties with smaller populations were aggregated) and key demographic factors for each county.

Statistically significant differences between group estimates were calculated using appropriate statistical tests. All estimates reported in this issue brief have been weighted to represent both the total 2008 Colorado population and the population that resides in each region.²

Correlates of Regional Uninsurance Rates

According to the COHS, 14 percent of Coloradans were uninsured at the time of the survey. However, this statewide average conceals significant regional differences in uninsurance rates (Figure 1).

Figure 1: Uninsured rates by the 21 Colorado HSRs, 2008–09³



SOURCE: 2008–09 Colorado Household Survey

Both at the state and local levels, policymakers are exploring ways to improve access to health care and health insurance coverage. To tailor appropriate state and regional policy options, it is instructive to understand the correlates of health insurance status at both levels. To that end, the COHS collected information on key correlates of health insurance status—income, employment status and other

²2008 population estimates for the state and counties are from the Colorado State Demography Office. The Colorado Health Institute (CHI) served as the administrator for the COHS under contract with the Colorado Department of Health Care Policy and Financing and authored this issue brief.

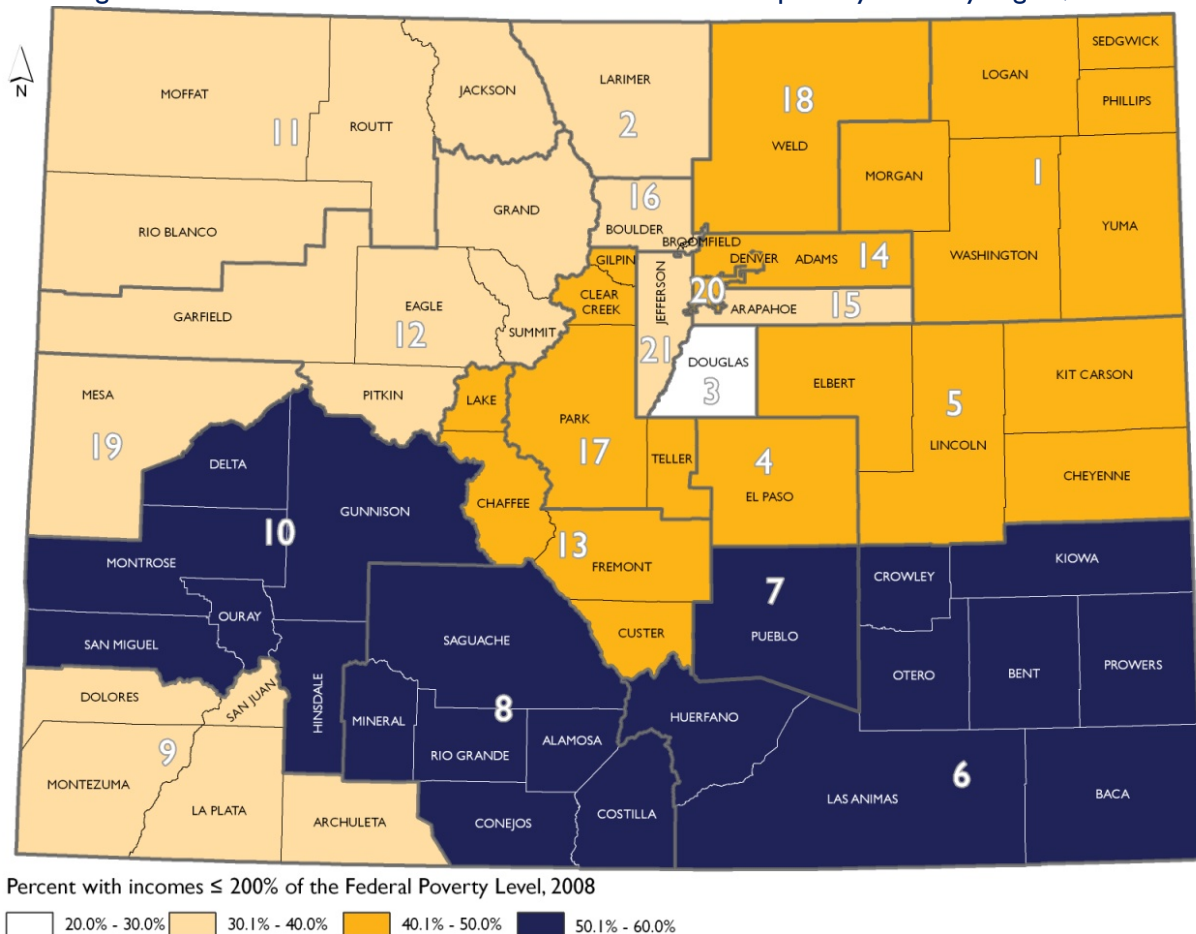
³ See the appendix for the uninsurance rate specific to each region.

demographic information. Analyses of these data can illuminate whether there is a common factor, or factors, that explain any observed regional differences.

