

HEALTH CARE COST CONTAINMENT

HEARING
BEFORE THE
COMMITTEE ON FINANCE
UNITED STATES SENATE
ONE HUNDRED THIRD CONGRESS
SECOND SESSION

—————
MARCH 10, 1994
—————



Printed for the use of the Committee on Finance

—————
U.S. GOVERNMENT PRINTING OFFICE

84-614-CC

WASHINGTON : 1994

For sale by the U.S. Government Printing Office
Superintendent of Documents, Congressional Sales Office, Washington, DC 20402
ISBN 0-16-046668-7

S361-7.

COMMITTEE ON FINANCE

DANIEL PATRICK MOYNIHAN, New York, *Chairman*

MAX BAUCUS, Montana	BOB PACKWOOD, Oregon
DAVID L. BOREN, Oklahoma	BOB DOLE, Kansas
BILL BRADLEY, New Jersey	WILLIAM V. ROTH, Jr., Delaware
GEORGE J. MITCHELL, Maine	JOHN C. DANFORTH, Missouri
DAVID PRYOR, Arkansas	JOHN H. CHAFFEE, Rhode Island
DONALD W. RIEGLE, JR., Michigan	DAVE DURENBERGER, Minnesota
JOHN D. ROCKEFELLER IV, West Virginia	CHARLES E. GRASSLEY, Iowa
TOM DASCHLE, South Dakota	ORRIN G. HATCH, Utah
JOHN B. BREAU, Louisiana	MALCOLM WALLOP, Wyoming
KENT CONRAD, North Dakota	

LAWRENCE O'DONNELL, JR., *Staff Director*

LINDY L. PAULL, *Minority Staff Director and Chief Counsel*

CONTENTS

OPENING STATEMENTS

	Page
Moynihan, Hon. Daniel Patrick, a U.S. Senator from New York, chairman, Committee on Finance	1
Packwood, Hon. Bob, a U.S. Senator from Oregon	2

COMMITTEE PRESS RELEASE

Finance Committee Sets Hearing on Health Care Cost Containment; Former HEW Secretary Califano to Testify	1
---	---

PUBLIC WITNESSES

Califano, Hon. Joseph A., Jr., chairman of the board and president, Center on Addiction and Substance Abuse, Columbia University, and former Sec- retary of Health, Education and Welfare, New York, NY	3
Goodman, John C., Ph.D., president, National Center for Policy Analysis, Dallas, TX	30
Shapiro, Robert J., Ph.D., vice president, Progressive Policy Institute, Wash- ington, DC	31
Zuckerman, Stephen, Ph.D., senior research associate, Health Policy Center, the Urban Institute, Washington, DC	34

ALPHABETICAL LISTING AND APPENDIX MATERIAL SUBMITTED

Califano, Hon. Joseph A., Jr.:	
Testimony	3
Prepared statement with attachment	49
CASA study	63
Durenberger, Hon. Dave:	
Prepared statement	105
Goodman, John C., Ph.D.:	
Testimony	30
Prepared statement	106
Hatch, Hon. Orrin G.:	
Prepared statement	115
Packwood, Hon. Bob:	
Opening statement	2
Moynihan, Hon. Daniel Patrick:	
Opening statement	1
Shapiro, Robert J., Ph.D.:	
Testimony	31
Prepared statement	115
Zuckerman, Stephen, Ph.D.:	
Testimony	34
Joint prepared statement	120

HEALTH CARE COST CONTAINMENT

THURSDAY, MARCH 10, 1994

U.S. SENATE,
COMMITTEE ON FINANCE,
Washington, DC.

The hearing was convened, pursuant to notice, at 10:06 a.m., in room SD-215, Dirksen Senate Office Building, Hon. Daniel Patrick Moynihan (chairman of the committee) presiding.

Also present: Senators Baucus, Bradley, Pryor, Riegle, Daschle, Breaux, Conrad, Packwood, Dole, Roth, Chafee, Durenberger, and Grassley.

[The press release announcing the hearing follows:]

[Press Release No. H-15, March 4, 1994]

FINANCE COMMITTEE SETS HEARING ON HEALTH CARE COST CONTAINMENT; FORMER HEW SECRETARY CALIFANO TO TESTIFY

WASHINGTON, DC.—Senator Daniel Patrick Moynihan (D-NY), Chairman of the Senate Committee on Finance, announced today that the Committee will continue its examination of health care issues with a hearing on cost containment measures in proposed health care reform legislation. Former Health, Education and Welfare Secretary Joseph A. Califano, Jr. is scheduled to testify.

The hearing will begin at 10:00 a.m. on Thursday, March 10, 1994 in room SD-215 of the Dirksen Senate Office Building.

"The Committee will explore the ways in which various reform plans propose to control health care costs," Senator Moynihan said in announcing the hearings. "The witnesses will discuss alternative approaches to controlling health care costs including those that primarily rely on competitive market forces, and those that primarily rely on regulatory mechanisms such as premium caps."

OPENING STATEMENT OF HON. DANIEL PATRICK MOYNIHAN, A U.S. SENATOR FROM NEW YORK, CHAIRMAN, COMMITTEE ON FINANCE

The CHAIRMAN. A very good morning to our distinguished witnesses and our welcome guests. We continue our hearings on health care and come to perhaps the central issue that brings the matter forward in such a prominent way, which is that of cost containment. The perception, real or otherwise, of the fact that health care costs have grown at quite extraordinary rates, particularly in the 1980's, and the question of whether they will continue to do so.

