ColoradoCare: Is the Cure Worse Than the Disease? (IP-22-1993)

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Issue Paper

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The expansion of health insurance in the United States has enabled the majority of its citizens to afford the best medical care in the world. After World War II, only about 10 percent of the population had health insurance. Five decades later, the proportion has reached an estimated 85 percent. But alarmists prefer to ignore this fact and emphasize the number of uninsured. They tell us that only a government health care takeover can ensure access to health care for 500,000 Coloradans and 37 million Americans who are said to be unable to afford health insurance.

No one really knows either the exact number of uninsured or their circumstances. Any statement about the numbers of uninsured, their ages, their employment status, or the duration of their uninsured spells relies on a sample of a relatively small number of people. The rules of statistics are then used to extrapolate the survey results to the entire population. When working with unfamiliar data, even people with formal training in statistics can end up with an unrepresentative sample, apply the statistical rules incorrectly, or misinterpret results.[1] Other people tend to accept the resulting numbers as fact. This makes statistical studies particularly susceptible to manipulation by disingenuous people who wish to slant studies in favor of their pet policy. For those in favor of massive government intervention in the production of health care, exaggerating the number of uninsured is a constant temptation.

Estimating the Number of Uninsured

To avoid being misled, one must understand how the number of uninsured is estimated. To begin with, the quality of any estimate depends upon the quality of the sample. In good surveys, great care is taken to ensure that the characteristics of the people in the sample reflect those of the population as a whole.

Representative surveys are expensive to develop and carry out. Because of this, most estimates of the number of uninsured rely either on the Current Population Survey (CPS) or the Survey of Income and Program Participation (SIPP), both of which are conducted by the U.S. government. Since 1980, households interviewed in the March CPS have been asked about their health insurance coverage in the previous year. "A 'Yes' to any of the health insurance questions denotes at least some coverage of that type during the

previous calendar year"[2] and the person is counted as insured. Because it asks roughly the same questions of different households each year, it is called a cross-sectional, or point-in-time, survey. Each year, about 60,000 households from 729 areas are interviewed. This geographic dispersion means that data from the CPS can also be used to develop estimates about conditions in smaller geographic areas like states, but with larger probabilities of error.

The SIPP sample is also chosen to represent the noninstitutionalized, resident, population of the United States. Unlike the CPS, the SIPP is a longitudinal survey. This means that a core of questions are asked of the same households 8 or 9 times over a 2 year period. The fact that the SIPP follows households for a period of time makes it an especially valuable tool for understanding the dynamics of health insurance. While data on the number of uninsured at any given time are available in both the SIPP and the CPS, only the SIPP provides information on how long an uninsured spell is likely to last.

Comparing Estimates of the Number Uninsured

Table 1 (see page 9) compares national estimates of health insurance coverage on three bases:

1) the longitudinal SIPP (SIPP/L) from the 1987 panel covering the months corresponding to the calendar year 1988

2) the quarterly or cross-sectional SIPP estimates from the fourth quarter of 1988 (SIPP/Q)

3) the estimates from the March 1989 CPS.

The three surveys produce estimates of those covered by Medicaid that do not significantly differ[3] in a statistical sense. This means that all three surveys produce relatively similar estimates of the number of people covered by Medicaid.

Although the three surveys generally agree on the percentage of the resident United States population covered by Medicaid, their estimates of the extent of private health insurance coverage vary substantially. Recall that the CPS and SIPP/Q estimates of private coverage are point-in-time estimates based on a single interview asking whether the respondent has been covered by health insurance any time in the last year or quarter. Their estimates of the people without coverage agree quite well.

Surprisingly, the SIPP/L estimates of insurance coverage have generally been about 9 percentage points higher then either the SIPP/Q or the CPS estimates. This is a relatively large difference and is probably too large to be explained by sampling variation alone. The much lower SIPP/Q estimate "lends credence

to the argument that there is a tendency for CPS respondents to answer health insurance questions based on their current status, even though the questions refer to coverage at any time during the previous calendar year."[4]

If people really do answer the CPS question on the basis of their current status, then the SIPP/L with its lower estimates of the uninsured would be the more accurate estimate.

