The Access Project

No. 2 • November 2008

ISSUE BRIEF

Authors:
Carol Pryor, The Access Project
Jeffrey Prottas, Brandeis University
Bill Lottero, The Access Project
Mark Rukavina, The Access Project

2008 Health Insurance Survey of California Farm and Ranch Operators

Who Experiences Financial Hardship Because of Health Care Costs?

EXECUTIVE SUMMARY

The 2008 Health Insurance Survey of California Farmers and Ranchers collected information from 1,787 non-corporate farm and ranch operators in California. The vast majority of respondents had health insurance, yet one in five reported that health care expenses contributed to their financial problems. This issue brief examines which farmers and ranchers are at greatest risk of experiencing financial hardship due to health care costs.

The brief uses two measures of financial hardship caused by health care costs. The first is a generally employed objective measure that defines households as experiencing financial hardship if they spend more than ten percent of their income on health insurance premiums and out-of-pocket medical costs. The second is a perceptual measure; it defines households as experiencing financial hardship if they report that health care costs contribute to financial problems.

- Thirty-one percent of respondents spent more than ten percent of their income on health insurance premiums and additional out-of-pocket medical and prescription medication costs. Among those who said their principal occupation was farming or ranching, this figure rose to 37 percent.
- A number of factors affected people's likelihood of spending more than ten percent of income on health care, but a key one was where people obtained insurance. Those who purchased insurance on the non-group market were at much greater risk of spending more than ten percent of income relative to those who obtained insurance through government-sponsored programs or through off-farm or ranch employment.
- The median amount that people who got insurance on the non-group market spent on premiums and out-of-pocket costs was $8,500. This compared to a median amount of $4,630 for those who got insurance through off-farm or ranch employment.
- One in five respondents reported that health care costs contributed to financial problems for them or a household member; this included nearly one-quarter (22%) of those who said their principal occupation was farming or ranching.

- Respondents who reported financial problems spent on average more than one-third (37%) of their income on insurance premiums and out-of-pocket health care costs. Among this group, nearly two-thirds (62%) said it made it difficult to pay other bills. More than one-quarter (28%) said it caused them to delay making needed investments in their farm or ranch. Eleven percent said it made it hard to pay off a farm or ranch loan.

- Along with the actual percentage of income spent on health care, a key factor affecting people's perception that health care costs contributed to financial problems was whether they had to borrow money to cover these costs. Borrowing included taking out loans against their farm or ranch, taking out loans from a bank or payday lender, increasing credit card debt, or withdrawing money from a retirement account.

Even though farmers and ranchers have higher average incomes and significantly higher net worth than U.S. households as a whole, and are much more likely to have health insurance, these findings show that a high percentage are seriously burdened by the costs of health coverage and care. For those who are experiencing the burden most intensely, health care costs are eating up, on average, over a third of their incomes. These findings reflect the disproportionately high percentage of farmers and ranchers who are forced to purchase insurance on the individual, non-group market, where both premiums and out-of-pocket costs tend to be higher. Farm and ranch families are not absorbing the costs easily. Over a quarter (26%) had to draw on resources to pay for health care. Of these, more than two-thirds (70%) had to dip into savings and many others had to go into debt to cover health care costs.

These findings contribute to the research documenting the growing problems of the underinsured—those with health insurance who are still left in financial jeopardy if they get sick. Given the high rate of respondents with insurance at risk of experiencing financial problems, it may be more appropriate to speak of major "insurance product failure."

The findings are relevant to a number of current policy discussions. Many states, including California, are considering mandates requiring people to purchase insurance on the individual market if they do not have another source of coverage. This study provides information about what constitutes affordable coverage; it suggests that affordability must be considered in terms of the percent of income people spend on health care, and it must take into account the overall amount they spend on health care rather than just the cost of premiums. The findings raise concerns generally about proposals that rely on the private non-group market as the primary or only vehicle for expanding coverage for the uninsured, especially given the weakness of consumer protections in this market. Finally, the findings help quantify the excessive burden small business people and the self-employed are now shouldering to pay for health care and caution that these costs have the potential to threaten this important segment of our economy. Solutions to help alleviate these problems will probably require a combination of approaches, including cost-sharing assistance, market controls to restrain costs and maintain quality, public/private partnerships, and greater access to government-sponsored programs.

INTRODUCTION

Research has clearly documented that unaffordable medical bills and resulting medical debt affect significant portions of the United States population. A 2007 survey by The Commonwealth Fund found that 41 percent of adults ages 19 to 64 had problems paying their medical bills or had accrued medical debt, up from 34 percent in 2005. Although the uninsured are most at risk of having medical bill problems and medical debt, many people with insurance are vulnerable as well. The Commonwealth Fund survey found that one-third of people continuously insured over the previous year had medical bill problems or medical debt. It also estimated that 25 million Americans were underinsured—that is, with insurance but at risk of having medical bill problems.[1]

In 2006 The Access Project, in collaboration with the Kansas Farmers Union, surveyed Kansas farmers about these issues.[2] The study revealed that while virtually all respondents and their family members were insured (95%), nearly one-third (29%) of non-elderly respondents had medical debt. However, this study did not gather information about the source, type, or characteristics of respondents' health insurance, nor did it gather information about the financial burden of health care expenses on farm and ranch families more generally. The Access Project thus joined with the University of North Dakota Center for Rural Health and Brandeis University to gather these data systematically and on a larger scale. Data were collected through a telephone survey of over 2,000 non-corporate farm and ranch operators in seven Great Plains states.[3] This survey protocol was then used to collect similar data from 1,787 farmers and ranchers in California.

The sample was limited to farmers and ranchers with individual or partnership type operations; the great majority were sole proprietors. The survey asked about the insurance characteristics and health care expenditures of farmers or ranchers and their families. While some respondents may have employed workers or hired contract workers, the survey did not gather information about this population.