I should say to our most distinguished former Secretary of Health, Education and Welfare, Hon. Joseph A. Califano, Jr., that we have heard somewhat dissenting views from persons such as Dr. Paul Ellwood who has said to us, no, it appears that management attention to this question in recent years has begun to show positive effects. Cost increases have not been as dramatic as they were. There is the specific case that CALPERS, the huge purchas-

ing cooperative in California, has negotiated a premium decrease for the first time, I suppose, ever; and there are views on both sides.

But we are most particularly interested in hearing your views, because you were involved with Medicare and Medicaid at the outset, when you were a distinguished White House assistant to President Lyndon Johnson. You have described, to the edification of New Yorkers, the degree to which President Johnson assured the then-Chairman of the Committee on Ways and Means, Wilbur Mills, that none of this money was going to go up north. It was all going to go down to take care of mommas and babies in the Mississippi Valley.

You were assured by such luminaries of our past as Wilbur Cohen that it would all cost about \$60 million a year, something like that. So you have not only seen the enactment of these programs, you have managed them as a Cabinet officer, and are hugely welcome to our committee this morning.

Senator Packwood?

**OPENING STATEMENT OF HON. BOB PACKWOOD, A U.S.
SENATOR FROM OREGON**

Senator PACKWOOD. It is good to have the Secretary back. It is sort of a back-to-the-future appearance. I can remember Secretary Califano appearing here in 1978 or 1977 or 1979 on President Carter's cost containment bill and as I recall—Joe, correct me if I am wrong—we had so many subsections of that bill that we ran out of our alphabet and were using Greek alphabet letters for the indent subparagraph, indent subparagraph as I recall.

You know, when the Director of the Budget, Dr. Reischauer, testified here, it was not a very encouraging appearance, not because he said anything wrong. He was very forthcoming. But he said of the President's plan if it works right, if everything goes well, then what we spend on health care will only go from 14 to 19 percent of our gross national product if everything goes well. Otherwise, we would spend 20 percent.

I think a number of members of the committee thought, well, that is a silver lining, to drop it from 20 to 19 percent but go up from 14 percent, we did not regard that as very encouraging. And, therefore, and especially based upon what the Chairman said about our Medicare and Medicaid numbers from 30 years ago and how little they were going to up and how wrong we were, I think we just ought to be very wary of any government projections as to what this is going to cost.

Second, Dr. Ellwood was quite good when he backed off a bit of his position on a mandate and he has said he has seen so much reform in the last year and a half or 2 years in the private sector in pushing costs down that he was a little wary himself of getting into any massive new government program that we are not too sure of.

He wondered if we should not be a little bit cautious in moving in. So I say that just with a bit of caution to you I have a high regard for you and have had for as long as I have known you, and I know of your background in this subject, and the tremendous work you have done with Chrysler in attempting to get costs down.

I do not think, Mr. Chairman, we could have better witness and I am delighted to have him back before us again.

The CHAIRMAN. We certainly are.

Senator Baucus?

Senator BAUCUS. No comment. Thank you, Mr. Chairman.

The CHAIRMAN. Senator Grassley?

Senator GRASSLEY. No comments, Mr. Chairman.

The CHAIRMAN. Senator Breaux?

Senator BREAUX. No comment, Mr. Chairman.

The CHAIRMAN. Senator Durenberger?

Senator DURENBERGER. Just happy to see Joe.

The CHAIRMAN. They want to hear you, sir. Proceed exactly as you like. I see Ms. Reid, your assistant, is with you and we welcome you to the hearing.

STATEMENT OF HON. JOSEPH A. CALIFANO, JR., CHAIRMAN OF THE BOARD AND PRESIDENT, CENTER ON ADDICTION AND SUBSTANCE ABUSE, COLUMBIA UNIVERSITY, AND FORMER SECRETARY OF HEALTH, EDUCATION AND WELFARE, NEW YORK, NY

Mr. CALIFANO. Mr. Chairman, I am delighted to be here. This is one of the great committees of the U.S. Senate and the Congress and you are a great Chairman.

I would like to submit my entire statement for the record.

The CHAIRMAN. It will be placed in the record and you proceed exactly as you would like.

Mr. CALIFANO. I will read a summary of it, if I may.

The CHAIRMAN. Sure.

[The prepared statement of Mr. Califano appears in the appendix.]

Mr. CALIFANO. It is a privilege to be invited to testify before you this morning. This distinguished committee, Mr. Chairman, has been at the forefront of efforts to make our Nation's health care system and shape it.

President Clinton has put the goal of universal coverage on the front burner of the nation's consciousness. The challenge is to achieve that goal with sound financing and cost containment. And as a White House assistant in the Johnson years, Secretary of HEW in the late 1970's, and the Chair of the first two Board Committees of Health Care Fortune 500 companies, I have struggled with health care policy matters for 30 years.

I have been surprised and bruised by the unintended consequences of well-intentioned reforms, including several of my own.

You asked me to focus my attention, Mr. Chairman, on universal coverage and cost containment. For historical and practical reasons, I believe an employer mandate is an important component of any reform that aims to fulfill these goals.

Such a mandate would capitalize and build on some of the best elements of our existing system. And virtually all nations with universal coverage have built on their existing systems. Great Britain's scheme of national health enacted in 1946 did not stem from an infatuation with socialist principles.

