

# ISSUE BRIEF

## THE MAGNITUDE OF UNDERINSURANCE IN COLORADO

*Prepared for The Colorado Trust by the Colorado Health Institute*

*As health care reform moves into the implementation stage, there are many questions to be sorted out. One unknown is the extent to which federal health care reform will address the adequacy of coverage. Simply having an insurance card does not guarantee that an individual will have the ability to access or pay for needed health care services.*

*Having inadequate health coverage – or being underinsured – means that public or private health insurance coverage does not cover the costs of medically necessary services relative to family income, resulting in out-of-pocket expenses that exceed an insured individual's ability to pay. People who are underinsured are more likely than those with adequate coverage to forego a physician visit or not to fill a prescription due to the cost of care. When they do receive health care services, many underinsured people have a difficult time paying their medical bills. As well, the underinsured are less likely to have a usual source of care – an important measure of health and well-being. In essence, being underinsured is akin to being uninsured.*

In Colorado, the number of those who are underinsured is nearly equal to the uninsured. The *2008-2009 Colorado Household Survey* (COHS) shows 650,000 Coloradans were underinsured, and 678,000 were uninsured at the time of the survey.<sup>1</sup> The survey data also show that nearly 39% of the state's population was either uninsured at some time in the 12 months prior to the survey or faced potentially significant financial barriers to getting the health care they need. The COHS represents the voices of 10,000 Colorado households, and was conducted to help determine factors that contribute to the health of our population. With support from The Colorado Trust, the Colorado Department of Health Care Policy and Financing conducted the survey, with the Colorado Health Institute serving as the survey administrator.

It is anticipated that federal health care reform will ultimately provide coverage to approximately 500,000 of the 678,000 people in Colorado who are uninsured. While it is less clear to what extent the legislation will aid the underinsured, several elements of federal reform should benefit people who are underinsured, including:

- *Health Insurance Exchanges.* The new law creates state-based health insurance exchanges through which individuals and small businesses can purchase qualified coverage. Plans offered through the exchange must meet minimum standards and would likely provide better benefits to some individuals who are underinsured.
- *Medicaid Eligibility Expansion.* Effective in 2014, the federal health care reform legislation expands Medicaid eligibility to cover all individuals under age 65, including children, pregnant women, parents and adults without dependent children, with incomes up to 133% of the federal poverty level (FPL). Although it is unclear how many people in the expansion population are underinsured, Medicaid may provide better coverage for many low income individuals than they now receive through their existing policies.
- *Premium Credits and Cost Sharing Subsidies.* The federal health care reform bill provides refundable and advanceable premium credits and cost-sharing subsidies to help individuals from 133% to 400% of FPL purchase health insurance through new insurance exchanges. The credits and subsidies will allow eligible individuals to purchase plans that meet the minimum standards of the exchange and, for many people, could provide better coverage than existing plans.
- *Medicare Improvements.* The federal reform bill contains several Medicare related provisions that also are likely to affect the underinsured. This includes a \$250 rebate to beneficiaries who exceed the coverage for prescription medications, with a gradual phase down in coinsurance costs for prescriptions to eliminate the gap.

*Underinsurance is defined as having public or private health insurance coverage that does not adequately cover the costs of medically necessary services relative to family income, RESULTING IN OUT-OF-POCKET EXPENSES THAT EXCEED AN INSURED INDIVIDUAL'S ABILITY TO PAY. Specifically, the published literature has established the ratio threshold to be 10% of annual income or 5% of annual income for households living below 200% of Federal Poverty Level.*

- *Community-based Collaborative Care Network Program.* The new law creates a program to specifically support consortiums of health care providers to coordinate and integrate health care services for low-income uninsured and underinsured populations.

While the ultimate impact of federal health care reform on the underinsured is still to be determined, it is important to understand who the underinsured are in Colorado, and why their coverage is insufficient. Drawing on the extensive data, from the COHS, this issue brief addresses:

- What it means to be underinsured
- The prevalence of underinsurance in Colorado
- The socio-demographic characteristics of underinsured Coloradans
- The implications of being underinsured with regard to health care access.

## » WHAT IT MEANS TO BE UNDERINSURED

In 2008, nearly 68% of Americans reported having private insurance coverage – either through an employer-sponsored health plan or purchased directly from an insurance broker or carrier. Approximately 15% of the U.S. population was uninsured and the remainder was covered by public insurance programs such as Medicaid, the Veterans Administration, Medicare or the State Children's Health Insurance Program (SCHIP) program.<sup>2</sup>

Most insured individuals, whether publicly or privately covered, contribute to some portion of the costs of the health care they receive. Among the privately insured, the cost of health insurance premiums is most often shared between employer and employee. Other out-of-pocket costs such as co-payments, deductibles and expenses that exceed health plans' annual benefit limits are born by the insured.