Using an estimated 1988 U.S. population of 245 million, the CPS estimate of 13.4% implies that in March of 1988 about 33 million people in the United States had not had any health insurance in the previous year. The point-in-time SIPP/Q estimate is similar at 12.8%. The SIPP/L estimate, which may be the more accurate, implies that only half as many people, 16 million (1.2 million), were uninsured for the entire year. The 1.2 million variation means that although the true number is unknown, the survey results suggest that it is probably[5] somewhere between 14.8 million and 17.2 million. In short, the popular estimate of 33 million people without health insurance in the previous year may be twice as high as the true number."

All of these estimates are carefully done. Why the popular media reports only the highest estimate, without even mentioning the possibility that the true number of uninsured may be only half as large, must be left to the reader's imagination.

500,000 Uninsured in Colorado?

In Colorado, Governor Romer's "Colorado Care Health Action Plan" uses CPS data to claim that "Over 500,000 Coloradans have no health insurance, and a similar number are underinsured."[6] Although unreferenced, these estimates are the same as those prepared by The Colorado Coalition for Health Care Access and distributed by the Colorado Trust in the *Colorado Health Source Book: 1991-1992.* The Coalition's figures are point-in-time estimates based on data for Colorado from the CPS. Table 2 (see page 10) compares the Colorado CPS estimates published by the federal government with those calculated by the Coalition using the same data. The data are from Chart 1 in the *Source Book* entitled "Colorado Residents by Insurance Status, 1991." Comparing the two sets of numbers suggests that the data in the Source Book were labeled 1991 in error; they look like 1990 data and are reported as 1990 data in Table 2. As Table 2 shows, an estimate of 15.3% uninsured exceeds both the national estimate and the midpoint of the CPS estimate for Colorado.

Even though it is larger than the CPS estimate (14.7% or about 487,000 uninsured Coloradans), the Coalition's estimate of 15.3%, or 514,000 uninsured Coloradans, may not be significantly different in a statistical sense. But the percentage of uninsured is presumably derived from the Coalition's population estimates, and these are troublesome. In Chart 1, the Coalition

estimated that 514,000 people were uninsured and that 2,852,000 people were insured for a total population of 3,367,000. For 1990, the Division of Local Government places Colorado's population at 3,310,277, a difference of about 2%, which may not be unreasonable.

In Chart 3 of the *Sourcebook*, the Coalition gives insurance status by age. Estimates of insured and uninsured children total 954,000 children under 18 years old and 1,296,000 children under 24. The Division of Local Government's estimates of the Colorado population in those age groups for 1990 are 865,000 and 1,208,401 respectively. These are differences of 10 and 7 percent. If the Coalition's methodology inflated both the insured and uninsured equally, then there is no cause for concern about the estimated percentage of uninsured. If, however, the extra people were added to one group or the other, the estimated percentage could contain more than the usual amount of error.

The Coalition's estimates of the uninsured by age for people over 24 years old generally agree with those from the 1990 SIPP (Table 3, on page 11). For those under 24, the Coalition's estimates of the percent uninsured are larger than the monthly estimates of the SIPP. Nationally, estimates from the SIPP suggest that 13.8 percent (approximately 0.6 percent) of the people in that age group lacked insurance in the last quarter of 1990. The Coalition claims that 20 percent of those under 6 years old and 16.5 percent of those from 6 to 17 years old lacked insurance.

Why do such a large percentage of children in Colorado lack health insurance when the percentage of Colorado adults without insurance approximately matches that in the national surveys?

Most children are either covered by family health insurance through their parents or by Medicaid. Are Colorado employers less likely to offer family policies? Are parents less willing to pay the extra money for coverage of their children? Does Colorado have a larger fraction of children living with workers without coverage? Are parents less likely to sign their children up for Medicaid coverage?