At the time, just after the end of World War II, almost every doctor and nurse in England was in the military and on the govern-

ment payroll. The government had taken over the nation's voluntary hospitals, which had collapsed under the weight of war casualties. After the war ended, the British Parliament simply legislated the status quo.

Similarly, the German system of universal coverage was built upon worker guilds and sickness funds that performed a role not unlike the role employers and health insurers play in the United States today.

The American link between health benefits and employment dates back to World War II. The war sparked research that produced wonder drugs like penicillin and dramatic advances in surgery and dazzled by the miracles of modern medicine patients wanted access to them.

At the same time, war time employers scrambled to attract scarce workers, the War Labor Board held the line on pay hikes but allowed increases in fringe benefits and health insurance quickly became the premier fringe.

The number of Americans in group hospital plans bolted from less than 5 million in 1941 to 26 million by the end of the war. In the 1950's and the 1960's, powerful unions and large corporations made health insurance and health coverage an integral part of the employment relationship.

Since then, three American Presidents—Richard Nixon, Jimmy Carter, and Bill Clinton—independently concluded that any scheme of universal coverage should be built on the existing American system in which some 60 percent of Americans, workers and their dependents, receive health insurance through their employment.

Each of the President's plans would require employers to provide a basic package of health care benefits to their employees, what I would call a minimum health care bill, similar to the minimum wage bill.

Congress can establish the mandate among large employers and gradually extend it to small businesses. If necessary, helping them with subsidies or tax credits to ease their burden and encourage them to form cooperatives to increase their purchasing power.

The history of the minimum wage, Mr. Chairman, with which you are familiar provides a telling precedent. In 1938 Franklin Roosevelt convinced Congress to enact the minimum wage. Initially the law covered only 11 million workers, a fifth of the total labor force. Of those who were covered, only 300,000, less than 3 percent, were then making less than the new minimum wage of 25 cents and hour.

Not until 1966 when Lyndon Johnson persuaded the 89th Congress to act—and you were in the Labor Department then I think, Mr. Chairman—was the law extended to cover nearly all retail and trade employees and for the first time agricultural workers.

Congress could follow a similar tact today by phasing in over a much shorter period, less than 10 years, a minimum health care plan.

Why is the employer mandate key to any reform? First, it builds on a part of the existing system that by in large is working well. Second, it enlists the ingenuity of thousands of businessmen and women to help keep health care costs down. Third, it draws a line of clear responsibility that will slow the game of hot potato econom-

ics now being frenetically played among those who pay for health care with the feds and States and business trying to pass the hot potato of costs to one another.

The employer mandate keeps some costs off the Federal budget and puts them into everyday life throughout our systems of Commerce as part of a fair wage and the purchasing decisions Americans make. The mandate would end the present lopsided shift of costs to employers with more than 100 workers.

The rhetoric of impassioned opposition to a mandate echoes earlier battles. Before the passage of the minimum wage in 1938, business leaders warned that it would lead the country to a tyrannical industrial dictatorship. They charged that Franklin Roosevelt's argument for mandated wage was like "the smoke screen of the scuttle fish," a cover for his plot to promote socialist planning.

Some opponents asked how business could "find any time left to provide jobs if we are to persist in loading upon it these everlasting, multiplying government mandates?"

In fact, American business adjusted, just as it did after passage of the Occupational Safety and Health Act, after passage of State laws mandating standards of cleanliness in restaurants and smoke-free space in enclosed areas, and after passage of Federal laws mandating safety standards for automobiles and access for the disabled.

We should not underestimate the ingenuity of American business and for this reason I would urge that employers be given freedom to bargain for and provide health insurance as they see fit, directly through managed care plans or fee-for-service doctors, from traditional insurers or new networks of health care providers.

American corporate executives are not inhibited by the political constraints often imposed on government agencies to protect special interests and they have made progress in making the health care system more efficient. They have, in recent years, been using their bargaining power to force doctors and hospitals to cut prices, eliminate excess capacity, reduce unnecessary tests.

They have squeezed deep discounts from pharmaceutical companies. And the response to their demands is rapidly changing the delivery of American health care independent of any action taken by the Congress. Hospitals, doctors, HMOs, long-term care facilities and insurers are organizing themselves into networks to deal directly and more efficiently with corporate purchases of care.

Indeed, these churning combined with the generally low inflation and political pressures slowed the pace of inflation in medical care prices last year to 5.4 percent. That is the lowest rate of increase since President Nixon's wage and price controls were in effect on the health care industry in 1973.

I think a mandate would capitalize on these healthy trends and I am for it. America's health care system is buffeted by some overarching problems that require the attention of Congress if every American is to have access to affordable care. I would like to illustrate that with one, substance abuse and addiction, which has an enormous impact on the Medicare and Medicaid programs.

Without an all fronts attack on substance abuse and addiction efforts to provide every American with the care he or she needs at a reasonable cost are doomed to failure. Substance abuse and ad-

diction accounts for at least \$140 billion, perhaps as much as \$200 billion of the \$1 trillion we will spend on health care this year.

There are 54 million Americans hooked on cigarettes and another 8 million on smokeless tobacco. More than 18 million are addicted to alcohol or abuse it. Some 12 million abuse legal drugs, such as tranquilizers, amphetamines and sleeping pills; 6 million regularly smoke marijuana and the number of high school students smoking pot is on the rise; 2 million use cocaine weekly, including at least .5 million addicted to crack. Up to a million are hooked on heroine and the number is rising. About 1 million, half of them teenagers, use black market steroids.