Research has shown that these out-of-pocket costs can serve as a deterrent to individuals seeking the care they need if the costs are considered too high relative to disposable income.<sup>3</sup> In many cases, insured individuals find that their health insurance plan does not cover the costs associated with a particular condition or treatment regimen. The gap between what private insurance plans and public programs cover, and the ability of individuals and families to meet out-of-pocket health care expenses has been described as the state of being underinsured. In general, underinsurance is defined as having public or private health insurance coverage that does not adequately cover the costs of medically necessary services relative to family income, resulting in out-of-pocket expenses that exceed an insured individual's ability to pay.

There are two commonly used methods for determining and measuring underinsurance. The first relies on individual perceptions of the adequacy of health insurance coverage and whether it is considered affordable. An example of this approach asks people who are insured whether they went without recommended health care because they could not afford it. A recent survey of patients in 40 primary care practices in Colorado found that approximately 36% of patients with full-year health insurance coverage reported that they had to forego or delay at least one type of recommended medical treatment because they could not afford it.<sup>4</sup>

This example illustrates one of the many challenges of quantifying underinsurance. What individuals deem to be affordable is largely a function of perceived versus actual health care need and economic circumstance. Because most health insurance surveys do not collect health status information, the more objective assessment of need based on actual health status cannot be

**HIGHLIGHTS FROM THIS REPORT:**

- Approximately 650,000 Coloradans were underinsured – 13% of the state’s population.
- Among underinsured Coloradans, the majority had annual family incomes below 200% of the federal poverty level (FPL) and experienced out-of-pocket health expenses of at least 5% of their annual income.
- The racial/ethnic and gender composition of Colorado’s underinsured population matched Colorado’s overall demographic profile, although Hispanics experienced higher *rates* of underinsurance relative to other racial/ethnic groups.
- The largest numbers of underinsured Coloradans were White, between the ages of 19-64 and lived in families with annual incomes of less than \$30,000.
- Although the largest *number* of underinsured Coloradans was under age 65, the highest *rate* of underinsurance occurred among adults 65 years and older.
- The majority of underinsured Coloradans (83%) received health insurance coverage in the private market, either through their employer or purchased directly from an insurance broker or carrier.
- Underinsured Coloradans were more likely to forego needed care and/or report problems paying medical bills than those Coloradans deemed to be adequately insured.
- Underinsured Coloradans were just as likely to indicate experiencing a problem paying a medical bill as were uninsured Coloradans.

determined. Additionally, *perceived need* questions may underestimate the number of underinsured because most people do not fully understand the limits of their insurance coverage until medical care is needed, at which point it is often discovered that coverage is inadequate or their condition is excluded from coverage.

The second approach to defining and measuring underinsurance is to calculate out-of-pocket medical expenses as a percent of individual or family income. The published literature has established the ratio threshold to be 10% of annual income or five percent of annual income for individuals and families living below 200% of the FPL (less than \$21,600 for an individual and \$44,100 for a family of four in 2009). A family or individual with annual out-of-pocket expenditures in excess of one of these two thresholds is deemed to be underinsured.

A recent Colorado *Voices for Coverage* study collected family expenditure data and used a combination of these two methods to examine affordability. The study found that those living below 200% of FPL had little disposable income available to pay for health care. The study concluded that when health care expenses exceed 5% of income, families begin to make trade-offs by reducing their spending on other necessities such as transportation and child care to pay for health care.<sup>5</sup>

For this issue brief, underinsurance rates are based on the ratio of out-of-pocket medical expenses to a family’s annual income. The analysis conducted for this brief includes only individuals who reported being insured for at least the entire 12 months prior to completing the survey interview.

### » HOW UNDERINSURANCE WAS CALCULATED

Calculating underinsurance rates involves several steps. First, respondents could have potentially listed multiple sources of health insurance coverage, so the 17.3% of individuals who indicated more than one source of coverage were grouped into mutually exclusive categories in the following order: employer-sponsored (including military) insurance, Medicare, Medicaid, Child Health Plan Plus (CHP+), individual coverage and other insurance.

Next, the ratio of out-of-pocket health expenses to annual family income<sup>6</sup> was calculated. Survey respondents were asked to indicate the total amount of their family’s out-of-pocket health care expenses, excluding premiums, during the past year for three categories of expenses: prescription drugs, dental and vision care and other medical care including doctors, hospitals, tests and equipment. Because specific data were not available about vision coverage or the duration of dental coverage, out-of-pocket expenses for dental and vision care were excluded from this analysis. When reporting total family income, respondents were asked to include all sources including wages, other earnings, dividends, Social Security benefits, worker’s compensation, alimony and child support.

Because out-of-pocket health care expenses were reported for the past year, estimates of the number of underinsured were limited to individuals who reported being insured for the entire prior 12-month period. Due to the fact that an uninsured family member could account for a significant proportion of a family’s out-of-pocket health care expenses, the calculation was restricted further to include only insured individuals living in families in which all family members were insured for the 12 months prior to the survey.

Almost 39% of Coloradans were either uninsured at some time in the 12 months prior to the survey or were at risk for experiencing potentially significant financial barriers to getting the health care they need.