If the estimate is indeed correct, a population difference like one of these must exist to explain why Colorado's children have less health insurance than the national average. The difference must be found and examined before one can do anything about it. Perhaps, though, errors in statistical analysis have led to a perceived "insurance gap" larger than any real deficit. The claim that Colorado children are less likely than children nationally to have health insurance may well be the result of statistically flawed methodology.

Why Claims of 500,000 Uninsured Probably

Overstate the Problem

Even if cross-sectional surveys like the CPS do not overstate the number of people uninsured, and if the way the Coalition used the CPS to arrive at its estimates is perfectly correct, the Coalition's 1990 estimate probably overstates the number of uninsured in 1991. Since World War II, when only 10 percent of the population was covered, the trend has been a steady increase in the fraction of the population with health insurance. But as a result of historical accident and tax policy, health insurance in the United States, unlike any other common type of insurance, is a fringe benefit of employment. This means that coverage fluctuates around the long-term trend as employment rises and falls with the business cycle.

Nationally, the business cycle peaked in July 1990.[7] A slowing economy typically increases unemployment, and CPS typically registers a higher number of uninsured people. But Colorado has had a relatively buoyant economy, and as employment and economic activity in Colorado increased, one would expect the number of uninsured to fall. In fact, the CPS estimate of the uninsured population in Colorado decreased from 14.7 percent in 1990 to 10.1 percent in 1991.[8](Table 2, page10) Assuming a state population of 3,310,849 in 1990 and 3,376,669[9] in 1991, there were about 486,700 uninsured in 1990 and 341,000 in 1991, a number much lower than the 500,000 asserted in the ColoradoCare proposal. The more realistic true number of uninsured, about 341,000, differs rather dramatically from the Governor's claim of half-a-million uninsured.

Nationally, those without insurance tend to be young adults with one or more job interruptions, people in families with incomes close to the official poverty line, and people who move out of married-couple families. Indications are that only about 30% of the uninsured go without health insurance for as long as a full year. Swartz, Marcotte, and McBride[10] studied 10,321 spells without health insurance from the 1984 SIPP. They show that 64 percent of those without health insurance found new coverage within 9 months of losing their insurance.(Table 4, page 11)

In related paper,[11] Swartz *et. al.* suggest that short uninsured spells occur because many individuals "may encounter a 90- or 120-day probationary period as new employees before they are eligible for fringe benefits again." Although the Consolidated Omnibus Budget Reconciliation Act of 1986 (COBRA) makes employees eligible to stay in their old employer's group policy as long as they pay no more than 102% of the full premium, Swartz *et. al.* doubt that much has changed. "There is very little evidence that many people have chosen to pay the full premium in order to continue coverage under their previous employer's policy, and there is a lot of anecdotal evidence that most people 'go bare' between jobs."

Do We Need Government Health Care to Take Care of the Uninsured?

Lacking health insurance is not the same as lacking health care. When people "go bare" they are gambling that they will not have a health problem serious enough to bankrupt them while they are without insurance. Many people clearly think this is a good bet. Weighing the probability that one will have a serious medical problem requiring immediate attention or develop a chronic condition that makes one uninsurable against the monthly payments for family health insurance, many people decide that the insurance is "too expensive." They know that often treatment can be temporarily postponed without ill effect. They also know they will receive treatment in the event of a serious accident whether or not they can pay, and that they can buy routine care with cash.

The idea that people can and do pay their own medical expenses, and that their expenditures are sensitive to their out-of-pocket costs, is also an idea beyond the ken of many health care policy specialists. In fact, households can budget for basic health expenditures just as they pay for maintenance and unexpected repairs on their homes and cars.