The first issue brief on the 2008 Health Insurance Survey of California Farm and Ranch Operators presented an overview of the survey findings. They showed that the vast majority of respondents had health insurance, yet one in five reported that health care expenses contributed to their financial problems, and 13 percent had outstanding debt that resulted from medical or dental bills.[4] The brief also documented that families on average were spending $7,661 annually on health insurance premiums and out-of-pocket medical costs. Those purchasing insurance on the individual, non-group market were particularly hard hit; controlling for age, health status, and prescription coverage, on average they spent $4,665 more than those with insurance obtained through off-farm or ranch employment and $3,426 more than those insured through government-sponsored programs.[5]

In recent years, the percentage of income people spend on health care has been increasing. Researchers have generally considered spending more than ten percent of household income on insurance premiums and out-of-pocket medical costs as a measure of financially burdensome health care costs.[6] Not surprisingly, those with lower incomes are most likely to spend more than ten percent of their income on health care, but the rate is also rising rapidly among people with moderate incomes (200%-400% of the Federal Poverty Level, which for a family of four today is between $41,304 and $82,608). In 1996, 15.6 percent of people in this income group spent more than ten percent of their incomes on premiums and other health care expenses; by 2003, the percentage had risen to 22.7 percent. The proportion of income spent on medical costs is also rising significantly among those who earn more than

400 percent of the Federal Poverty Level. In 2003, one in ten people in this income category spent more than ten percent of their income on health care costs, including insurance premiums, an increase of nearly 150 percent since 1996.[7]

Those who purchase insurance in the individual non-group market are much more likely to face financial strains due to medical costs than those who obtain insurance through their employment. A 2006 study found that 43 percent of adults covered by individual insurance spent more than ten percent of their income on medical expenses and premiums, compared to 24 percent of people with employer-sponsored insurance.[8] This is significant because family farmers and ranchers are more likely to purchase insurance on the individual market than the U.S. population overall. In our survey, 30 percent of respondents purchased insurance on this market, compared to about eight percent of insured Americans nationally.

Many studies have shown that unaffordable medical bills and medical debt significantly affect families' overall financial stability. Health care expenses can lead to housing problems,[9] increased credit card debt,[10] ruined credit records,[11] and in the worst cases bankruptcy.[12] For family farmers and ranchers, health care expenses have the potential to affect not only their families' economic security, but the financial viability of their farm and ranch businesses. Moreover, California family farms play an important economic role in rural communities. They constitute about 98 percent of all farms in the state and produce $32 billion per year in value.[13] The financial impact of health care expenses on family farms thus has the potential to negatively affect California's rural economies overall.

ABOUT THIS ISSUE BRIEF

This brief examines which farmers and ranchers are at greatest risk of experiencing financial hardship due to health care costs. It uses two measures of hardship. The first uses the percentage of income households spend on health care. The second measure is perceptual; it defines households as experiencing hardship if they reported that health care costs contributed to financial problems. We also examined some of the negative financial consequences these households experienced because of health care costs.

STUDY DATA AND METHODS

The data for this project were collected through a telephone survey of farm and ranch operators. The survey was developed based on a review of the literature on health insurance and medical debt and on input from an advisory group of rural health policy experts. The survey gathered information about respondents' and their families' health insurance status, the amounts of their insurance premiums and deductibles, the types of services their insurance covered, the financial burden of health care costs on families and businesses, and the existence of medical debt. It also gathered basic demographic information.

The sample population was drawn from the United States Department of Agriculture's National Agricultural Statistics Service current comprehensive list of farm and ranch operators in California. Respondents had to be over 18 years of age and no older than 64. The sample was also limited to farmers and ranchers with individual or partnership type operations. The list was sorted at the agricultural district level to assure a representative geographic distribution.

An initial letter explaining the importance of the project was sent to each farm and ranch operator included in the sample. The letter was signed by Vic Tolomeo, Director of the California Field Office of the National Agricultural Statistical Services, United States Department of Agriculture (USDA).

The survey instrument was tested with farmers and ranchers in January 2007 and revised based on the test results. Fielding of the California survey began in September and was completed in December of 2007. The original sample of 3,598 was adjusted to reflect the 870 operators who were inaccessible either because their phone numbers were disconnected or because surveyors were unable to reach them after at least 13 dial attempts. A total of 1,787 farm operators responded to the survey. The response rate, based on the adjusted sample size of 2,728, was 66 percent. Descriptive and bivariate analyses were conducted.

All quotes in this report are from survey respondents.

FINDINGS

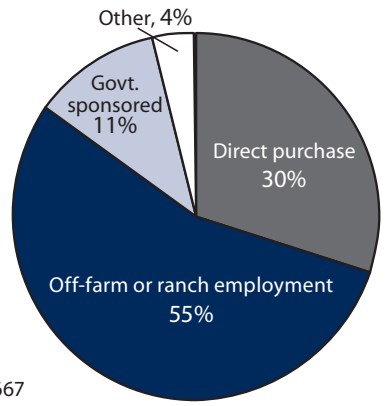
Respondent Characteristics

The vast majority of respondents in this survey were male (88%), Caucasian (91%), married (86%), and over the age of 44 (89%). The largest group of respondents (42%) had incomes between $40,000 and $99,999; 20 percent had incomes below $40,000 and 38 percent had incomes of $100,000 or more. Seventy-nine percent were sole proprietors of their farms or ranches, and 43 percent reported that farming or ranching was their principal occupation. Over two-thirds of respondents (69%) said they were in excellent or very good health; only eight percent reported that they were in fair or poor health.

Almost all of the respondents—90 percent—said all members of their households had been continuously insured in the previous year. Thirty percent purchased health insurance on the non-group market, either directly or through an insurance agent.[14] This is significantly higher than the national average; nationally, only eight percent of insured Americans purchase insurance in the individual, non-group market.[15] Fifty five percent obtained health insurance through off-farm or off-ranch employment, either their own or their spouse's. Eleven percent obtained health insurance through government-sponsored programs such as Medicare, Veterans Benefits, and MediCal.