Low income status by HSR

Many low income individuals qualify for publicly-financed health care coverage and yet research has found that lower income status is a risk factor for being uninsured.⁴ Figure 2 displays the proportion of Coloradans living in families with income at or below 200 percent of FPL.^{5,6} While 41 percent of the Colorado population has a family income below 200 percent of the FPL, this percentage ranges from 22 percent in Region 3 to 60 percent in Region 8.

Figure 2: Percent of Coloradans at or below 200% Federal poverty level* by region, 2008–09



SOURCE: 2008–09 Colorado Household Survey
*For a family of four in 2008, 200% of FPL was \$42,000.

⁴ “Sicker and Poorer—The Consequences of Being Uninsured: A Review of the Research on the Relationship between Health Insurance, Medical Care Use, Health, Work, and Income,” Jack Hadley, *Medical Care Research and Review*, Vol. 60, No. 2 suppl, 3S-75S (2003)

⁵ Family income was estimated by annualizing family income for the month prior to the survey.

⁶ See Appendix A for a summary of 2008 federal poverty guidelines based on family size.

Over half of the residents in Regions 6, 7, 8 and 10 had family incomes at or below 200 percent of FPL. Regions 6, 8 and 10 also had higher uninsurance rates (16, 18 and 21% respectively) than the statewide average of 14 percent; whereas Region 7 had an uninsurance rate equivalent to the state. Even though this income measure cannot fully account for higher regional uninsurance rates, it is an important contributing factor.

Employer characteristics by HSR

According to employer surveys, large employers (firms with more than 50 employees) are much more likely to offer health insurance to employees and their dependents when compared to small firms with fewer than 10 employees.⁷ Small employers (with fewer than 10 employees) cite cost as the primary factor preventing them from offering health insurance.

COHS respondents who indicated they were self-employed, worked for someone else, or worked for the military, were asked about the firm size in which they worked as measured by the number of people employed by the company. Further, respondents were asked whether their employer offered health insurance as an employee benefit.⁸

The relationship between small firm size and offering employer-sponsored health insurance (ESI) is displayed in Table 1. The uninsurance rate for each HSR is provided as point of reference.

Table 1: Employees (ages 19 to 64) working in small firms by rates of ESI coverage and uninsurance rates by HSR, Colorado, 2008–09

Region	% of all workers employed in a firm with 1-10 employees	% working for employers (all sizes) that do not offer ESI	% uninsured in region (all ages)
1	25.3%	11.4%	8.5%
2	22.3%	11.0%	15.3%
3	20.9%	3.8%	6.9%
4	11.1%	9.2%	14.2%
5	25.7%	23.6%	14.0%
6	16.9%	21.1%	15.5%
7	14.9%	18.6%	13.5%
8	28.8%	30.3%	18.2%
9	33.4%	25.1%	18.5%
10	24.7%	28.0%	20.6%
11	22.3%	9.1%	12.0%

⁷ For example, according to the 2008 Medical Expenditure Panel Survey (MEPS), 32% of private sector firms in Colorado employing fewer than ten employees offered health insurance to their employees. Alternatively, 98% of private sector firms in Colorado employing more than 50 employees offered health insurance.

⁸The question on the COHS that asked whether the respondent's employer offered employer sponsored health insurance as a benefit to its employees is different than the subsequent question which asked whether the respondent was personally offered health insurance by his/her employer. The former was a lead-in question to the latter. Results have been previously reported on the latter question. See [Colorado Household Survey Issue Brief - A Profile of Colorado's Uninsured Population](#) for more information.

Region	% of all workers employed in a firm with 1-10 employees	% working for employers (all sizes) that do not offer ESI	% uninsured in region (all ages)
12	35.8%	22.6%	21.4%
13	21.5%	20.9%	20.1%
14	8.3%	10.1%	16.6%
15	16.3%	9.2%	7.6%
16	21.9%	14.7%	8.7%
17	20.0%	10.6%	14.4%
18	13.8%	13.5%	11.3%
19	17.8%	8.2%	16.7%
20	13.6%	16.4%	18.4%
21	12.5%	8.2%	13.5%
Colorado	11.4%	12.4%	13.8%