The RAND Corporation conducted a five-year trial of alternative insurance plans with a stop-loss provision that limited expenditures to 5 to 15 percent of income or a maximum of $1000 in 1976 dollars. ($1000 in 1976 would be equivalent to about $2400 today.) "Total expenditures for the group given free care were 45 percent higher than for the group that paid 95 percent up to the stop-loss. Free care increased total expenditures by 23 percent relative to a plan in which patients made a 25 percent copayment up to a stop-loss. For the great majority of participants, the difference in expenditures had no measurable effect on health, whether judged by objective measures or themselves."[12]

If the cost of interim insurance were low enough, the vast majority of people would probably prefer not to bet all their assets that they will stay healthy whenever they change jobs or experience a period of unemployment. And all but a small segment of the uninsured could afford coverage, according to William Niskanen, an economist at the Cato Institute.[13] The way to do this is to make health insurance less expensive by reducing the distortions caused by government. The self-employed, employees of small businesses, and others not covered by employer provided group plans have higher costs imposed on them by the $60 billion annual tax break for those who have employer provided insurance as a tax-free fringe benefit. "Because the health insurance premiums are deductible expenses for employers, many workers effectively avoid a 28 percent income tax, a 15.3 percent tax for Social Security (half of which is paid by employers), and a 2 to 9 percent state and local income tax."[14]

State-mandated benefits also drive the cost of insurance up. Lobbyists for the more than 240 different health-related professions in the United States work diligently to shore up their clients' income by convincing state legislators to require that health insurers cover their clients' services. As a result, coverage for alcohol and drug abuse counseling are required in many states, pastoral counseling is covered in Vermont, deposits to a sperm bank are covered in Massachusetts, and hairpieces for bald people are covered in Minnesota. Many people simply need policies that protect their assets from catastrophic medical expenses. The National Center for Policy Analysis estimates that "as many as one out of every four people who lack health insurance has been priced out of the market by these costly regulations."[15]

Government never has been good at producing things at a lower cost than the private sector. Careful studies suggest that rising health care costs are caused by technological progress, the prevalence of third-party-payers, and the rapid increase in coverage brought about by Medicare and Medicaid.[16] If correct, this means that government intervention will add to costs, not control them, and that it will then seek to control expenditures by degrading the quality of care. These predictions have been borne out in Canada and Britain. When costs are properly adjusted for different accounting systems and populations, per capita health care expenditures in Canada--where provincial governments control every aspect of health care--are both higher than in the U.S. and growing more rapidly. And since the government takeover, the quality of care has steadily declined. It is now inferior to U.S. standards and still eroding.

Financing a government health care takeover by forcing employers to pay for coverage with a payroll tax or a fixed tax per worker will cause more unemployment among the disadvantaged. In a market system, wages are determined by the additional amount a worker produces and the price that his additional production can be sold for. When government increases the cost of employing relatively unskilled people by levying a flat tax on each employee, some of the unskilled will no longer produce enough to justify continued employment. Businesses must make a profit to survive. They will cut back their labor force by substituting machines for people, moving production out of the state, of dropping certain types of production entirely. Given the choice between health insurance and a job, even most of the uninsured would choose the latter.

What Should Colorado Lawmakers Do?

If the legislature really wants Coloradans to have top-flight health care, its members will do two things. First, they will apply Stigler's maxim to health care: "Direct aid should take the form of direct grants of money and *only* this form."[17] By providing cash subsidies to those at income levels determined "too low" or with medical expenditures that are "too high," the state can ensure that everyone can "afford" health care. Treating the program as a

straight transfer program makes the cost of the program explicit. It also allows people to choose the kind of care they want, thus preserving innovation in health care. Most important, it leaves the private sector to do what it does best--delivering goods and services without the distortions caused by government intervention.

Second, they will remember that every government foray into health--whether managing insurance companies, setting standards, fixing prices for medical procedures, dictating the content of insurance policies, or passing judgement on what consumers should be able to buy--has either raised costs or reduced quality. In Canada, managed care provided by provincial governments has caused irreparable damage to health care. There is no evidence to suggest that governments in the U.S. can do any better.

In simple justice to their constituents, Colorado lawmakers should follow the rule of Hippocrates: first, do no harm.