Recent national research has found that access to health care and other characteristics among families in which some members are insured and others are uninsured are distinctly different from families in which all members are insured or all members are uninsured. For example, a recent Commonwealth Fund analysis found that approximately 12% of nonelderly families with at least one uninsured member experienced high out-of-pocket health care costs, a rate that falls between families in which all members were insured (8%) and those in which all members were uninsured (18%).<sup>7</sup> Another national analysis found that insured children with at least one uninsured parent were more likely to go without necessary medical care and more likely to lack a usual source of care.<sup>8</sup> Because this research suggests that differences in insurance coverage among family members has implications for access to care, the graphs in this brief display a separate category for insured Coloradans who live in families with at least one uninsured member to illustrate this point.

Individuals were categorized as *adequately* insured if they were insured for all of the 12 months prior to the survey, did not meet one of the two out-of-pocket cost ratios for underinsurance and did not have an uninsured family member.

Of Colorado's estimated 650,000 persons deemed to be underinsured, most (572,000) met the second standard which is that they were insured, living below 200% of FPL and reported spending 5% or more of their annual income on out-of-pocket health-related expenses.

### » PREVALENCE OF UNDERINSURANCE AND UNINSURANCE IN COLORADO

The results of the 2008-2009 Colorado Household Survey show that approximately 13% of Colorado's population was underinsured. Another 6% of Coloradans were insured but lived in a family with at least one uninsured member. Almost 39% of Coloradans were either uninsured at some time in the 12 months prior to the survey or were at risk for experiencing potentially significant financial barriers to getting the health care they need.

Previous research has found that being underinsured places individuals and families at similar risk for compromised health and lack of access to care as those who have no health insurance at all. Because of this, the analyses conducted for this issue brief includes profiles of Coloradans who have no insurance as well as those deemed adequately insured and underinsured to emphasize the magnitude of the vulnerability to Coloradans going without health care and, and as a result, compromised health status.

### » PROFILE OF COLORADO'S UNDERINSURED

Data from the COHS reveal that:

- The majority of underinsured Coloradans were non-Hispanic Whites and concentrated in urban areas of the state, reflecting the demographic profile of the state's overall population.
- Coloradans living in low-income families as well as those reporting their health status as *fair* or *poor* were disproportionately represented among the underinsured when compared to Colorado's general population.
- The majority of underinsured Coloradans were working-age adults between the ages of 19-64 (61%), although the *rate* of underinsurance is highest among older adults ages 65 and older (21% of adults in this age group are underinsured).

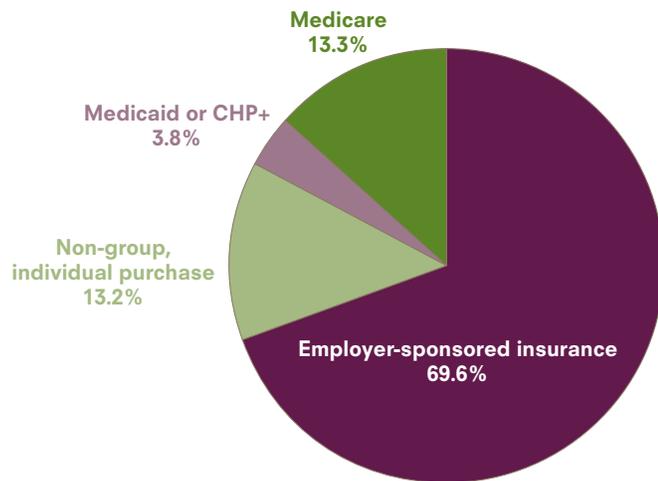
TABLE 1. COLORADANS BY INSURANCE STATUS, 2008-09

	Adequately insured	Underinsured	Uninsured at some point in the 12 months prior to the survey	Insured, but with an uninsured family member
Number	3,069,545	649,632	973,396	317,822
Percent	61.3%	13.0%	19.4%	6.3%

» INSURANCE STATUS

- 70% of underinsured Coloradans were insured through an employer, mirroring the majority of Colorado’s population (64%) that reported coverage from employer-sponsored insurance.
- 13% of the underinsured were covered by Medicare, followed by individually-purchased insurance (13%) and Medicaid/CHP+ (4%).
- The overwhelming majority of underinsured Coloradans reported getting their coverage through a group plan as opposed to the individual market. When one considers that the average cost of an employee’s annual premium in 2008 was nearly \$4,500 and that employee’s share of that cost has increased by 185% since 1996<sup>9</sup>, it is clear that enrolling in employer-offered health insurance is a growing commitment of an individual’s annual income, particularly for lower wage earners. Cost factors continue to be the single reason why workers decline coverage, even when offered.