SOURCE: 2008–09 Colorado Household Survey

HSR 12 had the highest rate of individuals working in firms with 1-10 employees (36%), had a relatively high rate of people working at employers that do not offer ESI as a benefit to their employees (23%) and also had the highest uninsurance rate (21%). A possible explanation for these high rates could be due to several popular mountain resorts being located in HSR 12. Small businesses are often located within resort communities and may employ a younger workforce because of the seasonal nature of the resort community. Further examination of the age distribution in HSR 12 found that it has the highest proportion in the state of individuals between the ages of 19 and 54 (53%).⁹ Previously reported findings from the COHS found that the 19–34 and 35–54 age groups had the highest rates of uninsurance (24 and 19%, respectively; 21% combined).¹⁰

In addition, the relationship between company size and health insurance status was examined for the state overall. It was found that individuals working in firms with 1-10 employees were much less likely to report that their employer offered health insurance as a benefit to employees (47%) compared to individuals working in firms with 10 or more employees (93%).

Unemployment rates by HSR

Earlier reported results from the COHS found that 63 percent of Coloradans are covered by employer sponsored health insurance.¹¹ This suggests that being employed is a significant predictor of having access to health insurance coverage, although it is not a guarantee (COHS data estimate that 53% of uninsured persons are employed).

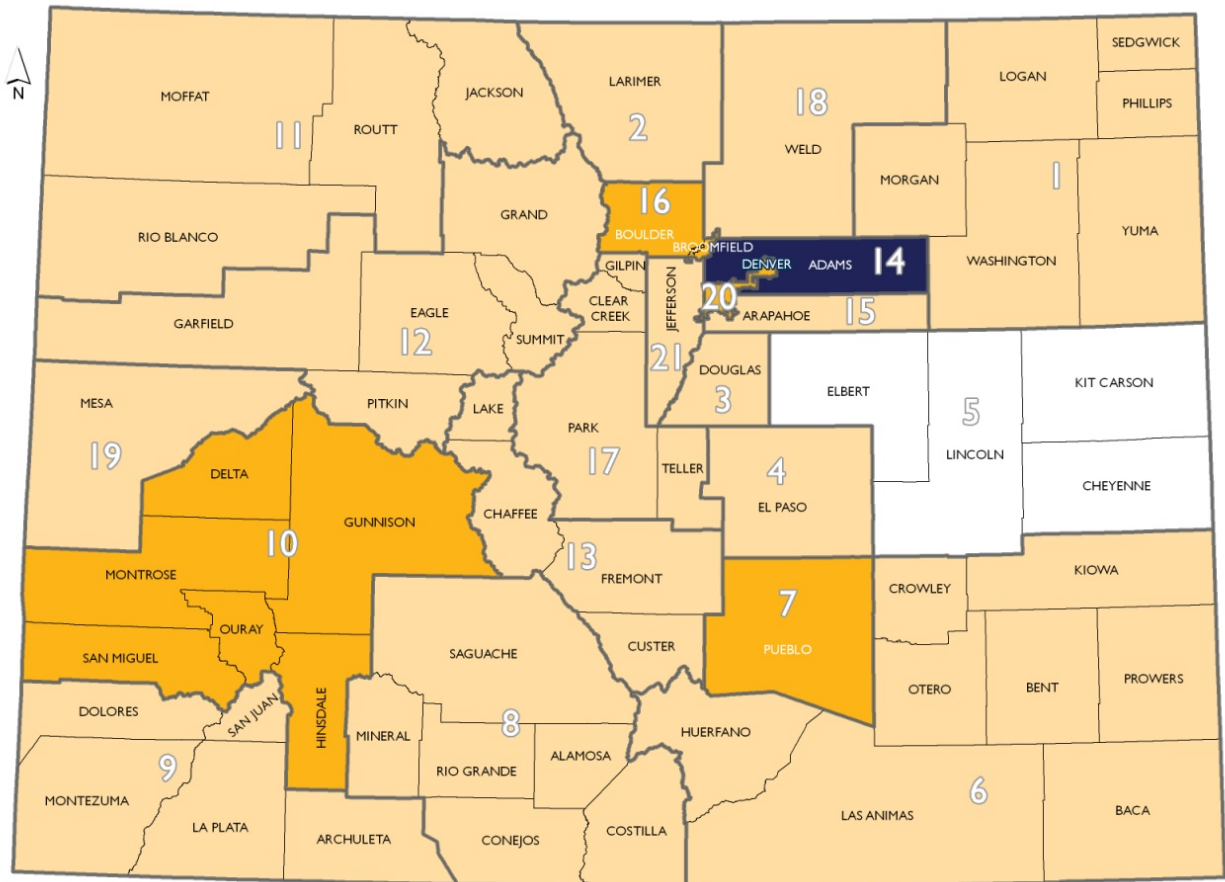
⁹Regional results for all indicators are shown in Appendices C–E

¹⁰[A Profile of Colorado's Uninsured Population](#), the first issue brief from the 2008–09 Colorado Household Survey.

