The Cost of Care:

Can Coloradans Afford Health Care

April 2009

COLORADO CENTER on LAW & POLICY

Justice and Economic Security for *all* Coloradans

The **Colorado Center on Law and Policy** works to secure justice and promote economic security for all Coloradans and to provide the critical advocacy formerly provided by federally-funded legal services programs. CCLP's goals are to foster economic self-sufficiency for all Coloradans; increase access to affordable, quality healthcare; and promote responsible and equitable fiscal policies through research and education. CCLP works for changes in public policy through timely, credible and accessible policy analysis, education, advocacy and coalition building.

The Colorado Center on Law and Policy (CCLP) embarked on this project to help frame what affordable means to Colorado, and move the debate about health reform forward.

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COLORADO VOICES FOR COVERAGE

Colorado Voices for Coverage (CVC) is a broad-based health care coalition representing business, faith, low income. and consumer groups. CVC seeks to further health care reform at the state and national level, and through education and advocacy, to increase access to quality health care for all Coloradans. CVC partnered with the Colorado Center on Law and Policy to conduct this affordability study to determine how much Coloradans can afford to pay for health care. With over 800,000 Coloradans uninsured, it is imperative that the affordability of health care be addressed.

CVC is a collaborative initiative comprised of a leadership team of organizations including: the Business Health Forum, the Colorado Consumer Health Initiative, the Colorado Council of Churches, and the Colorado Progressive Coalition.

Colorado Consumer Health Initiative:
The Colorado Consumer Health Initiative (CCHI) is a statewide, unified membership organization comprised of organizational and individual health care consumer advocates. CCHI acts as a unified representative of its members and partners at the legislature and in the community to influence and shape effective health care policy to ensure barrier-free access to quality health care for all Coloradans.

Business Health Forum:
The Business Health Forum (BHF) engages the business community in major health care policy reform efforts, including work done through the Colorado General Assembly, Gov. Bill Ritter's administration and other initiatives. BHF provides information to individuals in the business community to encourage their thoughtful participation in the health care reform debate.

Colorado Council of Churches:
Living in unity, working for justice is the mission of twelve member denominations as they come together as the Colorado Council of Churches (CCC). Through the work of two Commissions, Unity and Justice, official representatives of the member denominations address issues of Christian unity and interfaith relationships as well as issues of justice that affect the poor, voiceless, and marginalized in our society. While promoting unity, CCC celebrates diversity and the sacred humanity of every child of God.

Colorado Progressive Coalition:
Colorado Progressive Coalition (CPC) is a statewide, progressive values-driven organization and the anchor for Colorado's grassroots progressive community. CPC is building Colorado's progressive movement and is a leading local and national voice for civil rights and racial justice, economic justice and corporate accountability, health care for all, environmental justice, and an open and accountable democracy that works for everyone, not just the wealthy or the well-connected.

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The Colorado Voices for Coverage Partners: Dede de Percin, the Executive Director of the Colorado Consumer Health Initiative; Dr. Jim Ryan of the Colorado Council of Churches; Jason McKain of the Colorado Progressive Coalition; and Ralph Pollack of the Colorado Business Health Forum, all backed this project financially, politically, and intellectually. CCHI staff, especially Kelli Keck and Corrine Fowler, was intimately involved in the Workshop administration and field organizing. CVC's tireless workshop facilitators traveled the state, helping participants complete the surveys and bringing back valuable insights from Colorado communities.

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The Colorado Trust is a statewide grantmaking foundation dedicated to achieving access to health care for all Coloradans.
www.coloradotrust.org

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Established in 1999, the Caring for Colorado Foundation is one of the state's most respected health grant makers. CFC has improved the lives of Coloradans by awarding more than $50 million to non profit and government agencies, building health care capacity, strengthening the existing health care system and linking people to care. CFC's focus is on health care access for the uninsured and underserved statewide. Foundation initiatives include programs in oral health, public health and others. For more information on the Caring for Colorado Foundation, please visit www.caringforcolorado.org.

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The Denver Foundation is a community foundation serving the seven-county Metro Denver area that inspires people and mobilizes resources to improve life in our community. The Denver Foundation stewards an endowment to invest in meeting current and future needs for the Metro Denver community, and manages over 800 charitable funds on behalf of individuals, families and businesses. For more information, visit www.denverfoundation.org.

Robert Wood Johnson Foundation

This project was funded in part by the Robert Wood Johnson Foundation.
The mission of the Robert Wood Johnson Foundation is to improve the health and health care of all Americans. Our goal is clear: To help Americans lead healthier lives and get the care they need. www.rwjf.org

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www.kinggreisen.com

Sheila Fortune

This project was funded in part by a personal donation from Sheila Fortune.
www.sheilafortunefoundation.org

LETTER FROM THE EXECUTIVE DIRECTOR

Health care, while central to economic security and self-sufficiency, is beyond the financial reach of a growing number of Coloradans. This Report provides new information about family self-sufficiency by examining the affordability of health care for Coloradans.

The Colorado Self-Sufficiency Standard establishes how much income Colorado families of different types must have in order to make ends meet without public or private assistance. The Standard assumes, because it is true for the average Coloradan, that families have health insurance through an employer and that the employer pays three quarters of the premium for that insurance. We know, however, that health care is growing more expensive and the trend in health insurance is less coverage and higher cost sharing for consumers. We know also that many lower-income families are not offered or cannot afford to enroll in health insurance, even when their employer pays a substantial share of the premium. This Report complements the Colorado Self-sufficiency Standard by examining how much families have available to spend on health care and the choices they make in order to purchase it. Those choices and tradeoffs raise important public policy questions which we hope will be debated as a result of this analysis.

Affordability standards can be important public policy tools. In 2006, the Greater Boston Interfaith Organization (GBIO) demonstrated through household budget workshops that many people could not afford to comply with the individual mandate requirement that was a key part of the Massachusetts health care reform package. Consumer advocates used the GBIO study to persuade the state to offer new and improved insurance packages and reduce the penalties for non-compliance with the mandate.

As Colorado grapples with similar challenges in how to improve our health care system, this Report aims to shed light on how questions of affordability should impact broader health care reform.

Our important partners with whom we collaborated to produce this report—Colorado Voices for Coverage—adopted a similar approach to GBIO by reaching out across the state to ensure the success of the household budget workshops. Their diligence and data-gathering were invaluable. We are deeply appreciative of their efforts and their willingness to work with CCLP on this project.

We hope this Report will inform and enrich the continuing conversations and debates about health care reform in our state. As well, everyone involved in the preparation of this report hopes it will help to ensure that health care will one day be affordable for *all* Coloradans.

Sincerely,

Maureen Farrell

Maureen Farrell-Stevenson, Esq.
Executive Director, Colorado Center on Law and Policy

The Cost of Care: Can Coloradans Afford Health Care

EXECUTIVE SUMMARY

As the debate around health care reform evolves at the state and federal levels, there are three critical areas that policymakers must consider: adequacy, accessibility, and—the subject of this study—affordability.

Affordability is often mentioned as critical in the health care debate, but is seldom put into context. That is the aim of this study—to assist in determining what affordability means for Colorado families.

As families grapple with increasingly difficult economic realities, this study shows clear evidence that low-income Coloradans struggle to make ends meet, many families have little or nothing at all to pay for health care, and, in many cases, health care costs require financial tradeoffs elsewhere.

The research shows that families living below 200% of the Federal Poverty Level (FPL) have little if anything to spend on health care after paying for necessary expenses and other financial responsibilities. Most families between 200%-400% of the FPL (between $41,600 and $84,800 for a family of four) could contribute something to health care, but there is nonetheless a substantial minority in this income group who could not contribute anything toward health care. What this research also shows—that is unique to this study—is that families in all income categories, even those up to 500% of FPL ($106,000 for a family of four) make significant tradeoffs when it comes to investing in long term opportunities, such as savings and education, once the cost of health care consumes more than 5% of family income.

Other key findings on affordability include:

- Most families' expenses are greater than their incomes.
- Debt plays an integral role in families' financial decisions.
- Most families experienced an increase in debt over the previous year.
- Families earning between 200% and 400% FPL have some income available to spend on *health care*, but cannot afford *health insurance* without a substantial subsidy. At least some of these families would require a full subsidy. Only above 400% FPL can most families make a substantial contribution to their coverage.
- Many families that can afford health insurance are only able to do so because they have access to group coverage where the employer's share of the cost serves as a significant "subsidy."
- The more a family spends on health care and health insurance, the less it spends on basic necessities and investments in long-term opportunities. When families spend more than 5% of their household income on health care, they make substantial tradeoffs on other important expenditures, such as transportation, housing, and child care.
- As families have to spend more on health care, the largest tradeoffs are often in savings and education.

These findings are a result of input from more than 1,000 participants at nearly 100 community workshop forums throughout Colorado. Participants all were below 500% FPL and provided detailed income and expenditure data. Additional research also came from the Consumer Expenditure Survey, which gauges consumer spending in a number of areas.

This research has numerous policy implications centered primarily around the need to recognize a minimum standard of affordability and to define such a standard very broadly.

- "Affordable" varies widely depending on family composition, income level, age, employment status, cultural values about spending obligations, catastrophic events, and other factors.
- Available income varies widely even *within* income groups. Therefore, there is no single dollar amount or percentage of income that will be suitable for all families, even within the same income group.
- A common sense measure for expenditures should include both necessary expenses (food, housing, etc.) and other financial responsibilities (student loans, debt payments, etc.).
- Public policy should not punish lower income people for savings, especially for education, housing, and retirement. Any affordability standard should be based on income, minus such savings.
- 5% of household income is a threshold at which health care requires substantial tradeoffs, and is therefore a starting point for the consideration of an affordability standard. However, many households will still require targeted assistance even under this threshold.

These policy implications should inform lawmakers as they consider the affordability, or lack of affordability, of health care in Colorado.

Colorado is in the grip of a significant national recession and struggling with the problems that result from a broken health care system. Colorado families face increasingly difficult challenges. Wages and incomes are stagnant or falling, health care costs are rising, there are dramatic increases in the number of the unemployed and uninsured, and Colorado's fiscal landscape is in crisis.

A 2008 publication of the Colorado Center on Law and Policy entitled, *The Self-sufficiency Standard for Colorado 2008: A Family Needs Budget*, reports that health care costs, on average across the state, increased by 35 percent over the previous four year period. Put simply, it is becoming harder and harder for lower income families to both make ends meet and afford health care.

This study addresses fundamental questions. What is affordability? What does affordability mean for Colorado families? How should policymakers address this question of affordability? And what reasonable definition of affordability would ensure that all Coloradans can access health care? With more than 800,000 Coloradans uninsured, and with Colorado ranking among the worst in the nation for children living in poverty who have health insurance, defining affordability is a critical step in the march toward long-term, comprehensive health care reform.

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INTRODUCTION

As the number of uninsured grew throughout the past decade, states have taken the lead in health care reform with the goal of significantly increasing the number of people with health insurance. As of May 2008, three states had enacted--and twelve other states were moving toward-- substantive reform.[1] President Obama also campaigned on a platform of making insurance coverage available to all and appears to be moving in the direction of significant health care restructuring.

As we move toward significant health care restructuring, it is important to recognize that discussions about health care reform tend to assume that any product or program designed to cover the uninsured would be "affordable." New and continuing reform efforts, especially the interest in individual mandates which require everyone to have health insurance coverage, make it especially critical to examine the idea of "affordability" more closely.

How policymakers ultimately define affordability will have a significant impact on the success or failure of any reform effort. To this point, the affordability debate has been largely about the cost of insurance coverage, but it is critical that we discuss not just the cost of insurance, but also the affordability of *health care*. The entire cost of care—co-pays, deductibles, and other out-of-pocket costs—must all be considered in any calculation of affordability. More broadly, whether policymakers adopt an individual mandate policy, take a more incremental route to coverage through public program expansions and/or private insurance subsidies, or choose to manage risk and deliver care through mechanisms other than insurance, they must grapple with the issue of affordability.

This Report seeks to inform this critical policy discussion about affordability in several ways. First, it provides specific data to Colorado policymakers who are contemplating distinct approaches and who will be called upon to make decisions regarding standards of affordability, premium requirements, overall cost-sharing, and the financial choice between subsidizing private coverage and expanding public programs. Secondly, while the Report encourages a broader understanding of the concept of affordability, it also seeks to frame the discussion of affordability by considering several components that shape it—such as financial obligations—and by examining several ways of measuring it.