Fig. 1

Source of Health Insurance
among those with health insurance



Measures of Financial Hardship

Researchers have defined people who are insured as having a high financial burden due to health care expenses if they 1) have premiums plus out-of-pocket health care expenses that constitute more than ten percent of their income, or 2) report having had problems paying medical bills in the previous year.[16] In our study, we also used both an objective and a perceptual measure of financial burden.

As an objective standard, we followed the generally accepted measure that defines people as experiencing a financial burden if they live in households spending more than ten percent of their income on health insurance premiums and other medical and prescription medication expenses. For this analysis, we assumed both premiums and incomes to be at the midpoint of the ranges respondents selected. For example, for a respondent who reported paying between $250 and $500 a month on insurance premiums, we calculated the monthly amount as $375. For people who reported household net incomes between $20,000 and $39,999, we calculated annual income as $30,000. Out-of-pocket medical and prescription expenses were based on the specific figures reported by respondents.

Our perceptual measure is based on people's self-reports. In our survey, we asked respondents if health care costs contributed to their or a household member's financial problems. We define people as experiencing financial hardship if they answered yes to this question.

Financial Hardship Defined by Percent of Income Spent on Health Care

Thirty-one percent of our respondents spent more than ten percent of their income on health insurance premiums plus additional out-of-pocket medical and prescription medication costs; among those who said their principal occupation was farming or ranching, this figure rose to 37 percent. (We did not include the amount people spent on dental insurance and care, which would have increased the percentage.)

> *"The roughly $8,000 per year we spend on minor medical bills, health insurance premiums, and modest dental and vision care is a major chunk of our family's income and the largest item in our budget."*

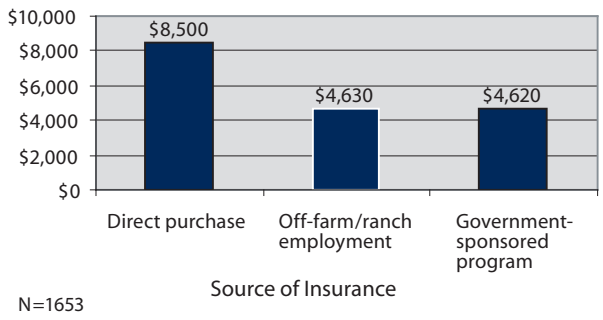
We then tested to see what factors contributed to people's likelihood of spending more than ten percent of income on health care. We looked at age, income, health status, source of insurance, insurance status, and whether people's principal occupation was farming or ranching as possible contributing factors. To test for health status, we divided respondents into those who said their health was excellent; those who said their health was very good; and those who said their health status was good, fair, or poor. Sources of insurance included insurance obtained through government-sponsored programs, off-farm or ranch employment, or purchase on the individual market. To test for insurance status, we divided respondents into those who said that everyone in their household was continuously insured in the previous year and those who said that they or someone in their household were uninsured for all or part of the previous year.

A logistic regression analysis indicated that the factors contributing significantly to the likelihood of people spending more than ten percent of their income on health care included their income, their health status, and their source of insurance. (See Table A1 in Appendix A.) Not surprisingly, the likelihood of spending more than ten percent of income on health care decreased as people's incomes rose; those with incomes over $20,000 were less likely to spend more than ten percent of their income on health care than those with incomes below $20,000. People who said their health was excellent or very good were also less likely to spend more than ten percent of their income on health care compared to those who said their health was good, fair, or poor.

Another key indicator, however, was where people obtained insurance. Those who purchased insurance on the individual, non-group market were at much greater risk of spending more than ten percent of income on health care relative to those who obtained insurance through government-sponsored programs or employment. The median amount per household that people who got insurance on the non-group market spent on premiums and out-of-pocket costs was $8,500. This compared to a median amount of $4,630 for those who got insurance through off-farm or ranch employment, and $4,620 for those who got insurance through government-sponsored programs.

Fig. 2

Median Amount Spent on Premiums and Out-of-Pocket Costs by Source of Insurance



> *"[Ranching] is dangerous so we have to have insurance, but it is way too expensive."*

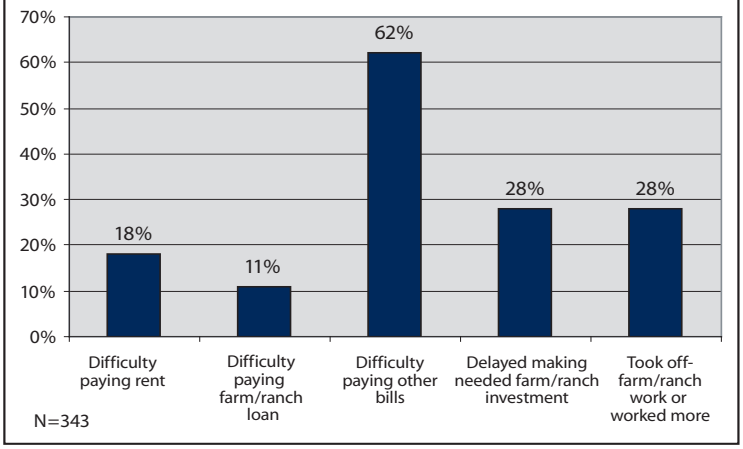
Financial Hardship Based on Self-Report

One in five of our respondents (20%) said they felt that health care costs contributed to financial problems for them or a household member. (Among those who said their principal occupation was farming, this figure rose to 22 percent.) Figure 3 shows the types of financial problems people said they experienced.