¹¹[A Profile of Colorado's Uninsured Population](#), the first issue brief from the 2008–09 Colorado Household Survey.

Figure 3 shows the unemployment rate as of winter 2008–09 for individuals between the ages of 19 and 64 for each HSR (Figure 3 includes data for working age adults who indicated that they were unemployed *and* looking for work at the time of the survey).

Figure 3: Percent of working age Coloradans (ages 19-64) unemployed by HSR, 2008–09



Percent unemployed, 2008
 0.0% - 5.0% 5.1% - 10.0% 10.1% - 15.0% 15.1% - 20.0%

SOURCE: 2008–09 Colorado Household Survey

*Overall state employment is 9 percent

Unemployment rates do not appear to correlate as strongly with the regional uninsurance rates as other indicators. One reason may be that the unemployment counts reported in this brief are based *only* on the employment status of the target individual. If the target is covered as a dependent through another family member’s health insurance policy, being unemployed would not be correlated with being uninsured.

Public insurance coverage by HSR

Although a higher than average proportion of individuals living in low income families can increase the uninsurance rate for a region, it is also true that many low income children and very low income adults qualify for the Medicaid and Child Health Plan Plus (CHP+) public insurance programs. In addition, almost all older adults ages 65 and older are eligible for Medicare. Table 2 displays the percentage of Coloradans by HSR who reported being covered by Medicare, Medicare and Medicaid (“dual eligibles”),

Medicaid or the CHP+ program. All categories displayed are mutually exclusive meaning that each person is counted only once.

Table 2: Percent of Coloradans covered by public insurance and the uninsured by HSR, 2008–09

Region	% enrolled in Medicare and dual eligibles	% enrolled in Medicaid or CHP+	% uninsured in region (all ages)
1	18.7%	14.6%	8.5%
2	12.6%	8.0%	15.3%
3	5.7%	1.1%	6.9%
4	14.1%	6.6%	14.2%
5	14.1%	5.1%	14.0%
6	18.7%	12.8%	15.5%
7	19.1%	17.0%	13.5%
8	22.2%	19.0%	18.2%
9	17.5%	9.0%	18.5%
10	14.3%	12.2%	20.6%
11	11.3%	9.4%	12.0%
12	7.1%	5.6%	21.4%
13	18.5%	6.1%	20.1%
14	10.4%	5.2%	16.6%
15	14.1%	7.2%	7.6%
16	8.8%	9.0%	8.7%
17	14.7%	8.6%	14.4%
18	11.4%	8.2%	11.3%
19	17.0%	9.4%	16.7%
20	13.1%	11.6%	18.4%
21	12.6%	6.4%	13.5%
Colorado	12.8%	8.0%	13.8%