Affordability is viewed in the Report from the distinct perspectives of household spending and opportunity costs. Based on data collected from Coloradans across the state, the study first examines how much money these Colorado households have available to spend after meeting a variety of important expenses which could potentially be spent on health care.[2] This same data also permits a group perspective on affordability, indicating what proportion of an income group would be able to afford insurance at distinct price points. Finally, data collected by the Bureau of Labor Statistics reveals the "opportunity cost" of health care, indicating the tradeoffs families make in order to purchase health care.

The economic crisis has added urgency to the question of affordable health care. In August of 2008, when the budget workshops for this Report were conducted, even before the economic downturn, one

[1] "States Moving Toward Comprehensive Health Care Reform," Kaiser Commission on Medicaid and the Uninsured. Summaries and updates available at www.kff.org.

[2] The household surveys were modeled on a similar project undertaken by the Greater Boston Interfaith Organization in 2006.

in four Americans was struggling to pay for health care.[3] A staggering 813,000 Coloradans were uninsured.[4] One-half of Americans cut back on health care as a result of cost concerns during the past year, most frequently by relying on home remedies and over the counter drugs rather than seeing a doctor.[5] With economic conditions deteriorating and the number of unemployed and uninsured growing, cost is likely to continue to present a substantial barrier to access to health care.

Policymakers are challenged today to provide affordable, adequate health care to as many people as possible. We hope to advance an informed and critical discussion of these important issues.

KEY FINDINGS

1. Most Low-Income Families' Have Expenses That Exceed Their Income

- The majority of families living below 200% of the Federal Poverty Level (FPL) have expenses beyond what their income can provide.[6]

- 45% of families with incomes between 200%-300% FPL; and 41% of families with incomes between 300%-400% FPL reported spending more than their income in the previous month. At the highest income level in this Report, 400-500% FPL, 32% reported expenditures beyond their income.

- Debt plays a significant role in family budgets and total financial liability is increasing. In all income categories but the highest, more people's debt increased than decreased in 2008 from the previous year.

2. Too Little or Nothing at All Available for Health Care Costs

- Households living at or below 100% FPL[7] have nothing left to pay for health care. About one-half of families living between 100%-200% FPL may have some money available after expenses, but these amounts are not substantial and would not be sufficient to purchase health care.

- Households between 200% and 500% FPL have varying amounts of income available that could be used for health care, but many would need a substantial subsidy before they could afford health insurance.
- Many families are only able to afford insurance because of the 75% subsidy that is typically provided by employers for group insurance.

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[3] "One in Four Americans Continues to Struggle Paying for Health Care," Kaiser Health Tracking Poll: Election 2008. http://www.kff.org/kaiserpolls/h08_posr081908pkg.cfm.

[4] Urban Institute and Kaiser Commission on Medicaid and the Uninsured estimates based on the Census Bureau's March 2007 and 2008 Current Population Survey (CPS: Annual Social and Economic Supplements). http://www.statehealthfacts.org/profileind.jsp?cat=3&sub=39&rgn=7

[5] "Consequences of Health Care Costs," Kaiser Health Tracking Poll, Feb. 2009. http://www.kff.org/kaiserpolls/upload/7866.pdf

[6] 200% FPL is $42,400 a year for a family of four.

[7] 100% FPL is $21,200 a year for a family of four.

- Depending upon income level, at least 9-22% of families earning between 200%-500% FPL, would need more than a 75% subsidy in order to afford health insurance.

- While subsidies might be adequate to make *insurance* affordable at the premium levels used to model affordability in this study, they would not necessarily make *health care* affordable. None of these calculations address out-of-pocket expenditures such as co-payments, deductibles, caps, uncovered benefits, or cost sharing. Nor do these calculations consider whether an individual's age, gender or health status would exclude them from coverage at these premium levels.

3. Opportunity Costs: Health Care Costs Mean Tradeoffs for Most Families

- The "cost" of health care goes beyond its price. The more a family spends on health care and health insurance, the less it spends on necessary expenses and other financial responsibilities. This pattern of tradeoffs becomes apparent after a family spends over 5% of its total income on health care. Families that spend more on health care spend less on essential day to day expenses such as food, transportation, housing, clothing, and child care.

- Families spending more than 20% of their income on health care spend on average one-third less on necessary expenses compared to families that spend less than 5% of household income on health care

- Families that spend more than 20% of their income on health care spend on average two-thirds less on other financial responsibilities like education, savings, household furnishings, compared to families who spend less than 5% of their income on health care.

- Savings drops off the most as health care spending increases. Families that spend more than 10% of their income on health care save 56% less on average compared to families spending less than 5% of income on health care. When spending on health care is more than 20% of income, savings is diminished by an average of 88%.

STUDY DESIGN

This Report is comprised of two parts: Household Budget Workshops and Opportunity Costs.

Part I: The Household Budget Workshop study analyzes the results of 97 household budget workshops conducted in six regions of Colorado in August 2008. Household budget data collected during the workshops was used to determine how much money households under 500% of the Federal Poverty Level (FPL) have available after typical expenses that potentially could be used to purchase health care. The workshop data also was used to calculate affordability from a group perspective by looking at the percentage of households that could afford health care at different price points.

Part II: The Opportunity Costs study examines changes that occur in household spending patterns based on the percentage of income used for health care expenditures. The Opportunity Costs data comes from the Consumer Expenditure Survey and data collected by the Bureau of Labor Statistics on the buying habits of American consumers, including information on their expenditures, income, and consumer unit characteristics. Neither of these samples are probability samples and the findings

should not be used to make statistical statements about the population of Colorado as a whole. However, both provide a useful portrait of the situations in which lower-income Coloradans find themselves and the types of choices with which they are presented.

This report intends to enter the political debate on the affordability of *health insurance*. However, in actuality, the structure and adequacy of health insurance varies so considerably that true affordability must also include other costs of health care including deductibles, co-pays, and non-covered services. Thus, this report broadens the policy debate on the affordability of insurance by also discussing the affordability of *health care*, and in so doing hopes to heighten readers' sensitivity to the differences between affording health care and affording health insurance.

Federal Poverty Level and Self-Sufficiency

The Report categorizes households and presents data in income categories based on increments of the Federal Poverty Level (FPL). FPL is used as the basis for the analysis in this Report as it is the standard used to define poverty and determine public program eligibility in Colorado and the United States. However, it is important to keep in mind that the FPL is an outdated measure of poverty as it relies on a standard established in the 1960s using food as the primary household expenditure. At the time the FPL was established, food was approximately one-third of a family budget. The FPL simply multiplies average food costs by three and adjusts for the number of family members. Fifty years later, the numbers have been adjusted for inflation, but the method of calculation is the same. During the intervening years however, the percentage of household income spent on food has dropped considerably, while other expenses, especially child care, health care, and housing have risen dramatically. For this reason, Dr. Diana Pearce's Self-Sufficiency Standard is a better measure of income adequacy because it empirically calculates the minimum income necessary for a family to meet its basic living expenses *without public or private assistance*, and highlights the significant variation in basic expenses across geographic regions and family types.[8] The Self-sufficiency Standard has been calculated for 35 states including Colorado, as well as New York City and the District of Columbia. **Exhibit 1** translates FPL categories to annual income amounts. **Exhibit 2** shows that families need to be significantly above 100% FPL in order to meet the Colorado Self-sufficiency Standard.

[8] The full Self-Sufficiency Standard for Colorado is available on the Colorado Center for Law and Policy's website: http://www.cclponline.org/pubfiles/SelfSufficiency08_FinalProof.pdf. For discussions of work related to the Self-Sufficiency Standard see, http://www.sixstrategies.org.

Exhibit 1

2008 Federal Poverty Level Guidelines

Persons in Family or Household	48 Contiguous States and D.C.	200%	300%	400%	500%
1	**$10,400**	**20,800**	**31,200**	**41,600**	52,000
2	**14,000**	**28,000**	**42,000**	**56,000**	70,000
3	**17,600**	**35,200**	**52,800**	**70,400**	88,000
4	**21,200**	**42,400**	**63,600**	**84,800**	106,000

Source: http://aspe.hhs.gov/poverty/08Poverty.shtml

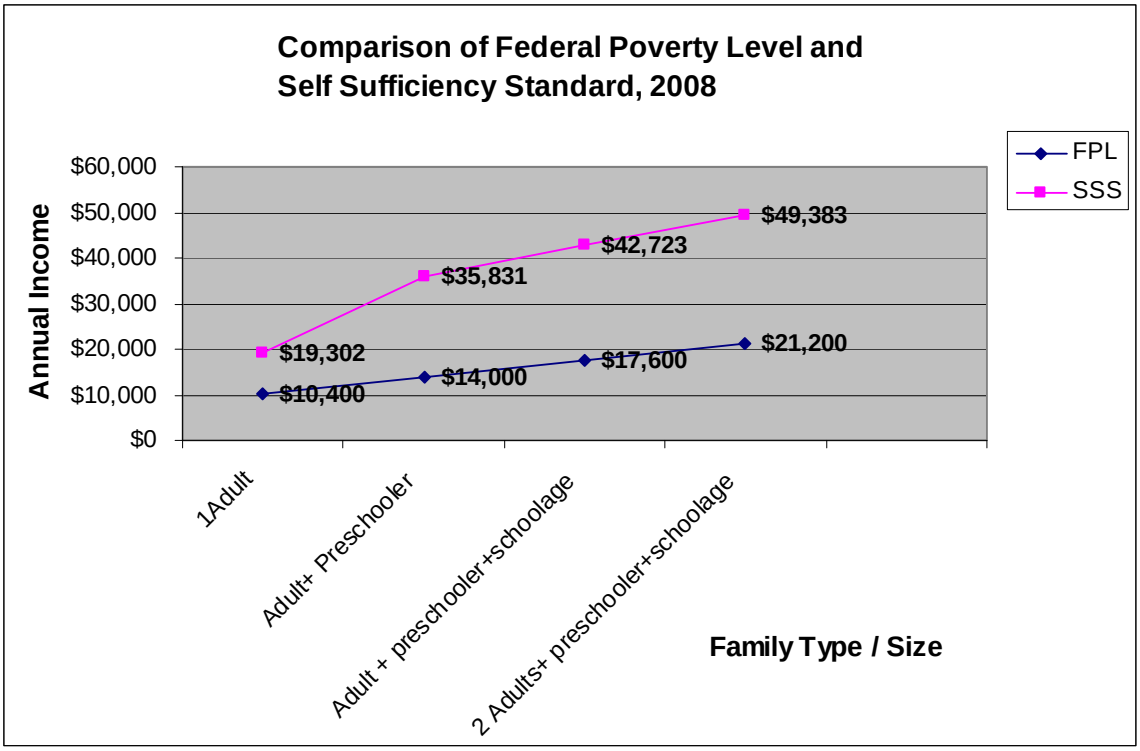

Exhibit 2:

Note: The Self-Sufficiency Standard varies by both family type and by geographic location. This example presents data from El Paso County as an overview of how much income is needed to live in Colorado. The Federal Poverty Level would only consider the number of family members, not age or family composition.

PART I. HOUSEHOLD BUDGET WORKSHOPS

DATA: Workshop Surveys

Colorado Voices for Coverage and the Colorado Center on Law and Policy conducted 97 budget workshops throughout Colorado in August 2008, visiting the communities of Fort Collins, Denver, Colorado Springs, Pueblo, Avon, Eagle, Aspen, Dillon, Carbondale, Lamar, La Junta, Alamosa, Burlington, Greeley, Montrose, Gunnison, and Grand Junction.[9] Workshop participants completed worksheets detailing their household income and expenditures for the month of July 2008. A total of 1,053 people participated, resulting in 880 useable surveys. Survey respondents had to be over the age of 17 and living in households under 500% FPL in order for their information to be included. The sample included an overrepresentation of women and Latinos. Non-Latino whites and people over age 65 were slightly underrepresented. Participants' income levels were generally quite close to Colorado's distribution, with lower income levels just slightly overrepresented. Workshops were conducted in English and Spanish. See **Exhibit A** for a more complete demographic profile of workshop participants.

Definitions of Necessary Expenses and Other Financial Responsibilities

The Budget Workshop Study uses two different measures of basic household expenditures. **Necessary Expenses** are expenses incurred for housing, utilities, transportation, food, childcare, alimony and child support, plus miscellaneous expenses estimated at 10 percent of the total. This definition is derived from components of the Self-Sufficiency Standard and was used in two similar studies conducted in New York and Massachusetts.[10] A second level of expenses, **Other Financial Responsibilities** includes monthly payments to credit card companies; student loans and other debt payments; tuition and other school expenses; savings; tithes and charitable donations; and support given to family members such as an elderly or ailing parent. A similar measure was also used in the Massachusetts project. Participants in the Massachusetts' workshop identified these additional items as essential to them. It is important to note that both measures tend to emphasize recurring monthly expenditures, while ignoring substantial but more irregularly purchased items such as durable household equipment, home repairs and maintenance, clothing or emergency needs. Also, although the Self-Sufficiency Standard calculates health care costs as part of necessary expenses, neither category in this analysis includes health care expenses, since the purpose of this study is to evaluate available funds after important expenses that could potentially be used for health care.