Substance abuse and addiction cause or exacerbates more than 70 conditions requiring hospitalization, complicates the treatment of most illnesses, prolongs hospital stays, increases morbidity and sharply raises costs. Half the nation's hospital beds hold victims of substance abuse and addiction.

More Medicare patients are hospitalized for alcohol-related problems than for heart attacks. The Center on Addiction and Substance Abuse at Columbia University, which I head, has found that at least one of every \$5 Medicaid spends on in-patient hospital bills can be traced to this substance, a cost of \$8 billion this year, Mr. Chairman.

I provided several copies of the CASA study and I would ask, Mr. Chairman, if it could be made a part of the record.

The CHAIRMAN. It will be so made.

[The study appears in the appendix.]

Mr. CALIFANO. Thank you.

The numbers in the study are low for the reasons mentioned in my statement. I commend the President for including coverage of substance abuse in his reform proposals and I would urge you to expand that coverage along the lines described in the attachment to my testimony.

After-care, as well as treatment, should be included in a package of benefits. Addiction is a chronic disease. It is more like diabetes and high blood pressure than a broken arm or pneumonia, which can be fixed in a single round of therapy.

The proposal to increase the excise tax on cigarettes is an especially important component of reform. Today I am releasing for the first time an analysis by the Center on Addiction and Substance Abuse at Columbia University, which reveals the link between cigarette smoking by 12 to 17 year olds and the use of hard drugs.

For too many children these cigarettes are a drug of entry into the world of hard drugs. CASA's analysis reveals that 12 to 17 year olds who smoke cigarettes are 12 times more likely to use heroine than those who have never used cigarettes, 51 times more likely to use cocaine, 57 times more likely to use crack, and 23 times more likely to use marijuana.

Those 12 to 17 year olds who smoke than a pack of cigarettes a day are 51 times more likely to use heroine than those who have never used cigarettes; 106 more times likely to use cocaine; 111 times more likely to use crack; and 27 times more likely to use marijuana.

Congress should increase the cigarette tax by at least \$2 a pack. The higher price would put cigarettes beyond the means and lunch

money of most elementary and high school students. Virtually no one starts smoking after they are 21 years of age; and the Food and Drug Administration, just a couple of weeks ago, reported, "It is our understanding that manufacturers commonly add nicotine to cigarettes to make them more addictive."

The combined impact of manufacturers spiking their cigarettes with nicotine to calibrate their addictive power and the fact that just about everyone who smokes gets hooked as a teen makes a higher tax not only an immediate revenue raising and cost containment measure, but an essential public health initiative to protect our children from being abused by these companies.

Finally, Mr. Chairman, universal health insurance will not be achieved solely by measures like these. For the poor, the old and the unemployed, the vulnerable individuals in our society, we must look to the common Treasury, whether through a Federal effort, say, by expanding Medicare or by an expansion of the federal/State partnership of Medicaid or by some other means, the taxpayers who have should pay for the poor who have not.

Mr. Chairman, you and I have struggled with this problem since the Kennedy Administration. President Clinton has created a once in a life time opportunity to enact comprehensive reform to bring equity and efficiency to American health care. I hope you and your committee will seize this opportunity.

I would urge that the members of this committee, as you are pressed on every side by powerful payers, providers and politicians with high financial stakes in the health care pot, not to lose sight of the patients and to remember that at its core health care is a ministry and not an industry.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Mr. Secretary. The title is permanent and the qualities are manifest. This was extraordinary testimony.

I would just like to make one point here. We are trying to avoid some of the rhetoric, as you have done; the rhetoric of deprivation and injustice, when we are trying to improve on a system which has had a lot of effort already.

I mean when you said that there are at least 250,000 excess hospital beds that cost the nation some \$10 billion a year, you speak to the provision of hospital beds under the Hill-Burton Act, and advances in medical care which mean that a practice that once required a lot of beds does not do so today.

That is not a bad society that produced an excess of hospital beds. It reflects change and in many cases advance. That is a very important proposal, a \$2 per pack tax on cigarettes. The President has proposed 75 cents and that would produce about \$11 billion a year.

I would think \$2 might produce at least \$15 billion. Your object in the end, of course, is that the cigarette tax produce no revenue. But there is a transition. Would you want to give us a revenue estimate?

Mr. CALIFANO. I think it is about \$15 to \$17 billion.

The CHAIRMAN. About \$15 to \$17 billion.

Mr. CALIFANO. The estimates are about 8 million people would stop smoking.

The CHAIRMAN. About 80 million?

Mr. CALIFANO. Eight million people would stop smoking. We know that as you increase the tax it has a particularly significant impact on young people who smoke.

The CHAIRMAN. As you said.

Mr. CALIFANO. From our experience in California and the experience in Canada. It is also would bring—you know, the Canadians are having to reduce theirs. They raised their tax very high, tremendous impact on people quitting smoking, but tremendous smuggling of cigarettes from the United States to Canada and they have now had to reduce their tax. So they would love it if we would raise our tax; they would raise theirs again.

The CHAIRMAN. It is a nice point. But I think that we can say we are safe in of saying we would get about \$15 to \$17 billion out of it.

Mr. CALIFANO. Yes, sir.

The CHAIRMAN. We will get an estimate.

Just one other thing I would like to ask to see if I read you correctly. The first part of your testimony was very much in harmony, I think other Senators would agree, with testimony we have been getting about management becoming aware of medical costs, as it has become aware of the cost of raw materials and such things as that.