SOURCE: 2008–09 Colorado Household Survey

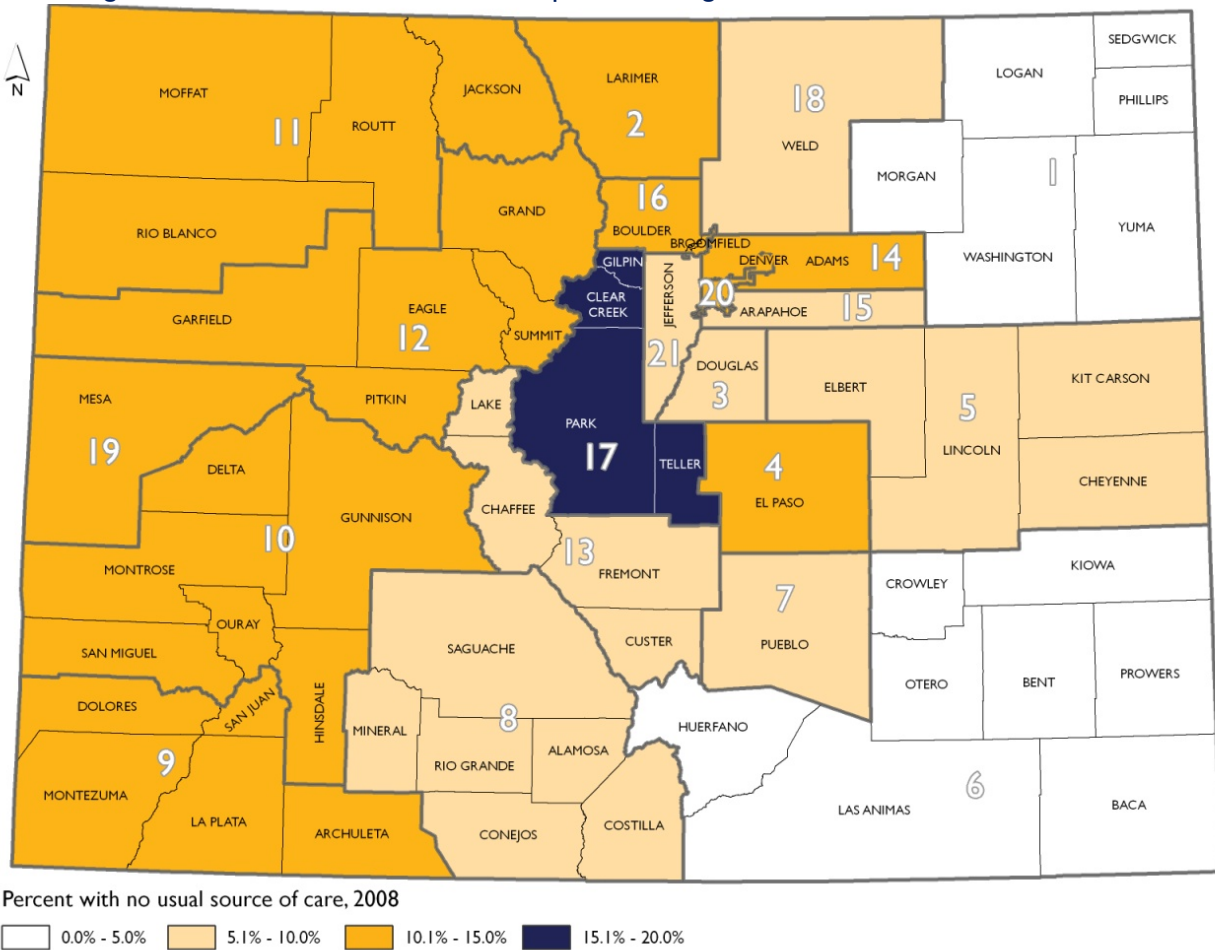
In the previous section on income status, over 50 percent of the population in HSR 7 had family incomes at or below 200 percent of FPL with an average uninsurance rate of 14 percent. However, HSR 7 ranked second highest in the state for number of individuals on Medicare (or dually eligibility for Medicare and Medicaid), Medicaid-only or enrolled in CHP+ (17%).

HSR1 had the third lowest uninsurance rate in the state (9%) and the third highest percent of individuals on public insurance (a combined rate of 33%), while having the second lowest percent of adults between the ages of 19 and 54 (42%).

Access to care by HSR

A frequently cited consequence of being uninsured is not having a regular source of health care. The COHS contained several questions related to an individual’s access to health care. In particular, each respondent was asked if he or she had a “place where [he/she] went when [he/she] was sick or needed advice about health,” which often gets translated as having a usual source of care. Figure 4 displays the differential rates of individuals who indicated they did *not* have a usual source of care by HSR.

Figure 4: Percent of Coloradans that reported having no usual source of care, 2008–09



Overall, 10 percent of Coloradans indicated that they did not have a usual source of care— slightly over 500,000 people. HSR 17 had the highest rate of people reporting that they had no usual source of care (16% or 30,000 individuals). HSR 17 also had the 5th highest proportion of adults between the ages of 19 and 54 in the state (51%) as well as a relatively high proportion of residents with low incomes (48%).

Examining why individuals reported not having a usual source of care will be the topic of a future COHS issue brief.

Summary of regional analysis

Explaining regional variations in uninsurance rates in Colorado is a complex undertaking, as can be seen by the findings presented in this issue brief. However, to the extent that the COHS accurately describes the socio-economic population characteristics of the various regions of the state, several factors were found to be associated with uninsurance rates:

- The higher the proportion of people working in small firms (especially firms employing 10 or less employees) in a region, the higher the uninsurance rate;
- The higher the proportion of workers working in a firm that does not offer health insurance as a benefit, the higher the uninsurance rate in that region;
- The greater the proportion of individuals living in families with incomes at or below 200% of FPL in a region, the higher the proportion of underinsured;
- The greater the proportion of young adults (ages 19–64) in a region, the higher the uninsurance rates

The appendices accompanying this issue brief present regional variations for a number of different variables that may offer further insight into regional uninsurance rates.