FINDINGS

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[9] The state was divided into six regions as follows: Urban Front Range, Southern Tier, Western Slope, Eastern Plains, and Mountain Communities. See Exhibit A.

[10] As in the Self-Sufficiency Standard, this miscellaneous expense category is meant to include all other necessary expenses such as clothing, shoes, diapers, paper products, non-prescription medicines, household items, personal hygiene items, and telephones. It is calculated by taking 10% of all other necessary expenditures. This percentage is a conservative estimate in comparison to the 15% commonly used in other needs budgets. See the Self-Sufficiency Standard, http://www.cclponline.org/pubfiles/SelfSufficiency08_FinalProof.pdf, and Citro and Michael, eds., *Measuring Poverty: A New Approach*, National Academy Press, Washington, D.C., 1995.
Greater Boston Interfaith Organization. "Mandating Health Care Insurance:
What is *Truly* Affordable for Massachusetts Families?" 2006. http://www.gbio.org/maint/affordability_report.doc, and Community Service Society, "The State of Independent Work: Affordability of Health Insurance for Working New Yorkers." http://www.freelancersunion.org/advocacy/publications/2003/affordability-study.pdf

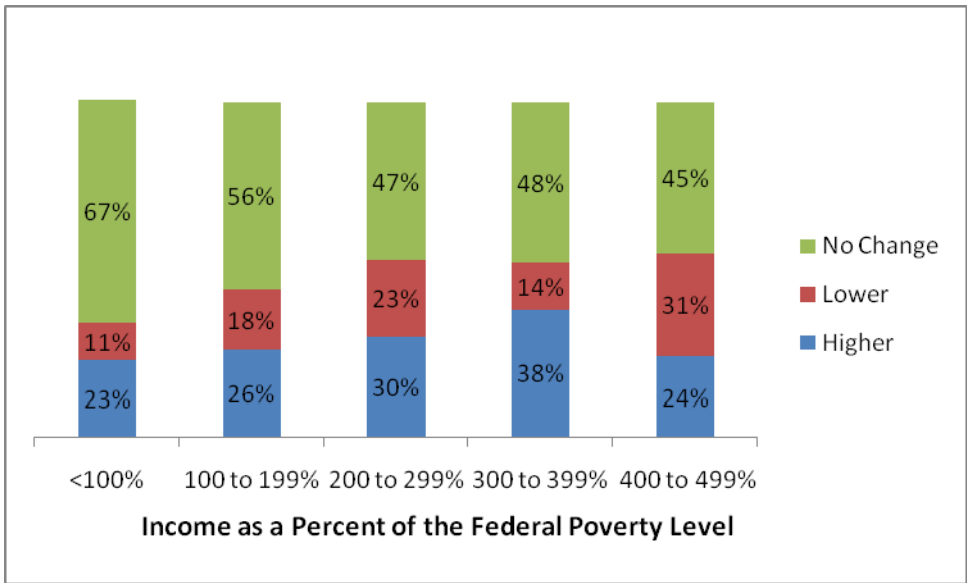
NEGATIVE BALANCES: Most Families' Expenses are Greater Than Income

Over half of all workshop participants (57%) reported that their expenses exceeded their income last month. 82% of households under 100% FPL; 60% of households between 100%-200% FPL; 45% of households between 200-300% FPL; 40% of households between 300-400% FPL; and even 32% of households between 400%-500% FPL answered yes to the survey question: Did you spend more than you earned last month? **(Exhibit 3)** As would be expected, lower-income households had more trouble meeting "necessary expenses." However, more higher-income households reported that "other financial responsibilities" were the reason they were spending beyond their incomes. It appears that those with higher income have less trouble meeting their "necessary expenses," but have larger "other financial responsibilities." Student loans, for instance, may result in *both* higher income and higher debt loads. On average across all participants, only 14% of all spending beyond income was on items outside the categories necessary expenses or other financial responsibilities.

Exhibit 3: Expenses versus Income by Poverty Level

	Were your expenses last month greater than your income?	Percent with a Negative Balance	
FPL	Yes	After Necessary Expenses	After Necessary Expenses and Other Responsibilities
100% or Below	82%	65%	67%
101% to 200%	60%	37%	47%
201% to 300%	45%	13%	29%
301% to 400%	40%	9%	28%
401% to 500%	32%	5%	19%

Exhibit 4: Credit Card Debt this Month Compared with One Year Ago by Income



Debt plays a significant and often increasing role in the budgets of workshop participants. Although most respondents had no change in their debt levels from the previous year, in each income category except for the highest, more people's debt increased than decreased. (**Exhibit 4)** Of those workshop participants with negative balances at the end of the month, nearly a quarter (24%) made ends meet by borrowing money or charging expenses to their credit card.

Others with negative balances received money from friends or relatives (30%), used savings (15%), sold personal items (8%) or made ends meet by "other means" (11%). The 11% who reported that they made ends meet by "other means" defaulted on their bills or worked out a payment arrangement with creditors (30%); sought assistance from government agencies or food pantries (14%); skipped meals or 'did without' (8%); were homeless or lived with family (10%); or used a variety of other means including pawning belongings, getting cash advances on a pay check, or using windfalls from tax returns. **(Exhibits 5 and 6)**

Exhibit 5: How Respondents Made Ends Meet When Expenditures Exceeded Their Income

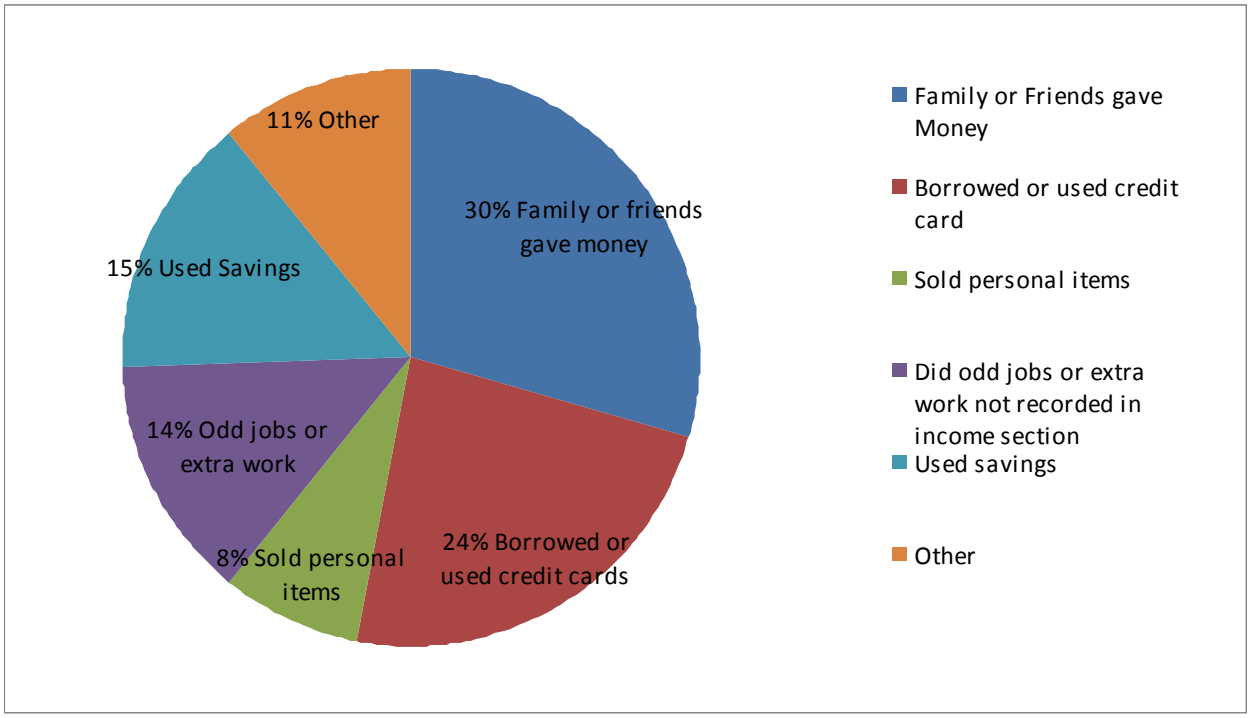
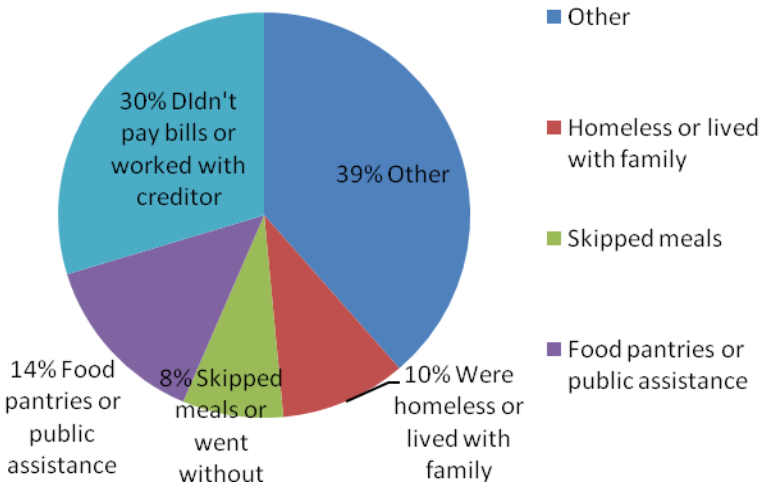


Exhibit 6: Ways Respondents Made Ends Meet Among Those Who Specified "Other"



AFFORDABILITY – A HOUSEHOLD PERSPECTIVE

Information provided by Budget Workshop participants about their monthly income and living expenses was used to determine how much money per household was left over for all additional household needs, and how much more might potentially be available to purchase health care or health insurance premiums. While family structure, age, and gender were each shown to affect affordability, income was by far the main driver.

The data indicates that families within a given income category differ substantially in what they can afford, which makes quantifying affordability by income somewhat elusive. Thus, dividing income categories into percentiles is especially important for creating a more complete picture of affordability. At the 50th percentile (median), one half of participants in an income category had more money than the income listed and the other half had less. At the 25th percentile, one-quarter of participants in an income group had the amount noted or less and three-quarters had more. Although the median is a widely used measure in studies of this sort, those who find themselves in the 25th percentile may have significantly lower incomes or different basic expenses compared with those in the 50th percentile. Also, because health insurance is a monthly expense, and because family income and expenses can vary from month to month, the study looked at both the 50th percentile and the 25th percentile to see what a typical month and a bad month might look like.

Income and expenses, especially for those at the lower end of the economic spectrum, can be unstable. The amounts remaining reflect what households had in one particular month only (July 2008). A family at the 25th percentile that has a negative balance in July could have more income and thus a positive balance in August. Likewise, a family with a high balance after paying necessary expenses and other financial responsibilities in July could have a lower balance during another month of the year, particularly if they faced an unforeseen emergency or event.

Households in poverty (under 100%FPL)

Fifty percent of households in poverty (under 100% FPL) had negative balances of at least -$357 after meeting necessary expenses, which deepened to -$544 after meeting other financial responsibilities. **(Exhibit 7)** Most policymakers agree that families under 100% FPL are not in a position to pay for health insurance, thus further data on these families is limited in this Report.

Income After Necessary Expenses

At the 50th percentile: Half of all families between 100%-200% FPL had at least $210 remaining after paying necessary expenses. Half of all households in the 200%-300% FPL category had $626 remaining after necessary expenses. Those between 300%-400% FPL had $828 remaining, and those between 400%-500% FPL had $1,389 remaining.

At the 25th percentile: One-quarter of families between 100%-200% FPL did not have enough money to meet even necessary expenses. Above 200% FPL, even families at the 25th percentile had some money left over after meeting necessary expenses. Those between 200%-300% FPL had $275 remaining. Those between 300-400% FPL had $242 remaining, and those in the highest income group between 400-500% FPL had $590 remaining.