Fig. 3

Financial Problems Experienced Because of Health Care Costs

among those who experienced financial problems



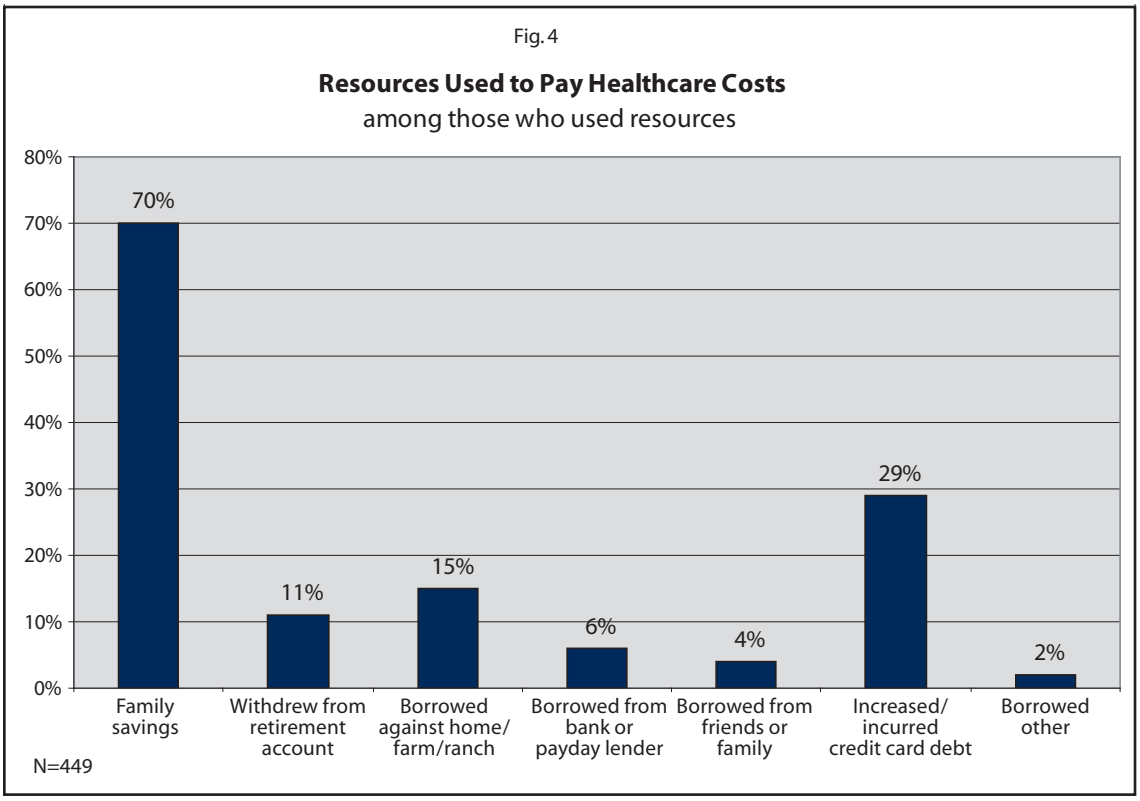
All of the respondents who said they felt that health care expenses contributed to their financial problems spent more than ten percent of their income on insurance premiums and other out-of-pocket medical and prescription costs. We wanted to know what factors led this group to feel that health care costs created financial problems.

We conducted a logistic regression to determine which factors contributed to people reporting financial hardship resulting from health care costs. (See Table A2 in Appendix A.) We included almost all of the same factors as in our analysis of those who spent more than ten percent of income on health care. However, we also included two additional variables. One was the actual percentage of income spent on health care. For those who reported health care expenses greater than their total income, the percentage was set at 100.[17]

The other variable referred to the resources people reported using to pay for health care. All respondents were asked whether they had to draw on resources to cover health care costs. Over one-quarter of the respondents (26%) did draw on resources. Among those who used resources, people were asked whether they used family savings, withdrew money from a retirement account, borrowed against their home or farm/ranch, borrowed from a bank or payday lender, borrowed from friends or family, incurred or increased credit card debt, or borrowed from some other source. The results are shown in Figure 4.

Fig. 4

Resources Used to Pay Healthcare Costs
among those who used resources



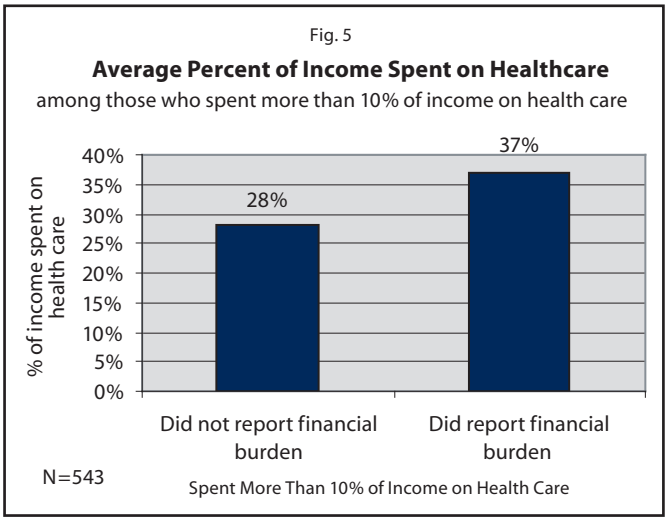
"I spent three days in the hospital a year and a half ago...and ended up with debt between $30,000 and $40,000."

We hypothesized that people who did not have to draw on resources or had enough savings to cover costs might subjectively experience the burden of health care costs differently from those who had to borrow to pay for care. All of the resources mentioned above, except using savings, involved borrowing money to pay for care. We thus looked at borrowing to pay for health care as a potential factor contributing to people's sense that health care costs contributed to financial problems. (We considered withdrawing money from a retirement account as a form of borrowing, since it drew on resources set aside for other long-term needs.)

The most important predictive factor in determining whether people felt that health care costs contributed to financial problems was the sources people used to pay for health care. Those who had to borrow to pay their medical bills were much more likely to report hardship than those who only used their savings or did not have to draw down resources.

The percentage of income people spent on health care was also significant. Those who reported financial hardship spent on average 37 percent of income on health care. Those who spent more than ten percent of their income on health care but did not report hardship spent on average 28 percent of income. Thus people reporting financial hardship were spending substantially more money on health care than those spending more than ten percent of income but not reporting hardship.