Appendix A

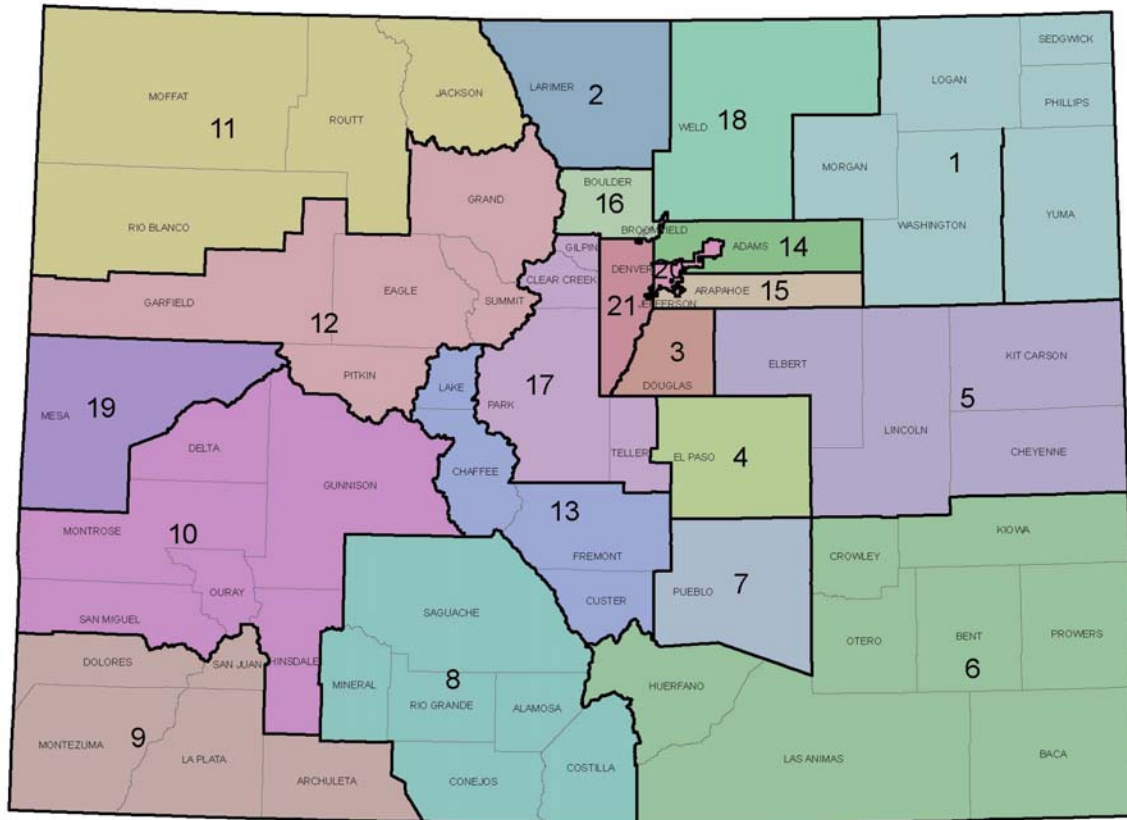
2008 Federal Poverty Guidelines

Family Size	100%	200%	300%	400%
1	\$10,400	\$20,800	\$31,200	\$41,600
2	\$14,000	\$28,000	\$42,000	\$56,000
3	\$17,600	\$35,200	\$52,800	\$70,400
4	\$21,200	\$42,400	\$63,600	\$84,800
5	\$24,800	\$49,600	\$74,400	\$99,200
6	\$28,400	\$56,800	\$85,200	\$113,600
7	\$32,000	\$64,000	\$96,000	\$128,000
8	\$35,600	\$71,200	\$106,800	\$142,400
9	\$39,200	\$78,400	\$117,600	\$156,800
10	\$42,800	\$85,600	\$128,400	\$171,200