Exhibit 7: Income Left Over per Household after Subtracting Necessary Expenses and Other Financial Responsibilities by Income

	Income after Necessary Expenses		Income after Nec. Exp. and Other Financial Responsibilities	
Percent of the Federal Poverty Level (FPL)	Percentiles			
	25th	**50th (Median)**	**25th**	**50th (Median)**
100%or Below	-$1082	-$357	-$1409	-$544
101% to 200%	-$315	$210	-$631	$105
201% to 300%	$275	$626	-$34	$320
301% to 400%	$242	$828	-$90	$353
401% to 500%	$590	$1389	$206	$617

Income after Necessary Expenses and Other Financial Responsibilities

At the 50th percentile: After subtracting other financial responsibilities, including monthly debt payments, school expenses, savings, support to family members (such as an elderly parent), and religious and charitable contributions, median households again had money remaining that they could potentially spend on health care. The exception, already noted, was the median household below 100% FPL poverty, which had no money left. Among households between 100%-200% FPL, half had $105 left for the month after paying necessary expenses and meeting other financial responsibilities. Median households with income between 200%-300% FPL had $320 left for the month, and households between 300%-400% FPL had $353. The top group earning between 400%-500% FPL had $617 available at the median.

At the 25th percentile: Households at the 25th percentile fared much worse that those at the median. Not until households reached 400%-500% FPL did they have money remaining after meeting "other financial responsibilities." One-quarter of those between 100%-200% FPL had negative balances of at least -$631. One-quarter of households between 200%-300% FPL had negative balances of at least -$34, and one-quarter of those between 300%-400% FPL had even larger negative balances of at least -$90. At the 25th percentile, only those in the highest income category (400%-500% FPL) had positive balances with $206 remaining after meeting other financial responsibilities.

The amounts households have remaining may or may not be sufficient to buy health insurance.
Whether a household has sufficient resources left over to purchase health insurance depends upon many factors including, but not limited to: family size, the insurance market, age, and health status. Moreover, any single expense that results in depleting, or nearly depleting, all remaining money for the month may not be affordable.

Half the households at or near Colorado's Median Income (between 201% and 300% FPL) had $320 left over after paying necessary expenses and other financial responsibilities

WHAT CAN $320 A MONTH BUY IN HEALTH CARE?

Estimated Cost of Individual Policy in Colorado: $230 per adult / $700 family max
Average Cost of Family Policy through Employer Subsidized Coverage: $252

This household could purchase coverage in the individual market in Colorado:

> *FOR ONE* family member:	Others members would remain uninsured.
> *IF* they were *HEALTHY*:	Most people with pre-existing conditions are uninsurable in this market.
> *IF* they were *AGE* 30-35:	By age 55 the cost of the same plan would be more than double. Costs for women are also higher.
> *BUT:*	Only $90 would remain to pay for out-of-pocket health expenses, emergencies and all other monthly expenses.

This household could afford the average cost for family coverage offered through Colorado employers:
> *BUT* only $68 would remain to pay for out-of-pocket health expenses (co-pays, deductibles, or non-covered expenses), and all other monthly expenses and emergencies.

AFFORDABILITY– A GROUP PERSPECTIVE
Affordability is generally thought of as a dollar amount, or as a percentage of income that individuals have available to purchase health insurance or health care. But there is another important aspect to affordability. At a given price, what proportion of a group can afford insurance or health care? Is it closer to 50% or closer to 100%? The answer may vary depending upon the public policy goal. Under an individual mandate requiring everyone to purchase insurance, the proportion of a group that could afford health insurance would have to approach 100%. If the goal is simply to decrease the number of uninsured, then policymakers may be satisfied with a smaller percentage of a group that would find health insurance affordable. Who gets left out is an important consideration when making policy decisions for broad groups of people, such as those within different increments of the Federal Poverty Level.

An important policy debate in many states, including Colorado, has focused on the capacity of the individual insurance market to provide low cost policies that would meet the needs of the uninsured. It is widely agreed that some degree of subsidy for some number of the uninsured would be necessary. The "group perspective" presented here is a broad brush analysis intended to weigh-in on this debate. It assesses the percentage of households who could "afford" health insurance under two scenarios. **(Exhibit 8)**

The first scenario, that of a family purchasing insurance in the individual market with no employer subsidy, assumes a cost of $230 per person per month. This is slightly higher than the average price of single coverage in the individual market, but is still squarely in the range of typical costs in the Colorado individual market, which vary from $190-$245 for a 30-35 year old male.[11] Insurance can be structured in a variety of ways to divide cost between up-front premiums and other types of cost sharing, and these structures can vary so dramatically regarding the services covered that selecting any actual dollar amount is in many ways arbitrary. The analysis assumes that insurance is purchased for all family members. The calculation used is $230 per adult and $80 per child (up to a maximum of 3 children).[12]

The second scenario is that of a family with employer-sponsored health insurance. The average cost of employer-sponsored insurance in Colorado is $252 for a family policy and $63 for an individual policy.[13] Employers pay, on average, 74.5% of health insurance premiums for their employees.[14] One way to look at the employer-sponsored insurance option alongside the individual market option is to consider the employers' contribution – or "subsidy" to employees – as a proxy for a public sector subsidy to see how this affects affordability.

The analysis omits those households under 100% FPL because the policy direction in many states, including Colorado, is to provide Medicaid coverage for everyone in poverty (under 100% FPL). The household budget data also indicate that such households have substantial negative balances even at the median. (**Exhibit 7**)

This exercise is designed to see how the ability to afford a premium varies among and within income categories; neither the $230 nor the $252 amount is a judgment – positive or negative – about a "proper" amount for a premium. The individual market scenario assumes the cost of a policy for a healthy 30-35 year old man. It is noteworthy that prices in the individual market vary considerably by gender, age, and utilization, and that coverage for health conditions is often declined. In fact, policy

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[11] Scholl, "Concept Paper." Colorado SB 08-217, Centennial CareChoices asked insurance carriers to respond to requests for information about minimum benefits plans for the uninsured that were pegged at 80% of the actuarial value of the State Employees PPO plan. Three possible state plans were noted during legislative debate. This analysis conservatively used the lowest priced of the three plans to determine a premium amount. In this analysis, the very complicated concept of equivalence is reduced to cost alone because it is interested only in affordability, not adequacy, of coverage. When the RFI was issued in October 2008, the panel, with a much broader agenda, did not set a dollar amount for responders to meet. However, they did choose as their benchmark a higher priced plan than the one modeled here. Ultimately, the premium costs of the offerings ranged from $190 to $416 with an average premium of $284 (not including a policy exclusively for high-risk individuals at $990). RFP # HCPFKQ0904RFICENT, p. 4.
https://www.gssa.state.co.us/BdSols.nsf/OByCats/AC45E0F0265659EF872574F000738A80/$file/Mod%201%20RFI%20VBP%20Centennial%20Cares%20Choice%2010-08-08.pdf

[12] This follows the model that Jonathan Gruber used in his Massachusetts analysis of affordability measures. He assumes that three children are roughly the cost of another adult Gruber, "Evidence on Affordability From Consumer Expenditures and Employee Enrollment in Employer-Sponsored Health Insurance," http://econ-www.mit.edu/files/128. 2007; Gruber "How to Define Affordability? An Overview of Issues and Data Options," March 2007.
http://www.une.edu/com/chppr/pdf/ps_grubermemo.pdf.

[13] "Premiums versus Paychecks."

[14] MEPS average employee contribution for employees with single coverage was 17.8% for CO:
http://www.meps.ahrq.gov/mepsweb/data_stats/summ_tables/insr/state/series_2/2006/tiic3.htm;
Average for employees with family plans was 25.5% for CO:
http://www.meps.ahrq.gov/mepsweb/data_stats/summ_tables/insr/state/series_2/2006/tiid3.htm;
"Premiums versus Paychecks."

prices in the individual market are biased downward because of this ability to select only the healthiest who seek coverage.

Under the above scenarios:

Individual Market
After Necessary Expenses: Under this restrictive definition of expenses, a majority of households in all income groups except the lowest (100-200% FPL) could afford to purchase insurance in the individual market. Among the lowest earning households (100-200% FPL), only 36% would have enough money remaining after meeting necessary expenses to purchase insurance under this scenario. 71% of households between 200%-300% FPL and 70% of households between 300%-400% FPL would have sufficient money to purchase individual insurance for their entire household. Eighty-seven percent of the households in the 400%-500% FPL category would be able to purchase individual insurance.

After Other Financial Responsibilities: The situation looks quite different once households have both paid for their necessary expenses and met their other financial responsibilities. Not until the highest income category do a majority of households have sufficient resources remaining to purchase insurance in the individual market for everyone in their household.

Only 22% of households earning 100%-200% FPL have sufficient income remaining after meeting other financial responsibilities to purchase insurance in this scenario. Forty-six percent of those between 200%-300% FPL and 44% of those between 300-400% FPL could purchase insurance. A majority of households (63%) with incomes between 400%-500% FPL have amounts available large enough to purchase insurance in this scenario.

Group Market
A considerably higher proportion of each income group could find insurance affordable when available through a group. The "subsidy" in this market makes a very large difference in the ability of households to "afford" insurance at all income levels, especially for those at the lowest income category (100%-200% FPL).

After Necessary Expenses: Again, as in the individual market scenario, a majority of households at all income levels had enough money after paying for "necessary expenses" to purchase a group insurance policy. Fifty-four percent of households between 100%-200% FPL could afford group insurance, but only 36% of them were able to purchase insurance in the individual market scenario. After meeting necessary expenses, 78% of households between 200%-300% FPL, 81% of those between 300%-400% FPL, and 91% of those between 400%-500%FPL had sufficient resources available to pay for the employee portion of a group health insurance policy.

After Other Financial Responsibilities: The importance of the employer "subsidy" is even larger after "other financial responsibilities" are considered. At every income level, the "subsidy" produced larger increases in the proportion of households that could afford group insurance than it produced after only necessary expenses were considered.

At the lowest income level—between 100%-200% FPL—less than half (44%) of households could purchase group insurance. This is double the percentage that was able to purchase insurance in the individual market after meeting other financial responsibilities. Above 200% FPL, a majority of households had sufficient money remaining to purchase group insurance. After paying necessary

expenses and meeting other financial responsibilities, 61% of those between 200%-300% FPL, 63% of those between 300%-400% FPL and 74% of those between 400%-500% FPL had enough money remaining to meet the employee portion of a group plan. Even at the highest income level, 11% more households could purchase group insurance than could purchase it on the individual market, as a result of the typical 75% subsidy.

Exhibit 8. Percentage of Budget Workshop Households That Can Afford Average Premiums in Individual and Group Market by Income

	Individual Market* $230 per adult plus $80 per child per month, with a cap of $700 for two parent families and $470 for single parent families.		**Employee Share of Group Insurance** $63 for a single adult, $252 for families per month**	
FPL	After Necessary Expenses (1)	After Necessary Expenses and Other Financial Responsibilities (2)	After Necessary Expenses (3)	After Necessary Expenses and Other Financial Responsibilities (4)
101 to 200%	36%	22%	54%	44%
201 to 300%	71%	46%	78%	61%
301 to 400%	70%	44%	81%	63%
401 to 500%	87%	63%	91%	74%

*Assumes coverage is purchased for each family member. Individual coverage is priced by age, health status, and gender; this base price assumes a healthy 30-35 year old male. Those with pre-existing conditions would likely be charged more or denied coverage.
** Assumes employer pays 74.5% of the premium.

ADEQUACY – THE OTHER HALF OF THE EQUATION

Insurance can be affordable, but still not adequate
Value = Affordable + Adequate

Benefits may be designed with:

Exclusions: on health conditions or types of care
Caps: on annual or lifetime dollars, number of visits
Cost Sharing: co-pays, deductibles, coinsurance

If a person needs care that isn't covered or that results in burdensome medical bills, a plan is **not adequate.** Limited plans may be fine for some but may not be something *worth* buying for others.

CONCLUSIONS:

- **Affordability must be defined broadly across multiple family types and income categories.** More than two thirds of childless adults could afford coverage in the individual market; yet only one-third of families could afford such coverage (data not shown). What is affordable for one family living at a certain income level, may not be affordable for another family living on the same income, depending on their financial responsibilities. These responsibilities can entail such realities as whether they have a child in school, have debt, support other family members, or fulfill an obligation to tithe to their church.

- **Debt plays a significant role in the lives of workshop participants**. At lower-income levels, below 200% FPL, much of this debt is incurred meeting necessary expenses. The finding that even people above the Federal Poverty Level are struggling is consistent with the Colorado Self-Sufficiency Standard, which establishes the gap between income required to meet a bare bones budget without public or private support and income as measured by the Federal Poverty Level. Even at income levels above 200% FPL, substantial percentages of workshop participants had expenditures in excess of income.

- **Over one half of Colorado's uninsured live below 200% FPL**[15] **and thus already struggle to make ends meet.** This analysis shows that:
    - Families below 100% FPL have no money available to purchase health care or health insurance.
    - Twenty-five percent of households under 200% FPL have negative balances after meeting necessary expenses, and therefore cannot afford to pay anything for health insurance or health care.
    - Less than a quarter of those between 100%-200% FPL could afford insurance in the individual market after meeting "necessary expenses and other financial responsibilities" and less than half could afford insurance even when it was a heavily subsidized group plan.