I take it that you are saying the increase in health prices has dropped to 5.4 percent and that you basically do not propose non-competing alliances. You say: "I urge you to give employers freedom to bargain for and provide health insurance as they see fit, directly through managed care plans or fee-for-service doctors, from traditional insurance or new networks of health care providers."

You would let this be an open system?

Mr. CALIFANO. Absolutely, Mr. Chairman. I must say, I do not think a large single alliance or these large alliances will work. The reality of programs like that just our history tells us, they quickly become politicized. The certificate of need program became politicized within a year.

Actually, I was in Florida during Christmas week and the December 28th Miami Herald, you might want to have your staff get it, the lead story—Florida just adopted an alliance system—the lead story in the right-hand corner was the battle between the Governor, the Speaker of the House and the Leader of the Senate over who was going to sit on the alliances.

And last, they are rarely efficient because government is constantly subjected to pressures that an American corporate manager is not subjected to. I think that is the reason we are seeing Medicare and Medicaid rising more rapidly than health care in the private sector.

The CHAIRMAN. That is a nice point. Senator Danforth—he is not here, but he would not mind my quoting him—told about a town meeting during which some lady who had a particular medical condition stood up and said, will that be in the benefits package. He said, I am happy to be able to tell you that decision will be made by a board in Washington and not by any of us. I said will not the day come when that lady the next time you are there stands up and says, will you vote to appoint a member of that board who will

put this condition on the list. And, of course, that pattern is familiar to us all.

My time is up. Senator Packwood?

Senator PACKWOOD. Mr. Chairman, I only have one question.

On page 8 of your testimony you say employers should remain active in helping keep costs down. Under President Clinton's plan, of course, the employer really does not have any incentive. The money goes to the alliance and the alliance may or may not keep the cost down, but the employer once he or she has made the payments is out of it.

I take it you would like to keep the employers involved in having a financial stake in getting these costs down if they can.

Mr. CALIFANO. I think it is very important to give them a financial stake because I think that works it into the system and that gives them a tremendous incentive, both to hold costs down and to provide health care plans that will make employees happy.

I think in terms of the smaller employer you have to phase it in over time. You will have to make various kinds of arrangements. But, you know, every time something like this has been mandated, we have always said what we heard going in—I mean, I cited the minimum wage quotes. We could have attached 20 pages of quotes like that.

By and large American business knows how to work these things into the system and how to do it efficiently. I think they were asleep. I will tell you a story, when I was Secretary in 1978, early 1978, I brought down the Chairman of—I invited the Chairman of IBM, who I think was John Opel and the Chairman of GM, Jim Roach, Irving Shapiro from Dupont, the Chairman of Kodak into HEW and we gave them a briefing on health care costs.

I thought it was a terrific briefing. And Hale Champion was there, my Under Secretary who you know, Mr. Chairman. I said you guys have got to get into this. You can do something about it. They left and I said was it not great and Hale said, "It was terrible. You know, you did not make a dent on them." It went right through them. It was not on their radar screen. Now it is on their radar screen.

I went on the Chrysler Board because Lee Iacocca said, we cannot turn the company around unless we deal with health care costs. And Chrysler has had tremendous success in dealing with health care costs.

An employer mandate would turn a lot of heads to it. You know, you are talking about an army of literally hundreds of thousands of people who will be interested in making the health care system more efficient if you have a mandate. I would give them the freedom to do it however way they want to.

Senator PACKWOOD. Do you think we ought to pick up all or a portion of the cost of the health care costs for those who will retire at age 55 to 65?

The CHAIRMAN. I think he has a conflict of interest.

Mr. CALIFANO. Thank you. [Laughter.]

Senator PACKWOOD. Well, I did not know if he still did or not.

Mr. CALIFANO. Thank you. I know that Chrysler would love that. But I think you have to weigh that with all the other priorities you have to deal with and you weigh that against care for the poor and

you do not have enough money to take care of people that have nothing, I mean, I would obviously opt for poor people.

Senator PACKWOOD. Thank you, Joe, very much. It was excellent testimony. I appreciate it.

The CHAIRMAN. It was extraordinary testimony and just a beginning.

Senator Baucus?

Senator BAUCUS. Thank you, Mr. Chairman.

Mr. Secretary, I am just concerned about what I see as a disparity between medical inflation on the one hand and overall health care spending on the other. Basically, the 1980's, beginning in 1987 up through 1993, the number of times by which medical inflation exceeded regular inflation is 1.8 percent, that is almost twice, from 1987 to 1990. In 1991 it is two times regular inflation and 1992 2.5 times, and 1993 twice.

Now you mentioned the figure 5.4 percent, which is the 1993 increase in medical inflation. Regular inflation is about 3 percent, so 5.4 is about twice regular inflation.

Now the problem is that there is another figure here. That is, in addition to medical inflation and regular inflation what about overall health care spending? In 1987 overall health care spending grew by 10.5 percent and that has consistently risen slightly. In 1992-93 it grew by 12 percent and in 1994 it is projected to grow by 12.5 percent.

So if employers, large employers particularly, are getting some control over their spending as a firm and if medical inflation is down to 5.4 percent, what explains the rising increase in overall health care spending?

One could say that perhaps part of it is that employees are picking up more of it than before. Someone else might say that, well, the additional employees are picking up more. Doctors, even though they are not charging as much, are providing more services than they used to. That might partly explain why even though prices are down health care spending is not.