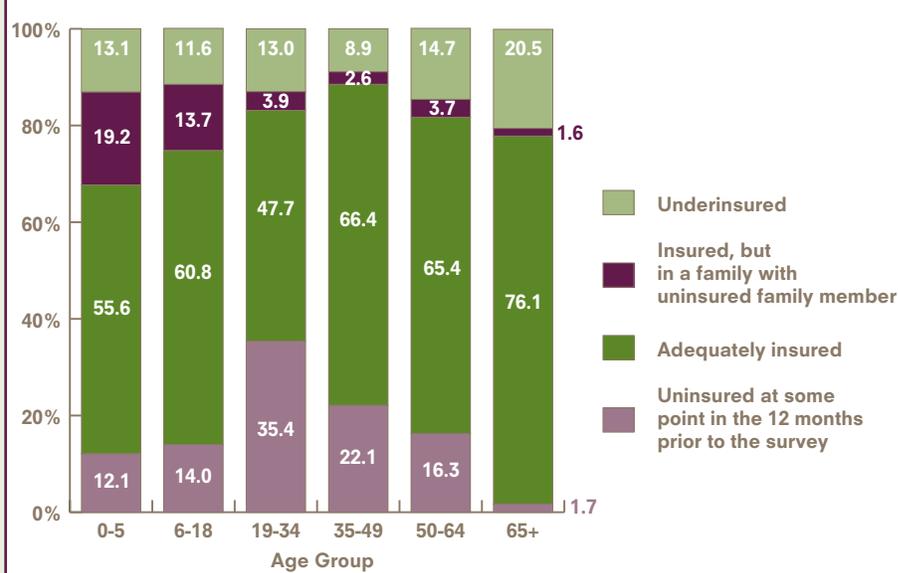
GRAPH 1. UNDERINSURED COLORADANS BY SOURCE OF HEALTH INSURANCE COVERAGE, 2008-09



In addition to describing the characteristics of underinsured Coloradans, another way of examining the data is to examine underinsurance *rates* among different subgroups of the population and how these rates vary by insurance status, age, race/ethnicity and income.

NOTE: *Unless otherwise noted, the data and analysis presented in all tables and graphs come from the 2008-09 Colorado Household Survey.*

**GRAPH 2. UNINSURED, ADEQUATELY INSURED AND UNDERINSURED RATES BY AGE GROUP, 2008-09**

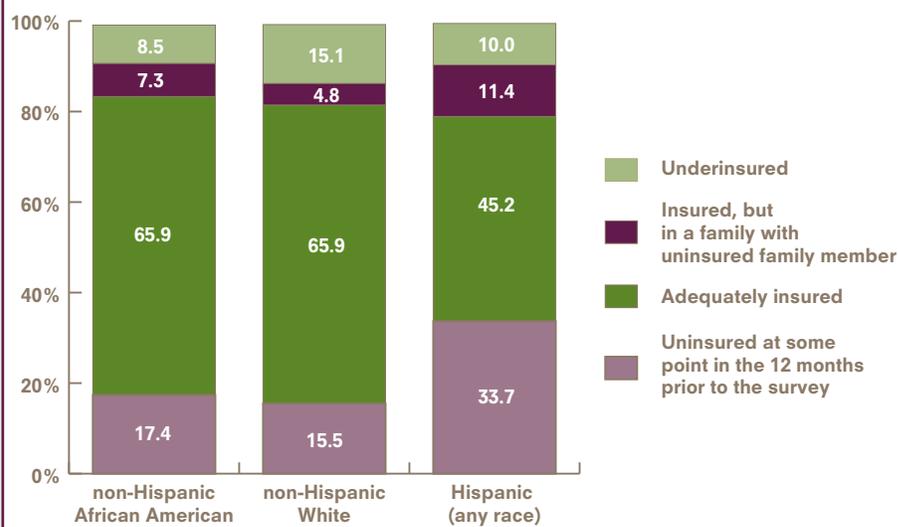


- Over 20% of working age adults ages 35-49 were uninsured (22%), however, this age group also had the lowest underinsurance rate (9%).
- Only 13% of young adults ages 19-34 were underinsured, although one-third (35%) were uninsured for all or part of the 12 months prior to the survey.
- A smaller percentage of children were either underinsured or uninsured compared to adults (with the exception of those on Medicare) although 19% of young children (ages 0-5) lived in a family with at least one uninsured member.

» **AGE**

■ Although adults ages 65 and older had the lowest uninsurance rate (2%), approximately one-in-five were underinsured. This finding suggests that despite the nearly universal insurance coverage achieved through Medicare, many low income Medicare beneficiaries simply cannot afford to pay the co-insurance and other out-of-pocket medical expenses associated with Medicare coverage.