- **Families within a given income category differ in what they can afford.**
  This is partially due to income variations within categories. For example, in 2008, a family of four who fell between 100%-200% FPL could make anywhere between $21,200 and $42,399 dollars annually, a monthly difference of up to $1,766. Apart from income, families vary on other important dimensions that can affect their ability to afford healthcare. They may differ with regard to:
    - Personal or cultural values about what they can and cannot afford
    - Experience with catastrophic or adverse events
    - Expenses related to family structure such as childcare costs, or the need to purchase diapers and formula
    - Debt loads, including medical debt
    - Cost of living in their particular city or county
    - Ability to build savings, invest in education, as well as tithing, paying religious dues or other charitable contributions

[15] Blue Ribbon Commission for Health Care Reform, "Final Report to the Colorado General Assembly," January 31, 2008, Executive Summary. See: http://www.colorado.gov/cs/Satellite/BlueRibbon/RIBB/1201542097631

- Social networks that may provide in-kind support such as housing, food, transportation or childcare

For these reasons, quantifying affordability by income is somewhat elusive. Thus, dividing income categories into percentiles is especially important for creating a more complete picture of affordability. Those who find themselves in the 25th percentile may have significantly lower incomes or different necessary expenses compared with those in the 50th percentile, and both budgets may be equally justifiable. Even among study subjects with incomes between 400%-500% FPL, there are differences in affordability. These differences are largely due to expenditures on debt repayment, savings, educational expenses, support of a family member, and charitable or religious contributions.

- **The typical "subsidy" provided in the group market increases the ability of households to afford insurance substantially, but is still not enough for many.**
    - At minimum, after necessary expenses and depending upon income level, between 9% and 46% of all households would require subsidies greater than the 75% that is typically offered by an employer.

- **Health care costs include more than the cost of health insurance.**
  Insurance premiums do not include deductibles, co-payments, or other out of pocket or non-covered expenses. Depending on the plan, especially in the non-group market, these costs may reduce the affordability of health care. Even those families who could afford and are able to purchase insurance, might face substantial economic burden and growing debt in the face of a serious health event, depending on continued ability to work, coverage limits, and cost sharing requirements.

- **Money remaining after most family needs are met *doesn't necessarily mean* a family can afford health care or health insurance.**
  "Affordability" is defined here as not resulting in a net negative balance. These findings do not look at what percentage of available income would actually be consumed by the purchase of health care. Twenty-five percent of households between 200%-300% FPL have $275 left for the month after paying necessary expenses. A significant percentage (78%) of this group could "afford" an employer-subsidized plan, but the $252 cost of that plan would consume virtually the *entire* remaining household budget leaving $23 for the month for all other additional expenditures.

PART II. OPPORTUNITY COSTS:
What Tradeoffs Do Families Make to Pay for Health Care?

A popular way to see what families can afford to spend on health insurance is to look at what they are currently spending. This approach assumes that if a family is purchasing insurance, it is affordable. This Opportunity Costs study examines whether household expenditures are sensitive to changes in health care spending. This approach differs substantially from the previous Household Budget Workshop study. Rather than seeking a dollar amount available after expenditures, this analysis assesses relative proportions between spending categories within a household budget. *This is a different perspective on affordability: the cost of health care is considered not as a dollar amount, but as the cost of giving up something else in the household budget.*

DATA: Consumer Expenditure Survey

The data is based on the Consumer Expenditure Survey (CEX) of spending patterns among 903 Colorado families during a single quarter from 2002 to 2007. Where noted, the data are controlled for family size and examined for age, race of head-of-household, and income effects. The demographic profile of this sample can be viewed in **Exhibit B**. The analysis uses *total health care expenditures rather than just insurance premiums* to capture all out-of-pocket expenditures.

Definitions of "Necessary Expenses" and "Other Expenses"

The Budget Workshops study was concerned with available income after *total* necessary spending, but this study is concerned with how health care spending *impacts other spending* in a family budget. This Opportunity Costs study uses key **Necessary Expenses**—food, transportation, housing, child care, and clothing—to test these shifts in family spending. **Other Expenses** is a broad category of items including savings and education (included as other financial responsibilities in the Budget Workshop study), as well as other things like home furnishings, alcohol, and tobacco.

FINDINGS

As health care continues to claim a larger percentage of a family's budget, spending in other categories goes down, sometimes steadily, sometimes swiftly.[16] It is this pattern among health care spenders that is the focus of this part of the Report. **Exhibits 9 and 12** look at the amount of spending on different categories of goods and services in relation to the percentage of household income spent on health care. This change is measured in mean dollars and also as a percentage change. **Exhibitis 10-11 and 13-14** depict this data visually. The group that spent nothing on health care also spent the least amount of money on all items analyzed. This can be attributed to the fact that they are predominately low-income and young – two characteristics associated with lower spending. Bivariate analysis is unable to control for the fact that this group is so different from the other spending categories, so the following analysis excludes them.

Necessary Expenses:

Necessary expenses, other than food expenditures, are sensitive to changes in health spending.

- **Transportation**: Transportation spending is sensitive to changes in health care spending. Expenditures decline from an average of $596 for households spending less than 5% of their income on health care to $374 for those spending over 20% of income on healthcare, a 37% difference.

[16] All results were statistically significant at the .05 level.

Exhibit 9

Changes in Monthly Spending on

NECESSARY EXPENSES

by Percentage of Income Spent on Total Health Care Expenditures

For those in >0-5%category, percent change in spending is shown from 0 (non-spenders).
For all other categories, percent changes in spending are calculated from the >0-5% spending level.

	Food *+		Transportation +		Housing *+		Child Care		Clothes*+	
% of Income Spent on Health Care	**Mean Dollars**	**Percent Change**	**Mean Dollars**	**Percent Change**	**Mean Dollars**	**Percent Change**	**Mean Dollars**	**Percent Change**	**Mean Dollars**	**Percent Change**
> 0-5%	$225.86		$596.31		$594.70		$44.63		$45.10	
6-10%	$220.76	**-2.3%**	$569.71	**-4.5%**	$496.56	**-16.5%**	$20.09	**-55%**	$40.80	**-9.5%**
11-20%	$209.92	**-7.1%**	$484.34	**-18.8%**	$497.48	**-16.3%**	$9.16	**-79.5%**	$38.93	**-13.68%**
> 20%	$224.20	**-0.7%**	$374.78	**-37.2%**	$411.34	**-30.8%**	$9.24	**-79.3%**	$36.69	**-18.64%**

Food includes food consumed at home and away.
Transportation includes all expenses pertaining to new and used cars and trucks; other vehicles; gas and motor oil; finance charges; maintenance and repairs; rentals; licenses; leases; and public transportation.
Housing includes spending on owned dwellings (including property tax and mortgage interest) and rented dwellings and all utilities, fuels and public services (gas, electric, all fuels, phone, water, all public services).
Child care includes babysitting or daycare in one's own home; babysitting or daycare in others' homes; other expenses including tuition.
Clothes includes all apparel, footwear, and services for these items.

* per household member
+ 5% trimmed means

Exhibit 10: Monthly Spending on Necessary Expenses

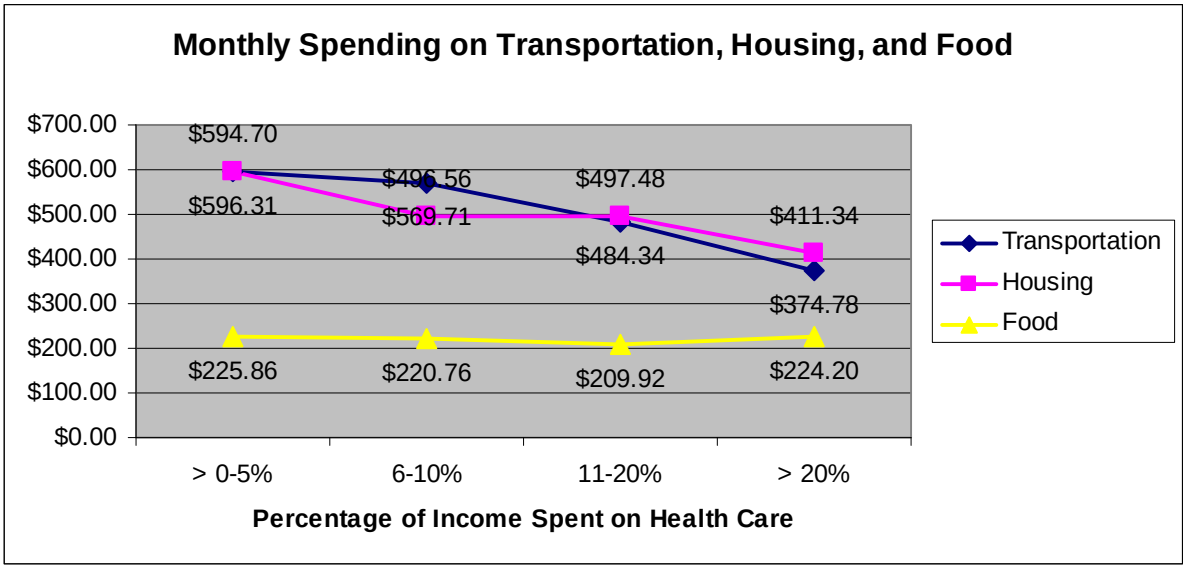
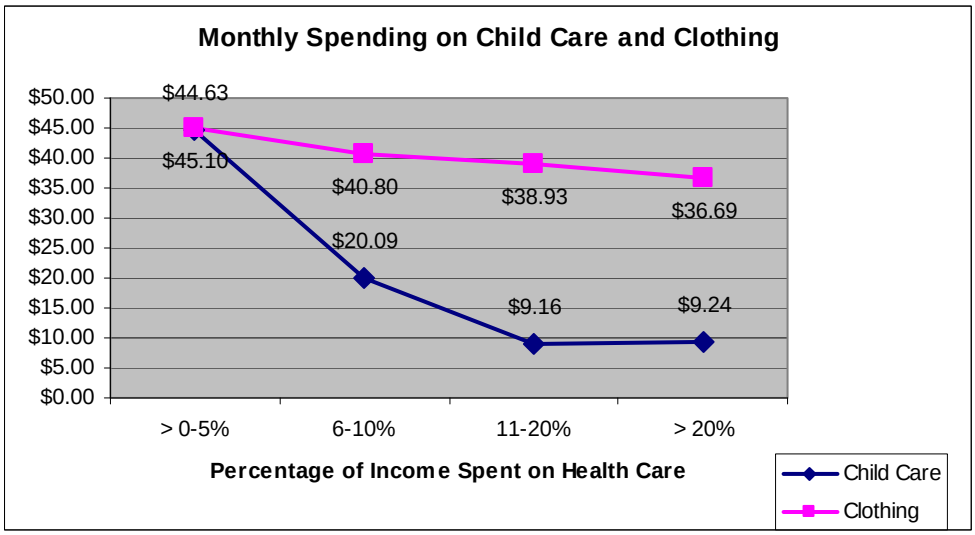


Exhibit 11:



- **Housing**: Households spending less than 5% of income on health care spend on average $594 a month per household member on housing. Households spending 6-10% of total income on health care spend on average $496 per household member on housing. Households spending between 11%-20% of total income on health care spend essentially the same—$497 per household member. Families spending over 20% of their budgets on health care spent on average $411 per household member on housing, nearly 31% less than households that spend under 5% of income on health care.

- **Child Care**: Although there are some limitations in the CEX data, it appears that child care expenditures may vary sharply between health spending levels.[17] With the exception of those households who spend nothing on health care, child care expenditures declined significantly as health spending increased. Households spending less than 5% of income on health care spent on average $44.63 on child care, while households spending more than 20% of income on health care spent $9.24 on child care, a decline of over 79%. Households spending nothing on health care, however, spent only $3.70 on child care. The very low dollar amount spent on child care for this group results from the fact that 65% of the sample are childless families.

- **Clothing**: Per household member, clothing expenditures drop steadily as health spending increases. Generally, expenditures on clothing drop more than those on food, but less than transportation or housing, suggesting that much of this category is non-discretionary.

Other Expenses:
Other Expenses, which includes home furnishings, savings, education, tobacco, and alcohol show essentially the same pattern as necessary expenses. **(Exhibit 12-14)** Spending increases as families begin to spend on health care, but then decreases in all categories as the percentage of income utilized for health care increases. There is an even greater sensitivity to changes in health care spending in the Other Expenses categories. Spending dropped an average of 19% in all categories of Necessary Expenses as health care spending increased, but it dropped an average of 45% for goods and services considered Other Expenses.