SOURCE: United States Department of Health and Human Services

Appendix B: Map of 21 Health Statistics Regions

Colorado Health Statistics Regions



*July 2008

Appendix C: All indicators, displayed by HSR, 2008-09

Region	% employed in a firm with 1-10 employees	% working for employers (all sizes) that do not offer ESI	% age 19 to 54	% unemployed	% at or below 200% FPL	% enrolled in Medicare and dual eligible	% enrolled in Medicaid or CHP+	% with no usual source of care	% uninsured in region (all ages)
1	25.3%	11.4%	42.6%	6.2%	47.9%	18.7%	14.6%	4.8%	8.5%
2	22.3%	11.0%	51.5%	8.4%	39.6%	12.6%	8.0%	12.8%	15.3%
3	20.9%	3.8%	50.9%	6.6%	21.9%	5.7%	1.1%	7.4%	6.9%
4	11.1%	9.2%	48.4%	8.3%	41.5%	14.1%	6.6%	11.0%	14.2%
5	25.7%	23.6%	44.4%	3.4%	48.7%	14.1%	5.1%	7.3%	14.0%
6	16.9%	21.1%	43.1%	6.0%	55.8%	18.7%	12.8%	4.5%	15.5%
7	14.9%	18.6%	47.4%	12.6%	52.1%	19.1%	17.0%	5.4%	13.5%
8	28.8%	30.3%	40.1%	5.6%	59.9%	22.2%	19.0%	7.7%	18.2%
9	33.4%	25.1%	44.0%	6.3%	33.7%	17.5%	9.0%	12.3%	18.5%
10	24.7%	28.0%	48.5%	13.4%	55.5%	14.3%	12.2%	13.3%	20.6%
11	22.3%	9.1%	46.2%	6.1%	38.6%	11.3%	9.4%	14.3%	12.0%
12	35.8%	22.6%	53.3%	9.8%	32.5%	7.1%	5.6%	11.4%	21.4%
13	21.5%	20.9%	47.3%	6.6%	48.1%	18.5%	6.1%	9.8%	20.1%
14	8.3%	10.1%	47.7%	15.2%	41.7%	10.4%	5.2%	11.7%	16.6%
15	16.3%	9.2%	46.5%	7.3%	35.0%	14.1%	7.2%	8.4%	7.6%
16	21.9%	14.7%	53.4%	10.7%	37.6%	8.8%	9.0%	12.1%	8.7%
17	20.0%	10.6%	50.8%	6.0%	48.1%	14.7%	8.6%	16.0%	14.4%
18	13.8%	13.5%	52.5%	5.9%	44.7%	11.4%	8.2%	6.9%	11.3%
19	17.8%	8.2%	47.2%	8.0%	34.0%	17.0%	9.4%	10.2%	16.7%
20	13.6%	16.4%	49.7%	11.3%	48.4%	13.1%	11.6%	11.2%	18.4%
21	12.5%	8.2%	49.3%	8.2%	37.7%	12.6%	6.4%	9.5%	13.5%
Colorado	11.4%	12.4%	62.9%	9.1%	40.5%	12.8%	8.0%	10.1%	13.8%

SOURCE: 2008-09 Colorado Household Survey

Appendix D: All indicators by regional uninsurance rates, Colorado, 2008-09

Region	% employed in a firm with 1-10 employees	% working for employers (all sizes) that do not offer ESI	% age 19 to 54	% unemployed	% at or below 200% FPL	% enrolled in Medicare and dual eligibles	% enrolled in Medicaid or CHP+	% with no usual source of care	% uninsured in region (all ages)
12	35.8%	22.6%	53.3%	9.8%	32.5%	7.1%	5.6%	11.4%	21.4%
10	24.7%	28.0%	48.5%	13.4%	55.5%	14.3%	12.2%	13.3%	20.6%
13	21.5%	20.9%	47.3%	6.6%	48.1%	18.5%	6.1%	9.8%	20.1%
9	33.4%	25.1%	44.0%	6.3%	33.7%	17.5%	9.0%	12.3%	18.5%
20	13.6%	16.4%	49.7%	11.3%	48.4%	13.1%	11.6%	11.2%	18.4%
8	28.8%	30.3%	40.1%	5.6%	59.9%	22.2%	19.0%	7.7%	18.2%
19	17.8%	8.2%	47.2%	8.0%	34.0%	17.0%	9.4%	10.2%	16.7%
14	8.3%	10.1%	47.7%	15.2%	41.7%	10.4%	5.2%	11.7%	16.6%
6	16.9%	21.1%	43.1%	6.0%	55.8%	18.7%	12.8%	4.5%	15.5%
2	22.3%	11.0%	51.5%	8.4%	39.6%	12.6%	8.0%	12.8%	15.3%
17	20.0%	10.6%	50.8%	6.0%	48.1%	14.7%	8.6%	16.0%	14.4%
4	11.1%	9.2%	48.4%	8.3%	41.5%	14.1%	6.6%	11.0%	14.2%
5	25.7%	23.6%	44.4%	3.4%	48.7%	14.1%	5.1%	7.3%	14.0%
7	14.9%	18.6%	47.4%	12.6%	52.1%	19.1%	17.0%	5.4%	13.5%
21	12.5%	8.2%	49.3%	8.2%	37.7%	12.6%	6.4%	9.5%	13.5%
11	22.3%	9.1%	46.2%	6.1%	38.6%	11.3%	9.4%	14.3%	12.0%
18	13.8%	13.5%	52.5%	5.9%	44.7%	11.4%	8.2%	6.9%	11.3%
16	21.9%	14.7%	53.4%	10.7%	37.6%	8.8%	9.0%	12.1%	8.7%
1	25.3%	11.4%	42.6%	6.2%	47.9%	18.7%	14.6%	4.8%	8.5%
15	16.3%	9.2%	46.5%	7.3%	35.0%	14.1%	7.2%	8.4%	7.6%
3	20.9%	3.8%	50.9%	6.6%	21.9%	5.7%	1.1%	7.4%	6.9%
Colorado	11.4%	12.4%	62.9%	9.1%	40.5%	12.8%	8.0%	10.1%	13.8%