Fig. 5



Health status also played a role: those who reported their health status as good, fair or poor had a higher likelihood of reporting that health care expenses contributed to financial problems compared with those who reported their health as excellent or very good.

Not surprisingly, income was also a significant factor: those who earned more than $100,000 a year were less likely to report financial hardship than those with incomes between $40,000 and $99,999.

DISCUSSION AND POLICY IMPLICATIONS

In recent years, both the cost of health insurance premiums and cost-sharing in the form of deductibles, co-payments, and co-insurance have risen rapidly. As a result of the amounts people are forced to pay on health care expenses, growing numbers are experiencing financial hardship.

In our previous brief, we showed that the farm and ranch families in our survey were spending on average $7,661 annually on health insurance premiums and out-of-pocket health care costs. Further analysis showed that costs were strongly correlated with people's source of health insurance. Controlling for age, health status, and prescription coverage, families who purchased insurance from an agent in the individual market spent $3,426 more on health care than families with insurance obtained from government-sponsored programs, and $4,665 more than those with insurance obtained through off-farm or off-ranch employment. These findings are especially important for farm and ranch operators because 30 percent of survey respondents purchased insurance in the individual market, compared to a national average of eight percent.

> *"Insurance is a major expense even with a bare bones major medical policy. I have a family of four and our premiums are more than a car payment."*

This brief looks at the percent of income these expenses represent. Based on a commonly used definition of financial burden from health care expenses, 31 percent of our sample—a population that has higher average incomes and significantly higher net worth than U.S. households as a whole—is burdened by the costs of coverage and care. This compared to 18 percent of the population younger than 65 in 2004 that spent more than ten percent of income on insurance premiums and health care.[18] And for those farmers and ranchers who are experiencing the burden most intensely (one-fifth of the sample), health care costs are eating up, on average, more than one third of their incomes.

Farm and ranch families are not absorbing these costs easily. More than two-thirds (70%) of those who had to draw on resources to pay for health care had to dip into savings to pay for care, money that otherwise could have been used as a buffer in years when farm incomes dip or for other long-term needs. Many others had to go into debt to cover their health care costs. Among those experiencing the highest burdens, 11 percent said they were having difficulties paying off loans against their farm or ranch, and more than one quarter (28%) delayed making needed investments in their businesses. More than one quarter (28%) also had to take jobs off the farm or ranch, presumably at least partly to get better health insurance coverage. These consequences have the potential to threaten people's farming or ranching operations, and indirectly the rural economies in which they are embedded.

Policymakers are increasingly concerned with the problems of the underinsured—those with health insurance who are still left in financial jeopardy if they get sick.[19] Virtually all (90%) of our respondents were insured, yet 31 percent suffered financial hardship because of health care costs. These findings raise questions about whether "underinsured" is the appropriate term to describe their situation. The term "underinsurance" implies that a solution is buying

> *"Two years ago I had a hernia operation but it wasn't "on the list", so my insurance only paid $700 of my $7,000 bill. I made a payment plan with the hospital...but missed a payment, so they sent the bills to collections."*

better insurance with more comprehensive coverage. However, our respondents would presumably buy better insurance if it were available or financially within reach, and it is clear that insurance premiums are contributing to the problem as much as the quality of the coverage. A better term for insurance that leaves three out of ten purchasers at risk might be "product failure."

Our findings are highly relevant to a number of important policy discussions currently taking place. This is especially true for current debates about how to provide coverage to small businesses and self-employed people who have to purchase insurance coverage on their own.

First, some policymakers support eliminating state-mandated benefits and allowing the sale of insurance policies with limited coverage or high levels of cost-sharing, maintaining it will make insurance premiums more affordable. The purpose of health insurance is to protect people financially and provide them access to care if they get sick. The findings from this study and others clearly demonstrate that many insurance products, particularly those sold in the individual market, are not fulfilling this function. Scaling back coverage to bring down the cost of premiums shifts costs but does not eliminate them. Insurance premiums are thus not an adequate measure of affordability. Families draw on the same pool of resources to pay for premiums and out-of-pocket costs. Policy approaches that merely change the label under which costs are categorized—from premiums to out-of-pocket expenses—do not solve people's real problems.

Second, many states, including California, are considering mandates requiring most uninsured people to purchase health insurance on the individual market if they do not have another source of coverage; such a mandate has already been enacted in Massachusetts. These proposals generally include subsidies to make coverage "affordable" for those with fewer resources. The proposals often stipulate that people will only be required to purchase insurance if affordable policies are available. Our study suggests that affordability must be considered in terms of the percent of income people spend on health care, and on the amount they spend overall on health care rather than just the cost of premiums. Without such limits, subsidies to help people purchase insurance may be inadequate and even higher income people may experience serious financial consequences if they have to access care.

Third, our findings raise concerns generally about proposals that rely on the private non-group market as the primary or only vehicle for expanding coverage for the uninsured. A great deal of research has shown that people insured on the individual market are more likely to pay higher premiums, have higher deductibles, have fewer benefits, and pay higher percentages of their income on health care than those with employer-sponsored coverage.[20] Our previous brief confirmed these findings; it documented that people incur significantly higher overall expenses when they have insurance purchased on this market. Our current brief shows that those spending the highest percentages of their income on health care also are more likely to have such coverage, and that the percentage of income consumed by health care costs can be extraordinarily high. Self-employed people such as family farmers and ranchers are much more likely than the population at large to have this type of coverage. Tax credits, as some have proposed, are unlikely to make up for the large differences in health care expenditures and percent of income consumed on health care that people with non-group coverage face, compared to those with employer or government-sponsored insurance.