**GRAPH 3. UNINSURED, ADEQUATELY INSURED AND UNDERINSURED RATES BY RACE/ETHNICITY, 2008-09**



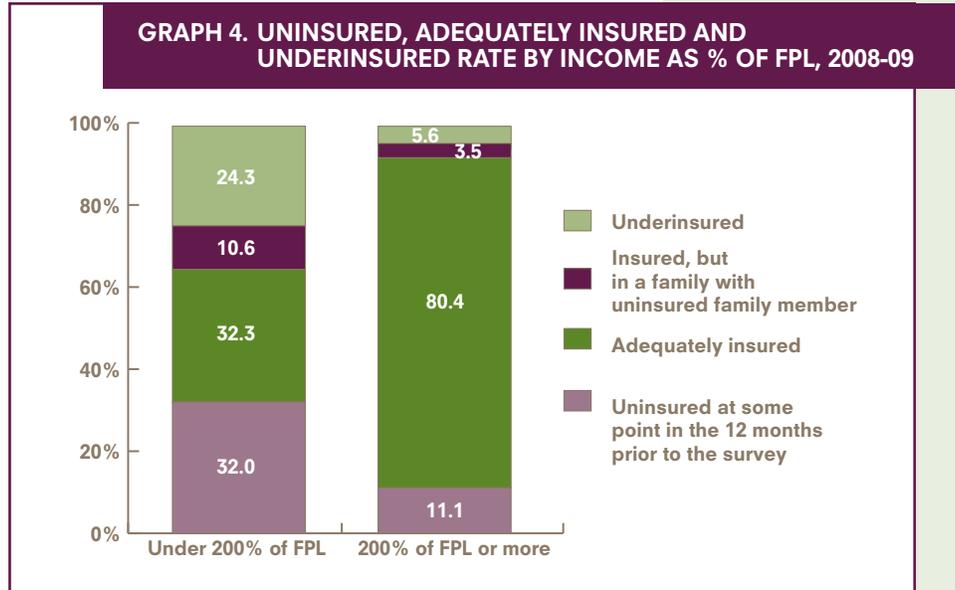
» **RACE/ETHNICITY**

■ Non-Hispanic Whites had the highest rate of underinsurance (15%), followed by Hispanics (10%) and non-Hispanic African Americans (9%).

■ Fewer than half of Hispanics (45%) were adequately insured, compared to two-thirds of White non-Hispanics and non-Hispanic African Americans.

» **HOUSEHOLD INCOME**

- Coloradans with annual incomes of less than \$30,000 had the highest rates of underinsurance (23%) of all income categories. Approximately two-thirds of low-income Coloradans were among the most vulnerable in terms of being underinsured, uninsured or living in a household with an uninsured family member.
- Taking family size and annual income into account, approximately one-quarter of Coloradans with incomes under 200% of FPL (\$21,660 for an individual and \$44,100 for a family of four in 2009) were underinsured and another 32% were uninsured at some point in the 12 months prior to the survey.