- **Education:** This category, which includes tuition, school supplies, and reading material, displays a somewhat different pattern than other expenses, as spending first rises before falling. A family spending less than 5% of total income on health care spends on average $14 per month on education and educational materials. When a family increases its health care spending to 6%-10% of total income, its education expenditures increase to an average of $18. However, as in other categories, when health care spending increases to 11%-20% of income, education expenditures decline. The average household expenditure at this level is $11.80 per month, or 15.77% less than that spent by families spending under 5% of total income on health care. As health care expenditures surpass 20% of the total budget, education expenditures decline even further to $5.64 a month, a 60% decrease.[18]

- **Savings**: The area where spending decreases the most as health care expenditures increase as a percentage of the family income is contributions to savings. When household spending on health care rises above 5% of income, savings drop 9%, but beyond 5% of income there are very large declines in savings. Households spending between 11%-20% of their income on health care saved $247.80, or 56% less than the $565 saved by households spending under 5% on health care. Those spending over 20% of total income on health care reduced their savings to $67, a decrease of 88%.

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[17] The numbers of families with preschool children whose childcare expenditures would be greatest are very unevenly distributed through the sample and the CEX definitions of family type make it impossible to know the percentage of families with children under six who would require full-time child care and whose child care costs would thus be highest.

[18] Family type might be thought to explain some of this pattern, as the number of households with children are not evenly distributed among the population. But, controlling for this factor by looking only at spending changes among those families with children, the results show exactly the same pattern. The actual differences in dollar amounts are very small.

- **Expenditures on Tobacco, Alcohol, and Household Furnishings Negatively Correlated with Healthcare Spending**. Expenditures on these items decreased by 41% as health care expenditures increased from less than 5% to more than 20% of total family income. (data not shown)

Exhibit 12

Changes in Monthly Spending on

OTHER EXPENSES

by Percentage of Income Spent on Total Health Care Expenditures

	Home Furnishings+		Savings++		Education*+		Tobacco and Alcohol	
	Mean Dollars	**Percent Change**	**Mean Dollars**	**Percent Change**	**Mean Dollars**	**Percent Change**	**Mean Dollars**	**Percent Cha**
> 0-5%	$107.24		$565.20		$14.01		$74.17	
6-10%	$104.86	**-2.2%**	$513.90	**-9.1%**	$18.08	**-29.1%**	$66.67	**-10.1%**
11-20%	$75.00	**-30%**	$247.80	**-56.2%**	$11.80	**15.80%**	$53.20	**-28.3%**
> 20%	$43.73	**-59.2%**	$67.43	**-88.1%**	$5.64	**59.8%**	$30.39	**-59.11%**

Home Furnishings includes all furnishings for the house, major and small appliances, and textiles.
Savings includes contributions to IRAs, personal insurance (not health), and pension contributions.
Education includes tuition, school supplies, and reading materials.
Alcohol/Tobacco all consumed.

* per household member
+ 5% trimmed means
++ top values only trimmed

Exhibit 13:

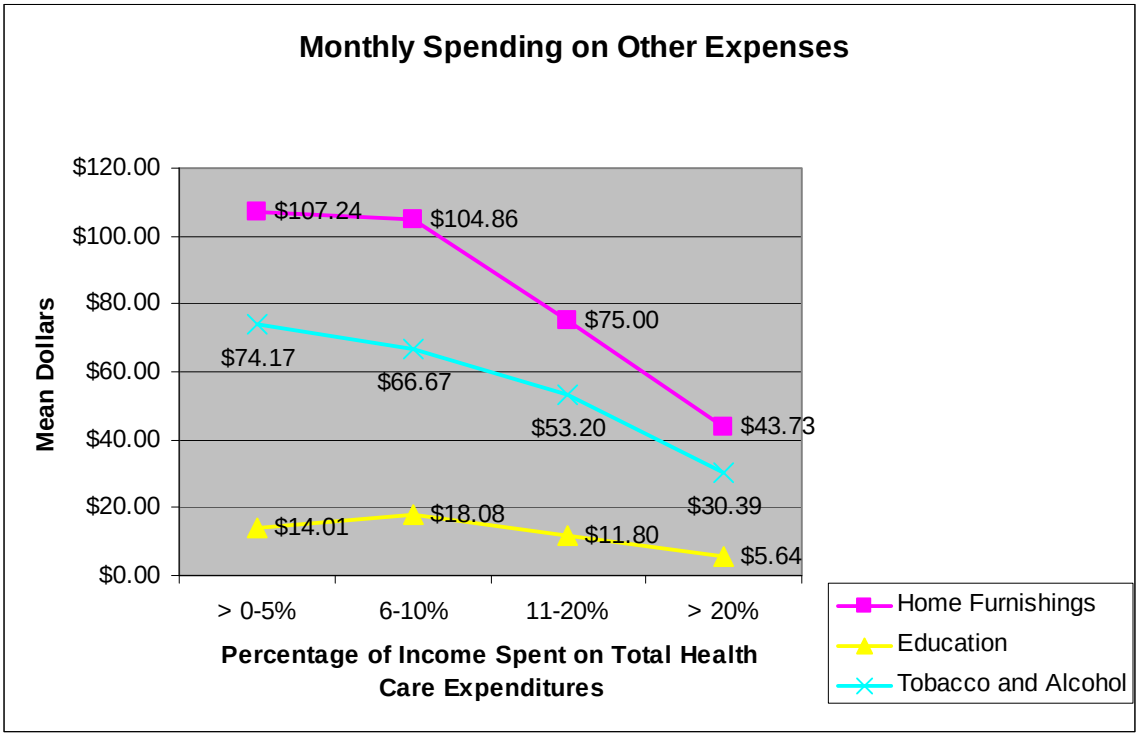
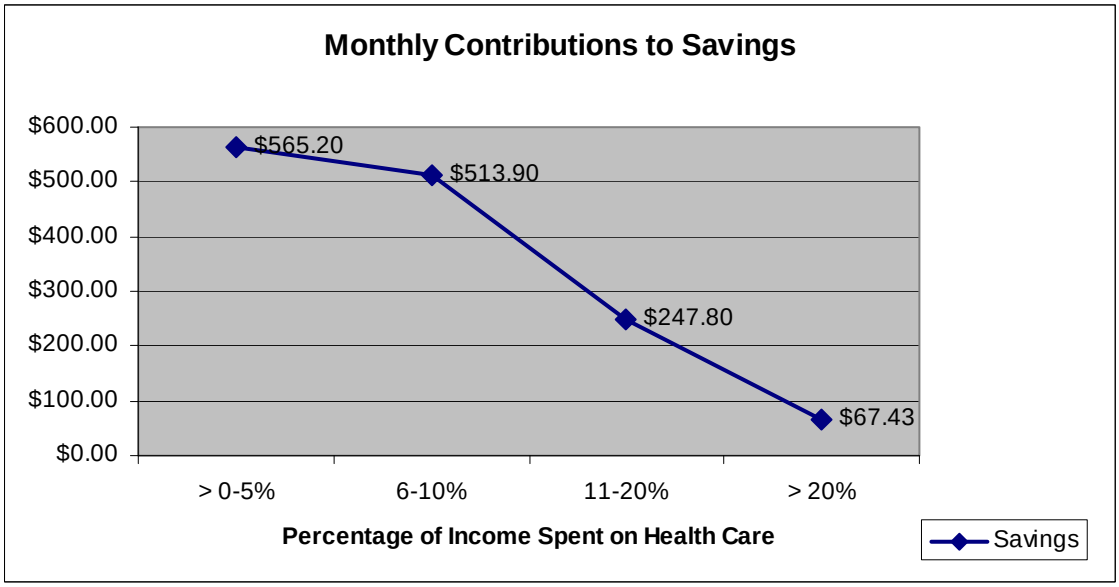


Exhibit 14:



CONCLUSIONS

- **Once households spend more than 5% of their income on health care they start reducing their spending on necessary expenses, such as housing, transportation, and child care.** On average, households maintain their food expenditures, reducing these only modestly. While households reduce spending on other expenses, reducing necessary expenses have potentially greater impact. Possibly, families at higher income levels can substitute lower-cost products, but families at lower income levels cannot do this, as they presumably are already using the low-cost alternatives. The farther down the income ladder families are positioned, the more significant the potential negative consequences. Reducing expenditures for necessities may mean living in inadequate housing, skimping on heat, not maintaining a vehicle, or relying on substandard child care.

- **Beyond the daily impact of decreased spending on necessities, reducing spending on education and diminishing savings may also jeopardize a family's long-term opportunities.** Health is an asset and health care is our investment to maintain and improve it. The data suggests families are trading one asset (savings) for another (health care). Asset building is critical to moving families beyond poverty and toward economic security. Assets include financial security, educational attainment, home ownership, and health care. According to the Corporation for Enterprise Development (CFED), many families with sufficient income live in "asset poverty," meaning they do not have enough savings to survive at the poverty level for three months without a job, and they lack sufficient liquid assets to put a down payment on a home, invest in two-years at a community college, or start a business.[19] Whether families are building a college fund or saving to take a vacation, in either case these savings would be available in a time of crisis. Health care provides one type of family security, but it is one which is perhaps being purchased at the cost of other securities. Families may not feel diminished savings on a day-to-day basis the way they do reductions in housing, utilities, or clothing, but this trade off comes at the cost of future opportunities.

IS 5% OF TOTAL INCOME AFFORDABLE?

The Opportunity Costs study found that families begin to make tradeoffs in other areas of their budgets once they spend more than 5% of their total income on health care. This final analysis applies that finding to the Budget Workshop population. Do workshop participants have an amount equal to 5% of their total income remaining after meeting necessary expenses and other financial responsibilities?

[19] Asset and Opportunity Scorecard, Corporation for Enterprise Development, 2007-2008. http://www.cfed.org/focus.m?parentid=31&siteid=2471&id=2471

WHAT IS AN AFFORDABLE PERCENTAGE OF INCOME TO PAY FOR HEALTH CARE?

SOME COMMON GUIDELINES

The affordability of health insurance has been addressed by federal and state government, academic analysis, and public opinion polling.

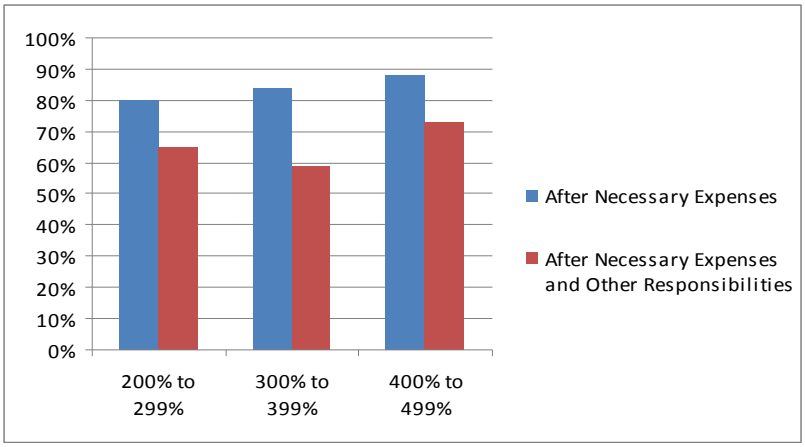
> **State Children's Health Insurance Program**	**5.0%**
> **Federal Tax deduction** for medical expenses that exceed 7.5%	**7.5%**
> **Lewin Group** model for Colorado's Blue Ribbon Commission on Health Reform	**9.0%** (for families 300%-400% FPL)
> **Robert Blendon** - Public Opinion Poll	**4.0%-7.0%**
> **Kenneth Thorpe** - Catamount Analysis	**2.2%-6.9%**

Note: for sources see Appendix I

The budget workshop data indicates that families under 100% FPL have negative balances, and those between 100%-200% FPL have only nominal amounts remaining after expenses. Only above 200% FPL does it become feasible for households to pay anything for health care. **(Exhibit 7)** This analysis computes 5% of total income for the households in the budget workshops over 200% FPL and shows the percentage of households who have that amount remaining after meeting necessary expenses and other financial responsibilities.

A 5% of total income affordability standard would be possible for between 80%-88% of those between 200%-500% FPL, after paying for necessary expenses. However, after meeting other financial responsibilities, that percentage drops to 65% for those between 200%-300% FPL; 59% for those between 300-399% FPL; and 73% of those between 400-500% FPL. Paying this amount regularly could be out of reach for a significant minority at each income level.

Exhibit 15: Percent of Households that Could Afford to Pay Five Percent of their Income towards Health Insurance by FPL



POLICY IMPLICATIONS AND CONSIDERATIONS

Policymakers should strive for a policy that will provide adequate and affordable health care for as many people as possible, both to assure the health of the population and to reduce cost shifting to others. Such policy must not threaten the economic security of Colorado families.