In addition, other recent research has shown that in many states, including California, consumer protections in the individual, non-group market are extremely weak. For example California does not require insurers to sell to all applicants (guaranteed issue) or prohibit medical underwriting (setting insurance rates based on health status), does not review in advance proposed health insurance premium rate hikes, and does not require insurers to spend at least three-quarters of every health care dollar paying for medical care (as

opposed to marketing, overhead, or executive salaries).[21] Existing regulation in the individual market may be especially unlikely to set standards for benefit design, premium costs, and limits on cost sharing that would be required to protect people from the exorbitant costs that many are now forced to assume.

Finally, our findings help quantify the excessive burden small businesses and the self-employed are now shouldering in order to pay for health care, and the consequences of these costs. A great deal has been written about the drain on resources and impact on competitiveness of high health care costs on large corporations, such as auto manufacturers. Our findings suggest that the burden of paying for health care faced by farm and ranch operators, and others who have small businesses or are self-employed, have the potential to threaten this segment of our economy as well. Solutions to help alleviate their problems will probably require a combination of approaches, including cost-sharing assistance, market controls to restrain costs and maintain quality, public/private partnerships, and greater access to government-sponsored programs.

APPENDIX A: REGRESSION ANALYSES

Table A1 presents the results of a logistic regression analysis of financial hardship defined as spending more than ten percent of income on insurance premiums and out-of-pocket health care costs. Significant factors are highlighted.

Table A1: Premiums and Out-of-Pocket Expenses Greater than 10% of Income

	Coef.	Std.Err.	Sig.	Odds Ratio
Age 35 – 44 [a]	.695	.831	.403	2.003
Age 45 - 54 [a]	.733	.812	.367	2.080
Age 55 - 64 [a]	.932	.809	.249	2.539
Age 65 + [a]	.633	.835	.449	1.883
Income $20,000 to $39,999 [b]	-1.586	.443	.000	.205
Income $40,000 to $99,999 [b]	-3.048	.412	.000	.047
Income $100,000 or more [b]	-5.119	.434	.000	.006
Health excellent [c]	-.408	.178	.022	.665
Health very good [c]	-.339	.161	.036	.713
Insurance from off-farm/ranch employment [d]	-.213	.275	.438	.808
Insurance purchased on non-group market [d]	1.190	.284	.000	3.288
Everyone in household insured in past year [e]	.262	.305	.389	1.300
Principal occupation farming or ranching	.078	.144	.591	1.081
Constant	1.514	.942	.108	4.544

[a] Impact of age categories is relative to those under age 35.

[b] Impact of income is relative to those with incomes under $20,000 a year.

[c] Impact of health status is relative to those reporting health as good, fair, or poor.

[d] Impact of source of insurance (off-farm/ranch employment or non-group market) is relative to government-sponsored insurance.

[e] Insurance status is relative to households where some or all members were uninsured part or all of the previous 12 months.

Factors contributing significantly to spending more than ten percent of income on health care include obtaining insurance through purchase on the non-group market (relative to obtaining insurance through a government program). Those with reduced risk of spending more than ten percent of income on health care include those with incomes greater than $20,000 per year and those having excellent or very good health (relative to those who said their health was good, fair, or poor).

Table A2 presents the results of a logistic regression analysis of financial hardship defined as reporting that health care costs contributed to financial problems. Significant factors are highlighted.

Table A2: Healthcare Expenses Contribute to Financial Problems

	Coef.	Std.Err.	Sig.	Odds Ratio
Age 35 – 44 [a]	.473	.860	.582	1.605
Age 45 - 54 [a]	.195	.840	.816	1.215
Age 55 - 64 [a]	.148	.839	.860	1.159
Age 65 + [a]	-.153	.879	.862	.858
Income less than $20,000 [b]	.865	.458	.059	.421
Income $20,000 to $39,999 [b]	.411	.244	.093	1.508
Income $100,000 or more [b]	-.418	.863	.023	.658
Health excellent [c]	-.655	.203	.001	.520
Health very good [c]	-.499	.178	.005	.607
Insurance from off-farm/ranch employment [d]	-.441	.303	.145	.643
Insurance purchased on non-group market [d]	-.190	.309	.539	.827
Everyone in household insured in past year [e]	-.730	.300	.015	.482
Principal occupation farming	.191	.164	.246	1.210
Insurance premiums plus out-of-pocket healthcare expenses as percent of income [f]	.013	.005	.018	1.013
Borrowed to pay for care [g]	2.507	.186	.000	12.274
Constant	-.913	.931	.327	.401

[a] Impact of age categories is relative to those under age 35.

[b] Impact of income is relative to those with incomes between $40,000 and $99,999 a year.

[c] Impact of health status is relative to those reporting health as good, fair, or poor.

[d] Impact of source of insurance (off-farm/ranch employment or non-group market) is relative to government-sponsored insurance.

[e] Insurance status is relative to households where some or all members were uninsured part or all of the previous 12 months.