Table 1: Estimates of the percentage of people covered by health insurance from three surveys.

Percent of people covered by type of insurance	All persons	By Age in Years			
		<25	25-44	45-64	>64
Private or Government:					
CPS	86.6		83.7	84.2	88.5	99.1
SIPP/L	93.3		91.3	92.6	94.1	99.9
SIPP/Q	86.8		82.9	85.2	89.2	99.5
Private:					
CPS	75.5		68.4	77.3	80.6	68.4
SIPP/L	85.1		80.8	87.6	88.9	85.5
SIPP/Q	76.4		71.2	78.6	82.5	77.0
Medicaid:					11
CPS	8.4		13.4	5.3	4.5	8.4
SIPP/L	9.1		14.1	6.1	4.8	9.1
SIPP/Q	7.4		10.6	5.0	4.1	8.8
Uninsured:					
CPS	13.4		16.3	15.8	11.5	0.9

SIPP/L	6.7	8.7	7.4	5.9	0.1
SIPP/Q	13.2	17.1	14.8	10.8	0.5

Source: Kathleen Short. 1992. *Health Insurance Coverage: 1987-1990 (Selected Data From the Survey of Income and Program Participation)*. U.S. Bureau of the Census. Current Population Reports, Series P-70, No. 29. U.S.

Table 2: A comparison of estimates of the percentage of the U.S. population without health insurance.

	Census CPS estimate of percent uninsured in Colorado	Coalition for Health Care Access CPS estimate of percent uninsured in Colorado	Census estimate of percent uninsured nationally based on point-in-time SIPP
Year			
1985			14.8
1986			14.4
1987			13.8
1988			12.8
1989	13.6 (1.4)		13.0
1990	14.7 (1.4)	15.3	13 (0.5) (fourth quarter)
1991	10.1 (1.2)		

Sources: Census CPS estimates for Colorado via the Governor of Colorado's office. Coalition numbers from *Colorado Health Source Book: 1991-1992*. Census estimates using SIPP from Table 153 of the *Statistical Abstract of the United States 1992*, U.S. Government Printing Office and Short, 1992, *Health Insurance Coverage: 1987-1990*, U.S. Bureau of the Census, Current Population Reports, Series P-70, No. 29, Table 2, page 20.

Table 3: A comparison of the uninsured population by age in Colorado and the

Colorado Coalition for Health Care Access's Estimate of Percent Uninsured in Colorado By Age, 1991.*		SIPP/Q Estimate of Percent Uninsured in U.S. Monthly Average October to December 1990.	
Age	Percent	Age	Percent
Under 6 years	20.0	<16 years	13.8
6-17	16.5	16-24	21.9
18-24	24.3	25-34	17.0
25-54	15.7	35-44	12.1
55-64	10.2	45-54	11.4
>64 years	0.7	55-64	10.5
		>64	0.3

*Note that the overall population estimate of uninsured may have been for 1990. See text for details.

Source: Coalition estimates from Heitler and Yondorf. 1992. *Colorado Health Source Book: 1991-1992,* The Colorado Trust, Denver, Colorado, Chart 3. SIPP/Q estimates from Short. 1992. *Health Insurance Coverage: 1987-1990 (Selected data from the Survey of Income and Program Participation)*, U.S. Bureau of the Census. Current Population Reports, Series P-70, No. 29. U.S. Government Printing Office, Washington, D.C., Table 1, p. 19.

Table 4: The duration of spells without health insurance; evidence from the SIPP.

Duration of Uninsured Spell	Percent of All Observed Uninsured Spells (n=10,321)
5 months or less	48
6 to 9 months	16
10 to 13 months	8
14 months to 24 months	9

Source: Katherine Swartz, John Marcotte, Timothy D. McBride. 1993. "Spells Without Health Insurance: The Distribution of Durations When Left-Censored Spells Are Included," *Inquiry*, **30**, Spring, p. 77. The data are from the 1984 SIPP.