The findings of the Household Budget Survey and the Opportunity Costs Study raise several key policy implications that policymakers should consider when contemplating an affordability standard.

Common Sense Expenditure Measures

As policymakers seek reasonable affordability measures, the recommended measure of available income is the "after necessary expenses and other financial responsibilities." This measure includes financially desirable goals of savings, cultural commitments to tithing and family that people consider critical, and debt which plays a substantial role in the lives of many. Although some might object to subsidizing families who prioritize some of the other financial responsibilities over health care, policymakers should recognize that these are the very expenses that are often unavoidable and inflexible for many families. Without mandating coverage, the reality is that many families will continue to prioritize their spending according to their own values. More importantly, policymakers should realize that these debts are legal obligations and cannot be quickly or easily eliminated. Some debt, such as student loans, are desirable and economically beneficial in the long term.

Furthermore, because health insurance is a monthly obligation, it would be preferable to use the lowest 25^{th} percentile of income earners as the standard for affordability to assure that even months with extraordinary expenses do not compromise a family's household budget or force a family to drop coverage.

However, the data indicates that this is an impossible standard. After meeting "necessary expenses and other financial responsibilities," one quarter of households up to 400% FPL have negative balances and are unable to pay for health care at their current level of spending. Even at the highest income level, 400%-500% FPL those at the 25^{th} percentile could not afford the modestly priced insurance plans modeled in this study.

A Minimum Standard of Affordability:

- Those in poverty have negative balances and cannot reasonably be expected to pay anything for insurance. Policy direction is to cover this population with Medicaid. Households between 100-200% FPL, even at the median, have so little available income that they too generally need a full subsidy to pay for health care. At most, some might be able to meet some minimal cost sharing requirements.

- Beyond 200% FPL there is a substantial change in available income. Between 200%-400% FPL, the ability to contribute to health care, at least for one-half of the group, becomes feasible. However, a substantial minority -- those in the bottom quartile -- have negative incomes and would require a full subsidy.

- Between 400%-500% FPL, most people could make a serious contribution to their coverage (similar to the levels that people contribute to coverage when they have an employer who offers coverage and picks up part of the cost for employees and dependents). However, even at this income level there are some people who may require more help because of their particular circumstances.

Affordability and Economic Security

One of the biggest surprises of the study was the wide variation of available money *within* income categories. No single percentage of income or dollar amount of premium will work for everyone even within an income category. *The challenge here is to develop a standard for households in very different circumstances.* For instance, this variation reflects the significant transportation needs of rural residents, child care expenses among younger families, student loans, or family obligations. This variation also represents temporary differences in circumstances, such as a car that breaks down or a roof that needs repairing. A particular family might fare better the following month, while others may fare worse. Especially at higher income levels, this variation also represents lifestyle choices that different families and individuals make. Setting a standard for affordability is difficult as the cause of this variation for any individual household is often unknown. Further research on the circumstances of those households in the 25th percentile is clearly warranted.

This study clearly indicates that as the percentage of total income spent on health care increases, family spending in other important areas decreases. The trend in tradeoffs is apparent after spending exceeds 5% of total income. Nearly three-quarters of those in the 400%-500% FPL range do have 5% of total income available after meeting other financial responsibilities. This amount would be a stretch for a great many families between 200%-400% FPL, and if percentage of income were a starting point for an affordability standard, something lower than 5% would perhaps be more suitable.

Health care competes with both education spending and savings in household budgets, yet both are critical for asset-building. In the long term, it makes no sense to ask families to purchase insurance only to find that they cannot finance a child's education or their own retirement. As families invest less in these critical areas, the larger society ultimately will be called upon to pay for these services. Furthermore, if public policy considers savings as a resource available for health care, it punishes low income people for saving. These savings present one of the few opportunities lower-income families have to reach economic security, by developing retirement savings, purchasing a home, or opening a business. Low-income families must not be forced to choose between health care and their own long-term economic security.

Setting a single standard for those in such different circumstances is a blunt policy instrument which could be sharpened by taking into account variable situations and other public policy goals. For instance, for those in the highest income category, 400-500% FPL, targeted assistance could be provided to individuals who can demonstrate extraordinary expenses such as large medical debts incurred the previous year. Similarly, policymakers could identify certain expenses as financially beneficial, such as student loans, retirement contributions, home purchases, and college investment accounts. If health care were computed as a percentage of individual income, then these expenses could be deducted from income at the onset.

If some sort of targeted assistance to those with extraordinary expenses and a series of deductions were in place, then setting a percentage of income that could be met by the median household as a standard could be acceptable. Policymakers would have to grapple with the realization that for some families this could require tradeoffs in some other areas often considered necessary. Such tradeoffs will undoubtedly be easier for higher-income households who can more easily find lower-cost substitutes. Policymakers will have to answer the question of whether it is acceptable to set a standard in the expectation that spending will shift to meet it. One limitation of household budget analysis is that it does not indicate how easily frugality could increase available income. While some expenses—such

as eating away from home—can be easily reduced, others—such as car payments, student loans, other debt, or a mortgage—cannot.

An important policy goal is that all people value health care and prioritize it a necessary expense. An individual mandate -- increasingly part of the policy debate -- is an important tool in creating that social expectation. While taking no position on the issue of individual mandates, this study does have implications for that policy consideration. Any requirement that people purchase coverage would create immediate hardship for the 25% of those households with negative balances after other financial responsibilities, and depending upon the subsidy schedule, even for some households up to 500% FPL. For many families this could involve significant adjustments to their standards of living that would have negative economic consequences. A substantial transition time would be required for such a policy change to allow families the opportunity to adapt and avoid further hardship.

These policy implications should inform lawmakers as they consider the affordability, or lack of affordability, of health care in Colorado.

As this study explores fundamental questions about affordability, it is imperative that any affordability standard account for the many variables exposed in this report. Likewise, policymakers must recognize that a flexible, broad approach to affordability might bear the best results for Colorado health care consumers. After all, the goal here remains the same as the state moves closer to health care reform. **Health care must increase economic security for Colorado's families, not threaten it.**

APPENDICES

Appendix I. Background on Affordability Measures

Measuring affordability is a complex issue and previous national and state-specific studies generally use one of four basic methods: public policy, public opinion, household budgets, and existing spending.

Public Policy

Both the federal and state governments have addressed the affordability of health insurance in a number of contexts. The federal tax code allows a deduction for medical expenses that exceed 7.5% of income. Federal regulations limit premiums to 7.5% of income for the state Medicaid Buy-ins program for disabled workers under 450% FPL. The Massachusetts Insurance Partnership provides subsidies to small employers and the contribution for employees and other eligible participants is limited to 5% of income. Similarly, the federal State Children's Health Insurance Program (SCHIP) also limits costs to 5% of family income. For the Blue Ribbon Commission for Health Care Reform in Colorado, the Lewin Group modeled a benefits package that would cover premium costs over 9% of income for families between 300%-400%FPL.[20]

Designing an affordability standard as a percentage of income (rather than as a percentage of the premium as in most employer-sponsored plans) assures that the program, rather than the individual, bears the rising costs of health insurance. This is a real advantage in an economy where the cost of health insurance premiums have risen faster than income in recent years.[21] However, the actual percentages used seem more a reflection of political decision-making than of empirical determination.

Public Opinion

Public opinion research demonstrates that people typically measure reasonable health care costs as similar to their current health care expenditures. In one such study in Massachusetts, respondents said that spending between 4%-7% of an individual's income on health care was reasonable.[22] An advantage to this approach is that identifying health care costs that the public will support may help develop public legitimacy and build momentum for reforms that involve cost and subsidy decisions.[23]

Household Budget Analysis

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[20] Blue Ribbon Commission for Health Care Reform, "Final Report to the Colorado General Assembly," January 31, 2008, p. 29 and Appendix G.

[21] Kaiser Family Foundation, "Effect of Tying Eligibility for Health Insurance Subsidies to the Federal Poverty Level," February 2007. www.kff.org/insurance/snapshot/chcm021507oth.cfm

[22] Robert Blendon conducted a telephone survey with 1,000 Massachusetts residents for the Blue Cross Blue Shield Foundation of Massachusetts. Blendon's respondents considered expenditures between 4%-7% of an individual's income "reasonable." See Christine Barber and Michael Miller, "Affordable Health Care for All: What Does *Affordable* Really Mean?" Community Catalyst, April 2007.

[23] About one in three Americans now report their family has had problems paying medical bills in the past year, up from about a quarter saying the same two years ago. Almost one in five (18%) of Americans report household problems with medical bills amounting to more than $1,000 in the past year. *Kaiser Health Tracking Poll: Election 2008 -- October 2008.* http://www.kff.org/kaiserpolls/h08_posr102108pkg.cfm. Those with medical debt were twice as likely to report being in only fair or poor health and twice as likely to have a serious or chronic health condition as others with private coverage. Kaiser Medical Debt 2003, NPR/Kaiser/Harvard voter poll in Ohio and FL. In two key swing states during the 2008 Presidential election, voters identified health care as their third largest problem. http://www.kff.org/kaiserpolls/upload/7793.pdf

Household budget analysis is the type of analysis used in this study. This approach recognizes health insurance as one cost among many necessary expenses that differ according to family circumstances. Using either actual reported family expenditures or average costs, such studies calculate what resources remain after meeting basic necessities that potentially could be spent on health care.[24] Generally, if total family expenditures exceed insurance premiums plus necessities, then health care is deemed affordable. Some criticize the basic assumption: calculating money that is "left over" to be used for health insurance can imply that health care is a lower priority than education, transportation, or any other necessity.[25]

The challenge is determining what constitutes "necessities" and how much of these are really necessary. Family budgeting reflects many factors, including values and priorities. Assistance to family members and tithing might be just as essential to one family as child care, food, or housing is to another.[26] Transportation expenses can range from maintaining an old vehicle, to leasing a new vehicle, or relying on public transit. Some necessary expenses such as eating away from home, can be easily reduced, whereas others--car payments, student loans, a mortgage -- cannot. For the purposes of this study, household budget analysis recognizes the wide array of variables and also reflects how an average household might budget its money. Yet, necessary expenses is generally defined very restrictively and does not account for many critical expenditures – investments in home maintenance, education, savings, and other asset-building.

Determining income is just as challenging as categorizing expenses. The high number of families who report expenditures in excess of income lead some researchers to suspect that people underreport their income. While it is likely that many people handle expenditures beyond their income by either going into debt or using savings, there is social science literature suggesting that underreporting income earned in the casual economy may be the primary source of this discrepancy, and thus expenses can be a more accurate measure of income than self-reported income.[27]

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[24] Typical expenses include taxes, food, child care, taxes, alimony and child support, utilities, education, and occupational expenses. Studies that use average costs include David Carroll, Dylan H. Roby, *et.al* "What Does It Take for a Family To Afford To Pay for Health Care?" California Budget Project and UCLA Center for Health Policy Research, August 2007; Watts, Carolyn A. and James Matthisen, "Income Adequacy and the Affordability of Health Insurance in Washington State," Washington State Planning Grant on Access to Health Insurance, June 2002. Budget workshops such as the GBIO use actual reported expenses.

[25] See Jonathan Gruber, "Evidence on Affordability From Consumer Expenditures and Employee Enrollment in Employer-Sponsored Health Insurance," 2007. http://econ-www.mit.edu/files/128.

[26] The Greater Boston Interfaith Organization, "Mandating Health Care Insurance: What is *Truly* Affordable for Massachusetts Families?" 2006. http://www.gbio.org/maint/affordability_report.doc
Measuring affordability is not merely an academic exercise; affordability studies can be powerful public policy tools. The "individual mandate" provision of the Massachusetts health care reform law that went into effect July 1, 2007, requires that all residents over eighteen years old carry "creditable" coverage so long as that coverage is deemed "affordable" under the premium schedule created by the Connector Board. The Greater Boston Interfaith Organization (GBIO), a coalition of 65 religious congregations, labor unions, and community organizations, conducted affordability workshops to determine whether the insurance industry's initial product offerings designed to meet the State's "minimum creditable coverage" requirement and the proposed subsidized premium schedule were actually affordable to consumers. Consumer advocates successfully used the GBIO study's results to question the viability of the proposed individual mandate for people under 500% FPL, resulting in a new round of improved insurance packages and a serious debate about penalties for non-compliance..