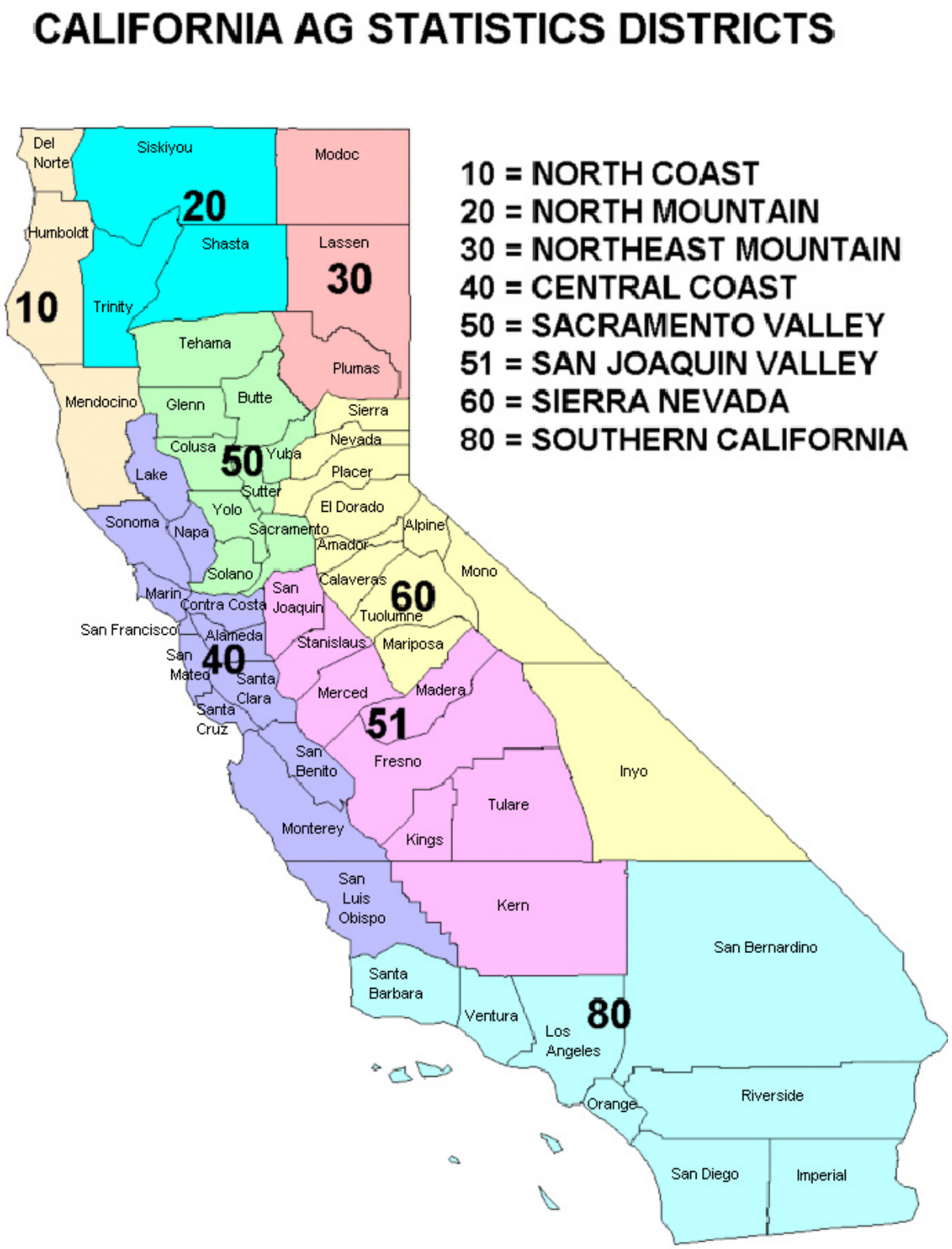
[f] Out-of-pocket expenses as percent of income sets premiums and income at mid-point of selected ranges. Out-of-pocket expenses are based on specifically reported figures and do not include expenses related to dental care. Percentages are capped at 100.

[g] Borrowed to pay for care is relative to use of savings only or no use of resources to pay for care.

Factors associated with a greater likelihood of feeling that health care costs contributed to financial problems included spending higher percentages of income on health care and having to borrow to pay health care bills. Those at reduced risk of feeling that health care costs contributed to financial problems included people in excellent or very good health (compared to those in good, fair, or poor health), and people earning more than $100,000 a year (compared to those earning between $40,000 and $99,999).

APPENDIX B: COMPARISIONS BY AGRICULTURAL DISTRICT

The California sample was stratified to ensure geographic distribution among six agricultural districts: North Coast, Central Coast, Sacramento Valley, San Joaquin Valley, Sierra Nevada, and Southern California. The map below shows the state divided into these districts. For this analysis, North Coast, North Mountain, and Northeast Mountain were considered as a single district, called North Coast. The table following the map shows key survey indicators by agricultural district.



The following table presents data at the agricultural district level for key indicators.

Table B1 : Key Indicators by California Agricultural District

	North Coast	Central Coast	Sacramento Valley	San Joaquin Valley	Sierra Nevada	Southern California	ALL
Income $40,000-$99,999	43%	39%	44%	39%	51%	36%	42%
Age 45-64	74%	79%	79%	77%	78%	77%	77%
Health excellent or very good	70%	72%	66%	65%	70%	72%	69%
Proportion of income from farm/ranch (average)	33%	29%	38%	42%	20%	29%	33%
Everyone in household insured	86%	93%	90%	91%	90%	91%	90%
Insurance through direct purchase on non-group market	31%	35%	29%	31%	24%	31%	30%
Healthcare costs>10% of income	37%	26%	28%	33%	33%	25%	31%
Healthcare costs contribute to financial problems	26%	19%	16%	15%	23%	17%	20%
Drew down resources to pay for health care	30%	27%	25%	21%	26%	25%	26%
Median amount spent per household on health care	$5,200	$6,200	$5,000	$6,000	$5,000	$4,850	$5,300
Median amount spent per household when insurance from non-group market	$7,775	$9,000	$7,900	$10,350	$8,300	$8,400	$8,500

ENDNOTES

[1] S. Collins et al., *Losing Ground: How the Loss of Adequate Health Insurance is Burdening Working Families*, The Commonwealth Fund, August 2008.

[2] W. Lottero et al., *Losing Ground: Eroding Health Insurance Coverage Leaves Kansas Farmers with Medical Debt*, The Access Project, August 2006.

[3] The Access Project published three briefs describing and analyzing the findings from the survey in the Great Plains states. B. Lottero, et al., *The 2007 Health Insurance Survey of Farm and Ranch Operators: Overview of Findings*, The Access Project, September 2007. C. Pryor et al., *2007 Health Insurance Survey of Farm and Ranch Operators: How Farmers and Ranchers Get Health Insurance and What They Spend for Health Care*, The Access Project, December 2007. *The 2007 Health Insurance Survey of Farm and Ranch Operators: Who Experiences Financial Hardship Because of Healthcare Costs?* The Access Project, September 2008. The briefs can be found on The Access Project website, www.accessproject.org.