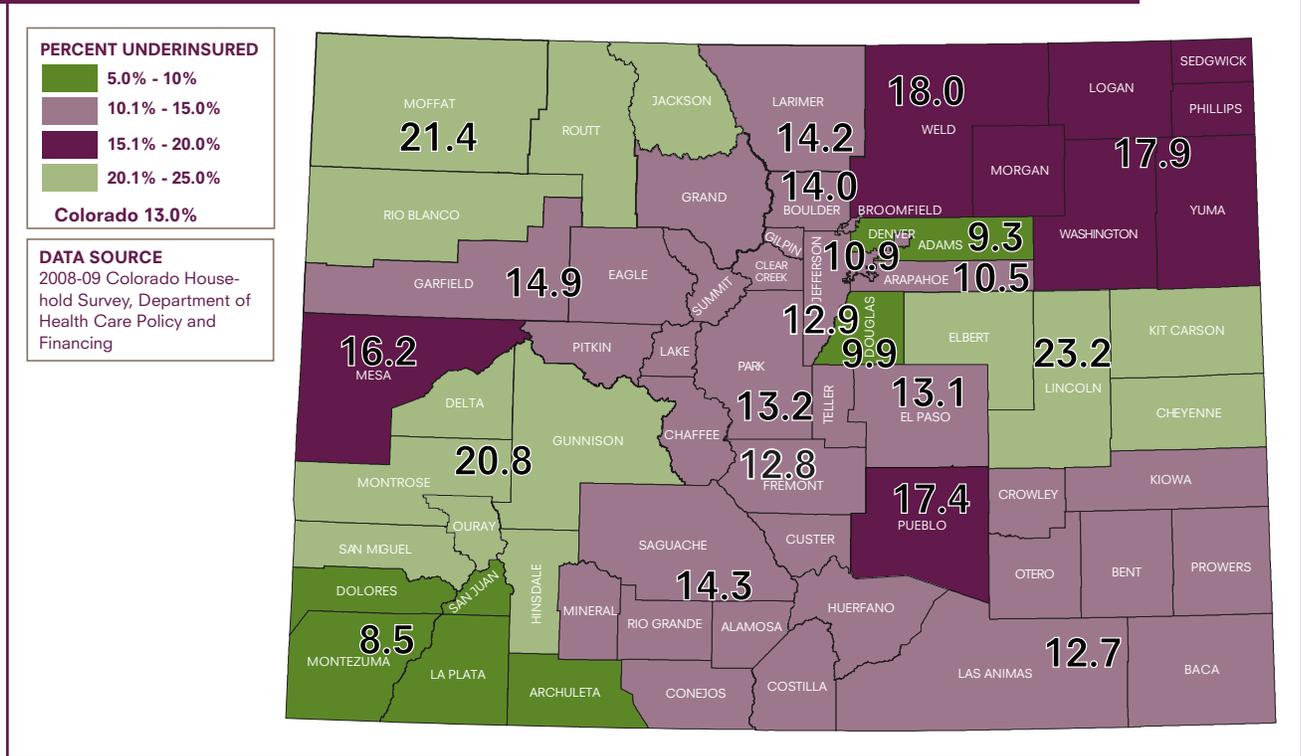


**TABLE 2. UNINSURED, ADEQUATELY INSURED AND UNDERINSURED RATES BY ANNUAL INCOME, 2008-09**

Annual family income	Adequately insured	Underinsured	Uninsured at some point in the 12 months prior to the survey	Insured, but with an uninsured family member
< \$30,000	33.6%	23.1%	33.1%	9.6%
\$30,000 - \$59,999	64.0%	11.5%	18.8%	6.4%
\$60,000 - \$89,999	83.9%	4.7%	7.2%	4.3%
\$90,000 +	94.9%	2.0%	2.8%	0.8%

**COLORADANS WITH ANNUAL INCOMES OF LESS THAN \$30,000** had the highest rates of underinsurance (23%) of all income categories.

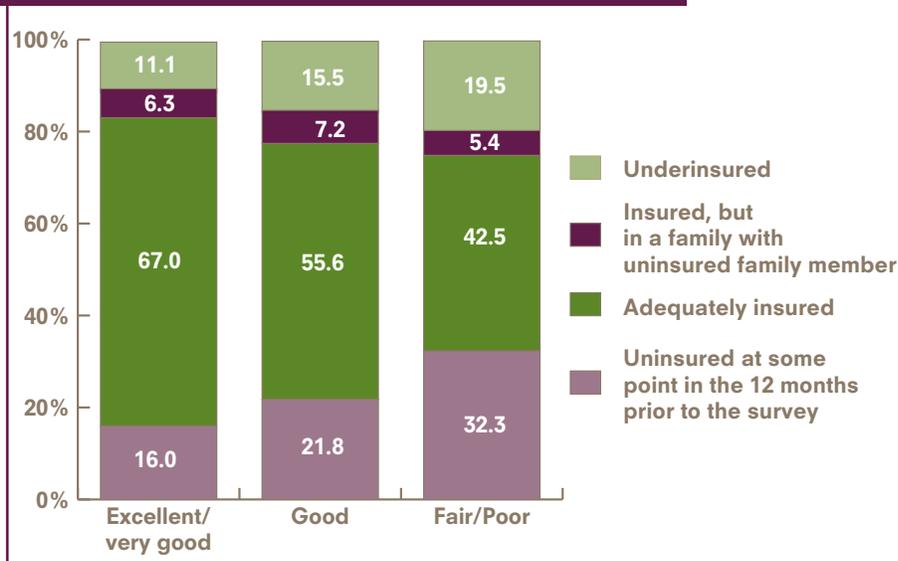
MAP 1. PERCENT UNDERINSURED BY COLORADO HEALTH STATISTICS REGIONS, 2008-09



» GEOGRAPHIC REGIONS

- Differences in underinsurance rates between urban and rural Coloradans are shown in the Map 1 above and in Appendix A on page 10. One-in-five residents were underinsured in three rural and frontier regions of the eastern plains and Western Slope, while 9-14% of Coloradans living in the Denver Metropolitan Area were underinsured. Region 9 in southwest Colorado had the lowest rate (8.5%) of underinsurance in the state.
- Underinsurance rates were slightly higher among Coloradans living in rural regions of Colorado (15%) compared to urban areas (12%).<sup>10</sup> In addition, more rural Coloradans reported being uninsured at some point in the 12 months prior to the survey (23%) than their urban counterparts (19%).

GRAPH 5. UNINSURED, ADEQUATELY INSURED AND UNDERINSURED RATE BY SELF-REPORTED HEALTH STATUS, 2008-09



» HEALTH STATUS

- 20% of Coloradans reporting fair or poor health status were underinsured, compared to 11% of those reporting excellent or very good health status.

» **IMPLICATIONS OF BEING UNDERINSURED**

There are many consequences of being underinsured, a number of which are highlighted here.

**Underinsured individuals and families experience significant barriers to health care.** National data suggest that underinsured individuals often experience the same access and cost barriers as those faced by the uninsured. In a 2007 national survey, underinsured and uninsured adults ages 19-64 reported with equal frequency that they had experienced financial hardships such as problems paying a medical bill or being contacted by a collection agency within the past year.<sup>3</sup> Results of the COHS show similar access barriers among Coloradans. Table 3 displays the frequency with which respondents reported a financial barrier to getting the care they needed.