I am just concerned that if we have an employer mandate, then a lot of employers, because spending is going up generally, particularly for small business, will find themselves paying a lot more for health care.

I was wondering then, why not have a premium cap? Under the President's premium cap, we are not reducing health care spending, we are just reducing the rate of increase. And according to CBO, under the President's premium cap, health care spending would not rise to 18 percent of GDP by the year 2000, but instead only grow to 17.3 percent by the year 2000.

So I am just trying to get a handle on the disparity between medical inflation, which seems to be somewhat controlled on the one hand, but overall health care spending which is still a problem on the other. If there is a mandate, don't we need some kind of premium cap, some way to give businesses and individuals some comfort that they are not going to be forced to pay more and more?

Mr. CALIFANO. I guess I would say, one, we have to recognize that there are some over arching trends in this country that whatever law you write on just financing and delivering care is not likely to affect. I mean, the country is aging rapidly and that is in-

creasing costs. There is a tremendous explosion in technology and most biomedical experts will tell you there is even a greater explosion coming over this decade.

When somebody is sick, you know, I am sure you have too—since I have been Secretary I am sure I have been called over 100 times for somebody to recommend a doctor when they were sick or their wife or their child or their brother. Nobody ever asked me how much the doctor cost.

So you have that operating here and I think actually my own view is, the problem I think with premium caps over time is, it will be like Medicare and Medicaid. It will be very hard to control because the political pressures will be enormous and employers are likely in the real world to do a better job of controlling those costs if you give them plenty of freedom to figure out how.

Because if you look at the other two pieces of health care, the public programs are still rising much more rapidly than the private programs. Now why? Part of it is that they are dealing with poor people who have more serious diseases and come in at a later point.

But part of it is also because they cannot enter into the kind of competitive bidding processes. They have difficulty imposing second opinion and the kinds of screens that the private sector just imposes.

Senator BAUCUS. I misspoke. When I said 12.5 percent of GDP I really meant to say 12.5 percent increase over the preceding year. That is health care spending is increasing at an increasing rate, averaging about 12.5 percent even though medical inflation, as you say, is down a bit, and even though employers, particularly for large companies, are able to control.

I am just concerned frankly, if you take a small business person, if there is no premium cap, that he or she is going to be paying a lot more given the data. Thank you.

The CHAIRMAN. Thank you, sir.

A question we have addressed, Mr. Secretary, is that if you have a premium cap, once an employer has reached it, there is no longer any concern about what overall costs are. Is that not right?

Mr. CALIFANO. I think that is a fair statement, Mr. Chairman.

The CHAIRMAN. Senator Grassley?

Senator GRASSLEY. Thank you very much for your testimony. You have done a pretty good job of laying out the unintended consequences of earlier reforms. I think you wrote well about that in the Washington Post article earlier this year. Well, no, last April it was, not this year.

Based upon all your experience with this and looking at it over a long time, do you have any advice for us based on this experience on a time line that we should adopt for reform is slowly and carefully and carefully the best way to proceed? I suppose that is maybe an obvious answer. But the alternative would be, do we have to move ahead quickly as soon people propose while the support, and I suppose that is more political support, particularly if the grass roots for doing something very comprehensive is still there.

Mr. CALIFANO. Well, I think in some areas it is important to provide coverage rapidly. I mean, I think the problems we have now

in emergency rooms with people that do not fit into the categorical eligibilities for Medicaid under the AFDC system or what have you, not being able to get care, holding off, not going for care until they have more extreme diseases and in effect cost the system more money.

I think there I would tend to move rapidly because if we can cover those poor people and get them to go get the care—we have to do that, too—then I think we would have an impact on costs at the same time.

In moving broadly with a mandate, I would phase it in over a few years. I would not do it overnight. And I think we have to recognize that we have to provide a way for small business to get the kinds of prices that large business can get, either by giving them encouragement in subsidies or tax credits or what have you to join together and form cooperatives. But I would rather see lots of cooperatives than just one.

Senator GRASSLEY. There are some areas, like in the area of risk adjustment or the assessment of quality in health care, and these are just two examples, where we are probably not completely ready to do certain things that we must be able to do before some of these reform plans would really be able to work as they are assumed to work.

It seems to me that we have to tailor the pace of reform to our ability to do these things because in some of these plans, at least these two are very essential elements, at least if we adopt a reform plan that would require those elements, would you agree or would you have a comment?

Mr. CALIFANO. I am not sure. I mean, I think on standards of care, if I understand the question, I think doctors are developing standards of care, experts in various specialties, cardiovascular experts, cancer experts, neurologists and what have you, I think there if we could make those standards of care in effect binding on our legal system so that we could reduce the malpractice problem, we would have a significant—we are talking about saving in my judgment billions of dollars. If a doctor followed the standards of care, he would be held free from liability.

I mean, I think there is no question we have been surprised again and again as we reform the health care system. I mean, we have moved around this table. Senator Breaux said to me when I was coming in he remembers when Russell Long and I solved a lot of these problems.

I would go carefully. But I think you have to recognize there is an element here of social justice and the element of social justice is that there are—which happens to coincide with cost savings—there are poor people out there that are not getting anything. And if we could get them something and encourage them to get care at an earlier stage, we would be much better off.

Senator GRASSLEY. You put this \$200 billion figure on alcohol and drug abuse. I wonder if you can go further in the sense that Dr. Sullivan went further and he has written or testified to the extent that there could be \$300 billion of costs from the total social health-related problems.