[4] C. Pryor et al., *2008 Health Insurance Survey of California Farm and Ranch Operators: Overview of Findings,* The Access Project, May 2008.

[5] Ibid.

[6] See for example P.J. Cunningham, *Overburdened and Overwhelmed: The Struggles of Communities with High Medical Cost Burdens*, Issue Brief, The Commonwealth Fund, November 2007. Cunningham also includes in his definition of high medical cost burden insured people with incomes below 200 percent of the Federal Poverty Level who spend more than five percent of family income on premiums and out-of-pocket costs. We did not include this criterion in our study as very few respondents in the sample with incomes under $40,000—just under 200 percent of the poverty level for a family of four—spent between five and ten percent of their income on health care. Thus most people who would have matched the five percent or more criterion are included among those who spent more than 10 percent of their income on health care. For use of the same definition to define financial burden, see J. Banthin and D. Bernard, "Changes in Financial Burdens for Health Care: National Estimates for the Population Younger than 65 Years, 1996 to 2003," *Journal of the American Medical Association*, Vol. 296, No. 22, December 13, 2006. A similar definition has been used to define the underinsured. See C. Schoen et al., "How Many are Underinsured? Trends Among U.S. Adults, 2003 and 2007," *Health Affairs*, June 10, 2008. Schoen excludes premiums when calculating percent of income spent on medical care. However, she found that being underinsured according to her definition was strongly correlated with having insurance premiums that exceeded five percent of people's income.

[7] J.S. Banthin and D. Bernard, "Changes in Financial Burdens of Health Care: National Estimates for the Population Younger than 65 Years, 1996-2003," *Journal of the American Medical Association*, Vol. 296, No. 22, December 13, 2006.

[8] S. Collins et al., *Squeezed: Why Rising Exposure to Health Care Costs Threatens the Health and Financial Well-Being of American Families*, The Commonwealth Fund, September 2006.

[9] R. Seifert, *Home Sick: How Medical Debt Undermines Housing Security*, The Access Project, 2005.

[10] C. Zeldin and M. Rukavina, *Borrowing to Stay Healthy: How Credit Card Debt is Related to Medical Expenses*, Demos, 2007.

[11] R. Seifert, *The Consequences of Medical Debt: Evidence from Three Communities*, The Access Project, 2003.

[12] D. Himmelstein et al., "Illness and Injury as Contributors to Bankruptcy," *Health Affairs Web Exclusive*, February 2005.

[13] National Agricultural Statistics Services, *2002 Census of Agriculture*, U.S. Department of Agriculture, 2002.

[14] The survey asked respondents whether they had various kinds of insurance, such as Medicare, Veterans Benefits, or health insurance purchased through an off-farm job or their spouse's job. It also asked if they had health insurance "that you purchased from an insurance agent or company." As the survey sample was designed to exclude corporate farms and over 80 percent of the respondents identified themselves as sole proprietors, we categorized people who said they purchased from an agent or company as having individual, non-group insurance. It is possible that some of these respondents had small group insurance, although it is unlikely that they constitute a significant part of the sample.

[15] S. Collins, *Squeezed*, op.cit.

[16] See note 6.

[17] About five percent of the sample reported having health care expenses greater than their income, almost all of whom were low income. This may reflect the fact that in our analysis, incomes were set to the mid-point of the income range selected. Thus, someone earning $19,998 would select $0 to $19,999 as their income range, and their income would be calculated at $10,000. Rather than exclude these respondents, which would have disproportionately decreased the sample population with incomes under $20,000, we chose the more conservative option of setting their health care expenses as a percent of income to 100. This could result in an underestimate of the percentage of income people spent on health care.

[18] Banthin et al., "Financial Burden of Health Care, 2001-2004," *Health Affairs*, January/February 2008.

[19] See for example C. Schoen et al., "How Many Are Underinsured? Trends Among U.S. Adults, 2003 and 2007," *Health Affairs*, June 10, 2008.

[20] S. Collins et al., *Squeezed*, op.cit.

[21] E. Hushagen and C. Fish-Parcham, *Failing Grades: State Consumer Protections in the Individual Health Insurance Market*, Families USA, June 2008.

ACKNOWLEDGEMENTS

The Access Project developed this report with the assistance of Brandeis University. It is based on data gathered by the United States Department of Agriculture National Agricultural Statistics Service (NASS) under a contract with The Access Project.

We would like to thank Vic Tolomeo, Director, Sarah Hoffman, Deputy Director, and Jack Rutz, Deputy Director of the California Field Office of NASS for their assistance, encouragement and overall management of the survey effort. Steve Fournier at Brandeis University deserves special thanks for his assistance with the statistical analysis and his patience with and responsiveness to our requests for data runs. We are particularly grateful to all of the farm and ranch operators who generously gave their time and willingly shared information. We hope that this report, based on their experiences, will be useful in improving health care coverage and access for rural Americans.

We would also like to thank Sara Collins of The Commonwealth Fund and Mary Wakefield, Kyle Muus and Garth Kruger of the Center for Rural Health for their helpful feedback on the survey instrument used to gather these data.

At The Access Project, we would like to thank Meg Baker, who designed and produced the report, and Nancy Kohn, who conducted follow-up interviews with respondents.

Photos courtesy of Steve Quint.

Generous financial support from The California Endowment made this project possible.

The Access Project (TAP) has served as a resource center for local communities working to improve health and health care access since 1998. The mission of TAP is to strengthen community action, promote social change, and improve health, especially for those who are most vulnerable. TAP conducts community action research in conjunction with local leaders to improve the quality of relevant information needed to change the health system. TAP's fiscal sponsor is Third Sector New England, a nonprofit with more than 40 years of experience in public and community health projects.

The Access Project • 89 South Street • Suite 202 • Boston • MA • 02111
www.accessproject.org