- Underinsured as well as uninsured Coloradans were more likely than those with adequate coverage to forego a physician visit or not fill a prescription due to the cost of care.
- One in three underinsured Coloradans (35%) had a problem paying a medical bill – this is almost three times the rate of Coloradans who had adequate insurance coverage.
- Having a usual source of care is strongly associated with receiving continuous, appropriate care as well as facilitating a positive relationship between patient and provider. Underinsured and adequately insured Coloradans had low rates of no usual source of care in contrast to Colorado’s uninsured where nearly 30% indicated not having a usual source of care.

**TABLE 3. ACCESS AND COST-RELATED PROBLEMS AMONG UNINSURED, UNDERINSURED AND ADEQUATELY INSURED COLORADANS, 2008-09**

Barrier experienced in the 12 months prior to the survey	Adequately insured	Underinsured	Uninsured at some point in the 12 months prior to the survey	Insured, but with an uninsured family member
Did not fill a prescription due to cost	7.1%	15.1% *	23.8% *	12.9% *
Did not get needed physician care due to cost	5.4%	11.6% *	32.8% *	8.4% *
Did not get needed specialist care due to cost	7.3%	13.5% *	25.9% *	8.6%
At least one of the above	13.0%	23.1% *	44.1% *	18.3% *
No usual source of care	5.8%	5.6%	29.7% *	6.6%
Problems paying medical bills	12.4%	35.1% *	38.2% *	37.3% *

*\*Statistically significant at p < .05 when compared to adequately insured.*

**As the Colorado population ages, so too may the number of underinsured grow.** One of the biggest unexpected findings in this analysis is the high proportion of Colorado adults age 65 and older who are underinsured – over 20%. Many reports on health insurance status stop reporting data for adults over 65 as the assumption is that Medicare provides comprehensive coverage. This report, however, shows that in Colorado, the age group with the largest percentage of underinsured individuals is the 65+ age group, in spite of their nearly universal coverage under Medicare.

**Coloradans living in rural areas are particularly vulnerable to higher rates of underinsurance and uninsurance.** Many rural Coloradans are self-employed ranchers, farmers, small business owners or work in low-wage positions in the service industry. Often these employers do not offer health insurance to their employees. When offered, small firms and self-employed individuals do not have numerous insurance options, limiting choice and for those available they have sizeable cost-sharing obligations to keep the premiums more affordable. These issues are important considerations for discussions about how best to extend affordable health insurance to residents in Colorado’s rural and frontier communities.

**These findings showed that only four percent of underinsured Coloradans were enrolled in the Medicaid and CHP+ programs.** This is partly because of the richness of the Medicaid benefit package relative to private

insurance, including having fewer cost-sharing requirements and, for both CHP+ and Medicaid, the majority of enrollees are children who are relatively more healthy, incurring minimal annual health care expenses. Medicaid represents a public insurance program that is truly affordable for the low-income populations it serves without skimping on the benefit package to the detriment of its enrollees.

**The majority of underinsured Coloradans were working-age adults ages 19-64 who were privately insured with relatively low incomes.** Extending adequate affordable coverage to these workers will require premium subsidies for employees and may include employer subsidies as well for those small firms that employ a majority of low-to-moderate income workers. Sometimes a third-party insurer, such as the state, assumes responsibility for high-cost, low-frequency claims, thus lowering the average risk of a group and resulting in lower premiums for an insured group; it represents another option to keep health insurance premiums affordable for employers currently unable to offer insurance because of the escalating costs of doing so.<sup>11</sup>

**The economic and personal costs of being underinsured are significant and far-reaching.** Too many Coloradans have reported foregoing medical care and filling needed prescriptions because of the costs involved. This foregone care is especially concerning for individuals that live with a chronic disease which, if appropriately monitored, does not have to impinge on their quality of life. Unmanaged chronic illness most often results in extraordinary economic costs to individuals and the state. The most prevalent chronic diseases in Colorado are heart disease and diabetes, both of which are correlated with the other in terms of symptoms, adverse outcomes and costs. Having one’s blood pressure monitored or diabetic feet checked are low-cost investments that can have long-term cost savings if done on a routine and on-going basis. The upstream costs of preventive and health maintenance care are diminished when individuals end up in emergency departments, hospital admissions or long-term care facilities because their health was left unmonitored.

**APPENDIX A: RATES OF UNDERINSURANCE BY THE 21 HEALTH STATISTICS REGIONS, 2008-09  
(ranked in descending order by percent underinsured)**

% Underinsured	Counties in region	Region
23.2%	Cheyenne, Elbert, Kit Carson, Lincoln	5
21.4%	Jackson, Moffat, Rio Blanco, Routt	11
20.8%	Delta, Gunnison, Hinsdale, Montrose, Ouray, San Miguel	10
18.0%	Weld	18
17.9%	Logan, Morgan, Phillips, Sedgwick, Washinton, Yuma	1
17.4%	Pueblo	7
16.2%	Mesa	19
14.9%	Eagle, Garfield, Grand, Pitkin, Summit	12
14.3%	Alamosa, Conejos, Costilla, Mineral, Rio Grande, Saguache	8
14.2%	Larimer	2
14.0%	Boulder	16
13.2%	Clear Creek, Gilpin Park, Teller	17
13.1%	El Paso	4
12.9%	Jefferson	21
12.8%	Chaffee, Custer, Fremont, Lake	13
12.7%	Baca, Bent, Crowley, Huerfano, Kiowa, Las Animas, Otero, Prowers	6
10.9%	Denver	20
10.5%	Arapahoe	15
9.9%	Douglas	3
9.3%	Adams	14
8.5%	Archuleta, Dolores, La Plata, Montezuma, San Juan	9