Would you be able or willing to make some sort of guesstimate on the aggregate health care costs that are attributable to our so-

cial problems, and including not only what you described in your statement, but violence, teen pregnancies, et cetera?

Mr. CALIFANO. Oh, I think that \$300 billion figure would be low. If you think about alcohol, drugs, pills and tobacco it is enormous health care costs which I mentioned. We tremendous costs in the criminal justice system, in the foster care system as you say, the teenage pregnancy system.

Cigarettes alone cost this country \$2 billion a year in Social Security disability payments for people that are disabled as a result of smoking, surviving with bad hearts and lung cancer and what have you. The security systems, I mean think about this, 20 years ago the security business in the United States was a billion dollar a year business. Last year it was a \$52 billion a year business.

Now most of that security, as those of us who live in cities know, is a function of the fear of theft and what have you from drug addicts. So it is a massive cost to our systems.

Senator GRASSLEY. Thank you, Mr. Califano.

The CHAIRMAN. Thank you, Senator Grassley.

Senator Breaux, do you want to recall some of those days when we fixed this system up?

Senator BREAUX. Russell said I did not need to come to the Senate, he had solved all the problems already.

I thank Secretary Califano for being with us and for your continuing contribution to this process. You do not have to be in a public office or in a Cabinet to continue to be involved in finding and helping us find the solutions. We thank you very much for your continuing public service.

One of the concerns that I have raised about the administration's bill is how we address the question of cost of the health care system. The administration says that they principally will rely on competition to get prices under control and that the premium caps that they have in the bill really would not be the principal way of achieving those cost controls.

I am concerned about that. If you look at what has happened, I think over the last 5 years we have averaged about 4.6 percent real cost increase in health care in this country. Countries that have very strict controls like Canada and the United Kingdom have had real cost increases of 3.5 percent per year and 2.5 percent per year.

The Clinton plan proposes to reduce real health spending in the United States to a figure of 1.5 percent real increase in 1996 and zero percent real increase in 1999. My concern is that this has not been achieved in countries that have strict price controls.

Now I am concerned that what is going to happen is that we are going to end up having the premium caps or price controls kick in before we have had a chance to reform the system. I think we ought to reform it and see what kind of results we get before we kick in price controls. I would like your thoughts on that.

Mr. CALIFANO. Well, I would not be inclined personally to rely on price controls.

The CHAIRMAN. Which in our terminology we call premium caps.

Mr. CALIFANO. Premium caps. To rely on the premium caps as a way of saving costs. I think you assume that the premium caps will stick. A whole history of providing health care benefits to our people, whether it is in State Legislatures or U.S. Congress is that

those caps do not stick. They cannot withstand the political pressure.

I think the other thing—I am not familiar with all the assumptions that are in the Clinton plan economic figures. I think I would do this gradually. I mean, I would cover everybody probably within five or 6 years or certainly before the end of the 1990's.

But I would rely more on some of the market forces I had mentioned and I would hope that there could be enough reform in some of the public programs to relieve the administrators of some of these programs of some of the restrictions on them.

Senator BREAUX. You would try and phase in universal coverage in some fashion?

Mr. CALIFANO. I think Congress should be committed to universal coverage. I think overwhelmingly the American people think in the matter of social justice that everybody should have the health care they need. But I think in the real world it will be phased in.

You know, almost 60 percent of our people are covered by the employment relationship and I would lock that coverage in just the way Medicare is locked in for the elderly. I would find a way to cover more of the poor people, take care of the unemployed. I would do the insurance reforms. I think the insurance reforms proposed in the Clinton plan are long overdue.

The CHAIRMAN. Medical malpractice liability.

Mr. CALIFANO. Well, the liability but also the community ratings, the portability, the no prior existing condition coverage things. I mean, I think those things are all important.

I think in the real world we have never had health care reform that cost less or whatever anyone predicted it would cost. Never. So I think history tells you that whatever you pass and whatever you do, it will cost more than you think it is going to cost at the time you pass it.

Senator BREAUX. Let me ask one other question for you to comment on. I appreciate that answer very much.

One way that the Breaux-Durenberger bill tries to get a handle on cost is to try and provide some incentives for people to buy more cost efficient plans.

Currently, as you know very well and all of our members know, an employer has a 100-percent deduction on the premiums that they pay for their employees' health care regardless of the cost. And no matter how much the costs are, that is 100 percent excludable to the employee as income.

So there are no real incentives in the Tax Code to seek out a less costly plan if you can deduct everything and none of it is counted as income. Our approach suggests that we limit the deduction of the employer to the least costly plan in that area that provides the comprehensive coverage to provide an incentive for them to look for plans that cost less, since we are all talking about the same comprehensive coverage.

There are a lot of ways to do this. I am just wondering if you have any comments on that approach.

Mr. CALIFANO. I mean, I think that is one way to do it. My own preference would be to start with the mandate and see how business reacts to that mandate. I think business will really deliver once you mandate it.

Senator BREAUX. That is another very important issue. But what I am asking about is the tax treatment of the plans to the company.

Mr. CALIFANO. I understand that. I would leave the tax treatment the way it is at the first stages of any reform; and I would hope that by mandating that business has to provide the coverage, business would continue to deliver more efficient plans.

They have done, as I guess others have testified, business has done a lot in the last few years as they have finally woken up to health care costs.

Senator BREAUX. One final question. If consumers know they can deduct 100 percent of the cost regardless of what it amounts to, where is the incentive to buy the least costly plan?