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Endnotes

1. Michael Fumento. 1993. *Science Under Siege*. An important book for general audiences that shows how various interest groups have manipulated and misstated statistical research on health and the environment to advance their agendas.

2. Kathleen Short. 1992. *Health Insurance Coverage: 1987-1990 (Selected data from the Survey of Income and Program Participation)*. U.S. Bureau of the Census. Current Population Reports, Series P-70, No. 29. U.S. Government Printing Office, Washington, D.C.

3. Short. 1992. *Health Insurance Coverage: 1987-1990*, p. 17.

4. Short. 1992. *Health Insurance Coverage: 1987-1990*. Short attributes this argument to Katherine Swartz in "How Different are Four Surveys' Estimates of the Number of Americans Without Health Insurance," Project Report, Urban Institute, 1984.

5. "Probably" can be quantified as follows. When deriving an estimate from a sample, statisticians use the rules of statistics to compute the standard error of the estimate. The standard error is designed so that if one were to add and subtract one standard error from the estimate, that interval would contain the true estimate of the population about 68 percent of the time. Adding and subtracting 1.6 times the standard error would include the true estimate about 90 percent of the time, and adding and subtracting 2 times the standard error would create an interval containing the true value about 90 percent of the time. Technically, the idea is that if one could survey all possible samples from a population and calculate the estimate and its standard error for each of them, then 68 percent of the intervals calculated by adding and subtracting one standard error would contain the true population value.

6. Governor's Office, State of Colorado. August 1992. *Colorado's Health Care Action Plan: From Concept to Solution,* unpublished manuscript, p. 1.

7. In recent years some cross-sectional surveys have found that the percentage of the national population without health insurance has been increasing. Short finds that the percentage of those with insurance was stable in 1989-90 although she suggests that more evidence is needed to confirm stability.

8. CPS estimates for Colorado were kindly provided by the Governor's office.

9. Population estimates from the Colorado Division of Local Government.

10. Katherine Swartz, John Marcotte, and Timothy D. McBride. 1993. "Spells Without Health Insurance: the Distribution of Durations When Left-Censored Spells Are Included," *Inquiry*, 30,

(Spring), 77-83.

11. Katherine Swartz, John Marcotte, and Timothy D. McBride. 1993. "Personal Characteristics and Spells Without Health Insurance," *Inquiry*, 30, Spring, 64-76.

12. Patricia M. Danzon. 1993. "Health Care Industry," *Fortune Encyclopedia of Economics*, Warner Books, New York. p. 677.

13. Reported by Greg Steinmetz. 1993. "Number of Uninsured Stirs Much Confusion in Health-Care Debate," *The Wall Street Journal*, June 9, p. 1.

14. John C. Goodman. 1993. "Health Insurance," *The Fortune Encyclopedia of Economics*. Warner Books, New York, p. 686.

15. Goodman. 1993. "Health Insurance," p. 687.

16. Two highly recommended books on the subject for the lay reader are Joseph L. Bast, Richard C. Rue, and Stuart A. Wesbury, Jr. 1992. *Why We Spend Too Much on Health Care.* Chicago: The Heartland Institute, and Terree P. Wasley. 1992. *What Has Government Done to Our Health Care?* Washington, D.C.: The Cato Institute. Excellent surveys of the academic literature on the subject are Mark V. Pauly. June, 1986. "Taxation, Health Insurance, and Market Failure in the Medical Economy." *Journal of Economic Literature*, vol. 24, pp. 629-675 and Burton A. Weisbrod. June 1991. "The Health Care Quadrilemma: An Essay on Technological Change, Insurance, Quality of Care, and Cost Containment," *Journal of Economic Literature*, vol. 29, no. 2, pp. 523-552.

17. George J. Stigler. "The Government of the Economy." Reprinted in *Principles of Microeconomics: Readings, Issues, and Cases, 2nd ed.* Edited by Edwin Mansfield. New York: W.W. Norton & Company, Inc. p. 32.

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