[27] See, for example, Meyer, Bruce and James X. Sullivan, "Consumption, Income and Material Well-Being After Welfare Reform," NBER Working Paper #11976, December 2006; Kathryn Edin and Laura Lein, *Making Ends Meet: How Single*

Existing Spending

Existing spending on health insurance is another less objective measure of affordability. The assumption is that current spending reflects consumer choice about what people are willing and able to spend. The Medical Expenditure Panel Survey (MEPS) is the usual source of this data. Median spending is often used (because it eliminates extreme preferences or circumstances) to define what people actually spend in different markets. Similarly, price elasticity values are used to estimate how many people *might* purchase insurance at different price points.[28] This measure, as well as participation rates in employer-sponsored plans, often does not take into account out-of-pocket expenses.[29]

Finally, while current spending may be a reasonable measure of affordability for families above 300% FPL, many recognize that it probably does not provide a fair measure of affordability for lower-income families.[30] Nor does it shed light on what types of other budget sacrifices families may be making to pay for health insurance.

Combined Approach

An excellent study in California combines two approaches by using MEPS data on current health care spending with the Basic Family Budget to estimate families' costs of other basic necessities. It looks not only at median—or typical—expenditures, but at amounts spent by families with much higher health costs. These families in the top 10% do not necessarily have chronic illnesses, but could have had an extraordinary health "event," such as an emergency room visit or a surgery, requiring substantial expenditures. This study reveals that income alone is an imprecise measure of affordability as health care costs vary widely. It points to the need not only to make insurance affordable to families in typical months, but to protect families from the risk of extraordinary health events, either by establishing limits to out-of-pocket expenditures or by other means.[31]

Affordability and Self-Sufficiency

Affordability of health insurance is generally viewed in the context of the Federal Poverty Level (FPL), which makes sense given that eligibility for public programs and presumably new policy initiatives, such as premium subsidies, is determined based on multiples of this definition of poverty. However, the Federal Poverty Level is an outdated measure of income adequacy. A Washington State study used the Self-Sufficiency Standard as the basis to define affordability because it more adequately

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Mothers Survive Welfare and Low-Wage Work. New York: Russell Sage Foundation, 1997. Gruber, "Evidence on Affordability."

[28] John Holahan, Jack Hadley, and Linda Blumberg. "Setting a Standard of Affordability for Health Insurance Coverage in Massachusetts," The Urban Institute, 2006. Kenneth Thorpe used price elasticity to model plans for Vermont's Catmount insurance plan. See Barber and Miller, "Affordable Health Care for All."

[29] Kaiser Family Foundation. "Insurance Premium Cost-Sharing and Coverage Take-up," 2007. http://www.kff.org/insurance/snapshot/chcm020707oth.cfm

[30] Linda Blumberg, John Holahan, et.al. "Setting a Standard of Affordability for Health Insurance Coverage," *Health Affairs*, 26, no.4 (2007): w463-w473. Uses families at 300-499% FPL as a benchmark since few below this level are currently purchasing private insurance, therefore it is unaffordable. http://content.healthaffairs.org/cgi/content/abstract/26/4/w463

[31] David Carroll, Dylan H. Roby, et.al., "What Does it Take for a Family to Afford to Pay for Health Care?" UCLA Center for Health Policy Research, August 2007. http://www.healthpolicy.ucla.edu/pubs/publication.asp?pubID=229

reflects the actual income families need to meet their needs, but even that study does not adequately account for health care costs. For the Self-Sufficiency Standard, Dr. Diana Pearce uses the average employee premium contribution in a group plan as the measure of health care costs. However, since low-income people are the least likely to have access to such plans, this probably underestimates the real costs of health care to many, thus also underestimating the income necessary to reach self-sufficiency. To correct for this downward bias, the Washington study altered Pearce's measure, creating an "adjusted standard" that estimated premiums plus out-of-pocket costs for twelve family types in one of two public programs or three private programs. Public programs were the most affordable. However, income levels high enough to meet basic living expenses (ie: self-sufficiency) often exceeded the income limits for some of the state's Medicaid programs. Adding Medicaid cost sharing only raised the bar to achieve self-sufficiency higher. And those with private coverage required even higher incomes to achieve self-sufficiency. One important public policy implication of this study was that the "adjusted" income standard should be used to determine eligibility for public health care programs.[32]

APPENDIX II. METHODS, ASSUMPTIONS, SOURCES

I. BUDGET WORKSHOPS

In August 2008, CCLP and the Colorado Voices for Coverage partners conducted 97 budget workshops throughout Colorado in banks, libraries, clinics, community centers, churches, Goodwill stores, and the Service Employees International Union (SEIU), at which people were asked to complete a six-page worksheet, available in both English and Spanish, detailing their household income and expenditures for the previous month (July 2008). Worksheets also included limited questions on demographics, disability status, healthcare access, and insurance coverage. When financial records were not available, facilitators worked with participants to complete the survey. Facilitator assistance was available in both English and Spanish, and participants were paid $10 for completing a survey.

The Sample

Of the 1,053 worksheets completed, 880 had useable data and were completed by individuals meeting the project criteria of being at least 17 years of age and below 500% of the Federal Poverty Level. Eleven percent of the worksheets were completed in Spanish.

This project used a convenience sample because the workshops were part of a community organizing strategy and not merely a data collection tool. **Exhibit A** describes the demographic characteristics of those whose surveys are included in the analysis and compares them to the Colorado population. Compared to typical demographics for Coloradans under 500% FPL, the sample had higher representations of females and Latinos, and lower representations of non-Latino whites and people over 65. The sample had slightly more people under 200% FPL, although the sample generally followed Colorado's income distribution quite closely. Although the question on the survey was optional—the citizenship status of the sample reflected the Colorado population as a whole.

The Workshop sample is a non-probability sample, and the findings cannot be statistically generalized to the population of Colorado as a whole. However, convenience samples provide useful information and insight into the experience or situation of a group. Interpreting the findings from a convenience

[32] Carolyn A.Watts, and James Matthisen, "Income Adequacy and the Affordability of Health Insurance in Washington State," Washington State Planning Grant on Access to Health Insurance, June 2002. http://www.ofm.wa.gov/healthcare/healthin/affordability/33affordability.pdf

sample properly requires characterizing how the sample differs from an ideal sample that was randomly selected. Here, comparing the Budget Workshop sample to the demographic profile of the State indicates that it overrepresents some of the most vulnerable populations who might find access to health care most difficult. Study findings can be especially revealing for this targeted audience of lower-income Coloradans.[33]

Measuring Income

To measure income as accurately as possible, compensating for any possible income underreporting, income was measured in two ways. Respondents' reported income was used if respondents *reported* expenses greater than their income. However, if a respondent's total monthly expenditure was calculated to be greater than their reported income, or if the respondent reported taking extra work or odd jobs not reported in the income section (and this resulted in expenditures greater than income), total monthly expenditures was substituted as a proxy income measure. Expenditures were used for 23% of the sample. An additional 7% of the sample had missing income data and expenditures were used to impute income for these participants. Federal and state income taxes were calculated according to the federal tax schedule and flat state tax rate, applying standard deductions.[34]

II. OPPORTUNITY COSTS

The data is the sample of Colorado households from the Consumer Expenditure Survey (CEX). The CEX is collected by the U.S. Bureau of Labor Statistics and details the buying habits of American consumers, including data on over 600 categories of household expenditures, income, and consumer unit characteristics. A limitation of using the Consumer Expenditure Survey for state-level analysis is that it is designed to generate national estimates and suppresses many state observations in order to protect participant confidentiality. In Colorado, all rural and frontier observations were suppressed, so this data reflects urban dwellers only. For this reason, the sample size of 903 households ("consumer units") is not as large as ideal, nor is it random. Nonetheless, the CEX is widely considered to be the best source of consumer expenditure data for the United States. The study adjusts for these limitations by applying state-level weights for age, race, and income based on Current Population Survey (CPS) estimates for Colorado.[35]

Sample size allowed only one-way variance of means (ANOVA) and some regression analyses, not multi-factorial analyses. The percentages of total health spending is well distributed throughout income categories, with the exception of those earning over 500% FPL who have a higher proportion spending less than 5% of total income on health care. There is probably some income effect but control tests suggest it is not substantial. To reduce this effect, variable means were trimmed at 5%. Ideally, this study would look at the percent of income spent on health care by income categories, race/ethnicity, and other demographic factors Narrower income bands for analysis would've also been ideal, but cell sizes became too small for statistical validity.

[33] Trochim WMK, Nonprobability Sampling. http://www.socialresearchmethods.net/kb/sampnon.php

[34] For low-income people, this could be an overestimate, because taxes were applied to some income that may go unreported to the IRS. For those who would file itemized tax returns to gain the maximum deduction, this method could overestimate taxes. Other taxes, such as sales and property taxes, were included as expenditures.

[35] This work was provided by UCLA Center for Health Policy Research.

EXHIBITS

Exhibit A:

Exhibit A: Characteristics of Workshop Study Participants and Colorado Residents under 500% FPL by Age, Gender, Race/Ethnicity, Immigration Status, Colorado Region, and Population Density

	Eligible Participants N=880	Percent of Sample	Colorado* N= 3,115,000
Age (range: 18- 89)			
18 -35	316	36%	36%
36-45	190	22%	21%
46-55	213	24%	17%
56-64	108	12%	10%
65 and over	53	6%	16%
Gender			
Male	259	30%	49%
Female	608	70%	51%
Race/Ethnicity			
Non-Latino White	500	56%	65%
Latino	294	33%	26%
Black	44	5%	5%
Asian/ Pacific Islander	14	2%	2%
American Indian/ Alaskan Native	13	1%	<1%
Other/Multiple Race	15	2%	2%
Income			
Under 100% FPL	312	25%	22%
100 to 199% FPL	248	29%	26%
200 to 299% FPL	158	21%	23%
300 to 399% FPL	98	15%	19%
400 to 499% FPL	64	10%	11%
Citizenship			
Native born citizen	710	90%	88%
Naturalized citizen	11	1%	3%
Non-Citizen	71	9%	9%
Legal permanent resident	46	6%	NA
Colorado Region *			
Urban Front Range	332	39%	NA

Exhibit A: Characteristics of Workshop Study Participants and Colorado Residents under 500% FPL by Age, Gender, Race/Ethnicity, Immigration Status, Colorado Region, and Population Density

	Eligible Participants N=880	Percent of Sample	Colorado* N= 3,115,000
Southern Tier	117	14%	NA
Western slope	294	34%	NA
Eastern Plains	47	5%	NA
Resort	69	8%	NA
Population Density			
Urban	392	46%	NA
Rural	381	44%	NA
Frontier	86	10%	NA

*** Communities visited include: Fort Collins, Denver, Colorado Springs, Pueblo Avon, Eagle, Aspen, Dillon, Carbondale, LaMar, LaJunta, Alamosa, Burlington, Greeley, Montrolse, Gunnison, Grand Junction.**

Exhibit B: Characteristics of Colorado Households from CEX			
AGE (heads of family)			
	Frequency	**Percent**	**Cumulative percent**
18 thru 35	332	36.8	36.8
36 thru 64	457	50.6	87.4
65+	114	12.6	100
Total	903	100	
RACE-ETHNICITY (heads of family)			
	Frequency	**Percent**	**Cumulative percent**
Non-Latino White	659	73.0	73.0
Latino	149	16.5	89.5
Other	95	10.5	100
Total	904	100	
FEDERAL POVERTY LEVEL			
	Frequency	**Percent**	**Cumulative percent**
<100%	215	23.8	23.8
100-199%	146	16.2	40.0
200-299%	92	10.2	50.2
300-399%	113	12.5	62.7
400-499%	83	9.2	71.9
>500%	254	28.1	100
Total	903	100	

FAMILY TYPE			
	Frequency	**Percent**	**Cumulative percent**
Adult Only	591	65.4	65.4
With Children	312	34.6	100
Total	903	100	

TOTAL HEALTH SPENDING AS A PERCENTAGE OF INCOME			
	Frequency	**Percent**	**Cumulative percent**
0	206	22.8	22.8
<0 to 5%	399	44.2	67.0
6-10%	160	17.7	84.7
11-20%	84	9.3	94.0
Above 20%	54	6.0	100
Total	903	100	

INSURANCE STATUS			
	Frequency	**Percent**	**Cumulative percent**
No Insurance	331	36.7	36.7
Insurance	572	63.3	100
Total	903	100	

Exhibit C

Mean Spending Per Month by Race / Ethnicity
(head of household)

	Non-Latino White	Latino	Other
% of Sample	**73%**	**16.5%**	**10%**
Food	**$**513	**$**454	**$**443
Child Care	27	8	58
Transportation *	504	394	493
Housing *	1,193	971	957
Entertainment *	191	83	118
Tobacco / Alcohol	57	26	41
Savings *	457	313	288
Health Care *	201	111	132

* 5% trimmed means

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