## » ENDNOTES

- 1 An estimated 678,000 Coloradans responded that they were uninsured at the time of the survey. A higher number of Coloradans (973,000) reported that they were uninsured at some point in the 12 months prior to the survey. Typically, the respondent's insurance status at the time s/he completes the survey is used to calculate the uninsured rate. However, the alternate *uninsured* definition was used throughout this brief because of the approach used to defining *underinsurance*. Specifically, one criterion for being identified as underinsured is that an individual had health insurance for the entire 12 months prior to the survey. This assures that an individual's out-of-pocket health expenses were not attributable to a spell without health insurance. Therefore, the complementary definition of uninsured includes anybody who had a spell without insurance in the 12 months prior to the survey. Note that the uninsured estimate reported in this brief (973,000) differs slightly from a comparable, previously published estimate due to imputation of the 0.1% of survey records that were missing data on the 12-month insurance variable. For a discussion of COHS uninsured definitions, see the Colorado Department of Health Care Policy and Financing issue brief, *A Profile of Colorado's Uninsured Population* (Feb 2010).
- 2 The Current Population Survey (CPS) on which these estimates are based allows respondents to indicate multiple sources of health insurance coverage; therefore a relatively small proportion of individuals indicated both private and public coverage in the past year. DeNavas-Walt C, Proctor B, Smith JC. Income, poverty, and health insurance coverage in the United States: 2008. U.S. Census Bureau, *Current Population Reports* [serial online]. September 2009;issue P60-236(RV).
- 3 For example, see Schoen C, Collins SR, Kriss JL, Doty MM. How many are underinsured? Trends among U.S. adults, 2003 and 2007. *Health Affairs*. 2008;27: w298-w309. Recent evidence suggests that premiums are also consuming an increasing proportion of Americans' incomes. See Schoen, C, Nicholson, JL, Rustgi, SD. Paying the price: How health insurance premiums are eating up middle-class incomes – State health insurance premium trends and the potential of national reform. The Commonwealth Fund [serial online]. August 2009.
- 4 Vorhees K, Fernald DH, Emsermann C, et al. Underinsurance in primary care: A report from the state networks of Colorado Ambulatory Practices and Partners (SNOCAP). *Journal of the American Board of Family Medicine*. 2008;21: 309-316.
- 5 Feder E. *The Cost of Care-Can Coloradans Afford Health Care?* Colorado Voices for Coverage and Colorado Center on Law & Policy. April 2009.
- 6 All income estimates are based on the respondent's annualized family income from the month just prior to when the respondent answered the survey. Although individuals were asked to report their gross family income, it is possible that individuals reported their family's take-home income.
- 7 Merlis M, Gould D, Mahato B. Rising out-of-pocket spending for medical care: A growing strain on family budgets. The Commonwealth Fund [serial only]. February 2006.
- 8 De Voe JE, Tillotson CJ, Wallace LS. Children's receipt of health care services and family health insurance patterns. *Annals of Family Medicine*. 2009; 7:406-413.
- 9 Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey, 2008
- 10 The definition of urban and rural are based on Rural Urban Commuting Area (RUCA) taxonomy, described in Hart LG, Larson EH, Lishner DM. Rural definitions for health policy and research. *American Journal of Public Health*. 2005;95: 1149-55.
- 11 For a concise summary of benefit design approaches, see Yondorf B. *Health insurance benefit adequacy*. The Colorado Health Foundation. March 2009.

**ACKNOWLEDGEMENTS:**

The 2008-09 Colorado Household Survey (COHS) was conducted by the Colorado Department of Health Care Policy and Financing (HCPF) with support from The Colorado Trust. HCPF contracted with the Colorado Health Institute (CHI) to serve as the survey administrator. A representative sample of 10,000 Colorado households was contacted by phone between November 2008 and March 2009. In each household, a family member was randomly selected to answer a series of detailed questions about health insurance coverage, employment status, access to and utilization of health care services and out-of-pocket expenditures incurred. If the randomly selected family member was a child under the age of 18, a parent or guardian responded on behalf of the child. The survey was administered in both English and Spanish. The statewide survey was stratified geographically into 21 health statistics regions to allow for the calculation of stable and reliable sub-state estimates. Three of the 21 regions were further stratified by African-American and all other races to increase the representation of African-Americans in the sample. The survey data were weighted to represent Colorado's population. All analyses provided in this report were conducted by CHI staff on behalf of The Colorado Trust.



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