SOURCE: 2008-09 Colorado Household Survey

Appendix E: Indicators by HSR in descending order of variable rank, 2008-09

Region	% employed in a firm with 1-10 employees	Region	% working for employers (all sizes) that do not offer ESI	Region	% age 19 to 54	Region	% unemployed
12	35.8%	8	30.3%	12	53.3%	14	15.2%
9	33.4%	10	28.0%	16	53.4%	10	13.4%
8	28.8%	9	25.1%	18	52.5%	7	12.6%
5	25.7%	5	23.6%	2	51.5%	20	11.3%
1	25.3%	12	22.6%	17	50.8%	16	10.7%
10	24.7%	6	21.1%	3	50.9%	12	9.8%
2	22.3%	13	20.9%	20	49.7%	2	8.4%
11	22.3%	7	18.6%	21	49.3%	4	8.3%
16	21.9%	20	16.4%	10	48.5%	21	8.2%
13	21.5%	16	14.7%	4	48.4%	19	8.0%
3	20.9%	18	13.5%	14	47.7%	15	7.3%
17	20.0%	1	11.4%	7	47.4%	3	6.6%
19	17.8%	2	11.0%	13	47.3%	13	6.6%
6	16.9%	17	10.6%	19	47.2%	9	6.3%
15	16.3%	14	10.1%	15	46.5%	1	6.2%
7	14.9%	15	9.2%	11	46.2%	11	6.1%
18	13.8%	4	9.2%	5	44.4%	17	6.0%
20	13.6%	11	9.1%	9	44.0%	6	6.0%
21	12.5%	19	8.2%	6	43.1%	18	5.9%
4	11.1%	21	8.2%	1	42.6%	8	5.6%
14	8.3%	3	3.8%	8	40.1%	5	3.4%
Colorado	11.4%	Colorado	12.4%	Colorado	62.9%	Colorado	9.1%

SOURCE: 2008-09 Colorado Household Survey

Appendix E: Indicators by HSR sorted by rank order (continued)

Region	% at or below 200% FPL	Region	% enrolled in Medicare and dual eligibles	Region	% enrolled in Medicaid or CHP+	Region	% with no usual source of care
8	59.9%	8	22.2%	8	19.0%	17	16.0%
6	55.8%	7	19.1%	7	17.0%	11	14.3%
10	55.5%	1	18.7%	1	14.6%	10	13.3%
7	52.1%	6	18.7%	6	12.8%	2	12.8%
5	48.7%	13	18.5%	10	12.2%	9	12.3%
20	48.4%	9	17.5%	20	11.6%	16	12.1%
17	48.1%	19	17.0%	11	9.4%	14	11.7%
13	48.1%	17	14.7%	19	9.4%	12	11.4%
1	47.9%	10	14.3%	9	9.0%	20	11.2%
18	44.7%	4	14.1%	16	9.0%	4	11.0%
14	41.7%	15	14.1%	17	8.6%	19	10.2%
4	41.5%	5	14.1%	18	8.2%	13	9.8%
2	39.6%	20	13.1%	2	8.0%	21	9.5%
11	38.6%	21	12.6%	15	7.2%	15	8.4%
21	37.7%	2	12.6%	4	6.6%	8	7.7%
16	37.6%	18	11.4%	21	6.4%	3	7.4%
15	35.0%	11	11.3%	13	6.1%	5	7.3%
19	34.0%	14	10.4%	12	5.6%	18	6.9%
9	33.7%	16	8.8%	14	5.2%	7	5.4%
12	32.5%	12	7.1%	5	5.1%	1	4.8%
3	21.9%	3	5.7%	3	1.1%	6	4.5%
Colorado	40.5%	Colorado	12.8%	Colorado	8.0%	Colorado	10.1%

SOURCE: 2008-09 Colorado Household Survey