Mr. CALIFANO. Well, they know they can deduct the minimum wage. They know they can deduct wages. They know they can deduct the expense of buying equipment. They know they can deduct the expense of their raw materials and they have plenty of incentive to keep those costs down, this tremendous competition for American business now.

Senator BREAUX. Okay. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Breaux.

And the other side of Breaux-Durenberger, Senator Durenberger.

Senator DURENBERGER. Mr. Chairman, thank you. I have a statement, a two-page statement, I would like to be made part of the record.

The CHAIRMAN. So ordered.

[The prepared statement of Senator Durenberger appears in the appendix.]

Senator DURENBERGER. I would like to do that because it was drafted by a new young man who has joined me as my Finance Committee L.A. and I kind of looked at this morning and I said, this is so unusual. Here is a person who has captured me on two pages. I cannot keep a question to two pages and he did it. So I would like it to be part of the record. [Laughter.]

The Secretary and I have spent the last 15 years at health care meetings and I have enjoyed it greatly. I really appreciated everything that I have heard here today. I think there is a confluence in reform that is a lot more apparently already from his testimony between people from a variety of approaches here than much of the rhetoric outside this room would give us credit for.

I have two questions. One is, one of the subjects that will be debated by the next panel is, how do you get the market reform if medicine is basically a local product, local markets, and the distortions in the local markets are caused by having the wrong incentives and the wrong rules built into our reimbursement systems and a whole lot of other things? And we want to change that.

You have been a change agent for the dozen years or so prior to your most recent assignment and so is your employer. We would like that in every community. So one of the questions will be: Can you change the system one buyer at a time? Or do you need large numbers of buyers like all the Chrysler employees, a lot of small businesses like a case in Cleveland or whatever? If you really want change to come, can you do it one buyer at a time?

Mr. CALIFANO. I think you have to provide the purchasers of care with some purchasing power and the large companies have it. You know, we have a whole history in this country of farm cooperatives and electric utility cooperatives and people getting together in a whole variety of ways to increase their purchasing power. I think you can do that.

I think we have to recognize that there are two things about health care. One is, it really is a one-on-one service industry. I mean, there is no machine that is going to operate and take out your liver or take out your gall bladder or what have you. And second, it is a very human thing—we all want cost containment, but when I am sick or my wife is sick or my child is sick or my mother is sick, there is nothing too expensive to relieve them of pain or cure them. That is a very human factor and I do not think you can legislate against that.

I am increasing coming to think that in terms of the costs at the end of life, which are a tremendous proportion as this committee well knows of the Medicare costs, we will have a greater impact in this country as the culture changes and people say I do not want to die tied up to tubes and plastic, I would rather die at home. Then we will have for many a cost containment measure that the economists—with all due respect to the coming panel—or policy wonks will devise.

Senator DURENBERGER. My second question relates to this next phase of your life and I really compliment you as I have publicly in other settings.

Mr. CALIFANO. Thank you, Senator.

Senator DURENBERGER. On making that choice and you are one of my role models when I think about what should I do with the rest of my life. The struggle for us here as it relates to the response to the question on social costs, behavioral problems, addictive disorders, all of that sort of thing, the struggle for us was reflected a week ago in a hearing on the benefit package.

How do we get all of these problems and all of the today's knowledge about how to deal with these problems, how do we sort of squeeze all of that stuff into a benefit package. And if, in fact, I can just step back to your specialty or one of your specialties, which would be addictive disorders, dealing with the diagnostic problem, dealing with the therapeutic problems and so forth, what advice do you have to us in terms of the construct of statutory benefit description, a national commission if such and then the accountable health plans themselves?

Mr. CALIFANO. Well, if you look at—I will just take substance abuse—if you look at that as a package, the premium cost per premium would be somewhere around \$45 to \$60 to have a complete comprehensive package of the kind I have attached to my testimony. That is about \$15 billion a year. Multiply it by the 200 plus million people we have, of which we are already spending probably both in the public sector and the private sector \$7 billion. I think you are talking about a net additional cost of about \$8 billion a year.

Now what are the potential savings? They are enormous if we can start to deal effectively with substance abuse and addiction in this country.

So I would think you have to weigh those investments. One of the problems you have, and we all know it, is this annual budget problem. I mean, you would focus on this year's budget. But I would hope that this committee would be willing to look at making some investments that you know will not pay off this year, but will pay off in succeeding years.

The CHAIRMAN. Thank you, Senator Durenberger.

Can I just repeat that wonderful closing line of your testimony that health care is a ministry, not an industry. We have to keep that in mind continuously.

Senator Bradley?

Senator BRADLEY. Thank you very much, Mr. Chairman.

Mr. Secretary, let me first of all thank you and the Center at Columbia for this absolutely outstanding report and for being one of the few voices in what could be termed the American establishment that continually pushes the importance of addressing addiction in this society.

We are, more than we realize, in control of our own destiny here. You know, we are either going to be healthy or unhealthy in part depending on what each of us does with our own lives. It seems to me that is the message that you continue to be and the Center continues to be.

And hopefully someday it will get through to people and we will begin to put enough resources behind countering addiction that it deserves in terms of cost control, long life, productivity in the economy, et cetera. So I want to thank you.

Now you recommended a \$2 a pack cigarette tax. You focused on cigarettes. I mean, they are a clear addictive substance that is most widely abused in society. It has the most pernicious effect on lives and it costs the most for us to deal with as a society.

Can you think of other addictions from which we could get revenue in an atmosphere where we need revenue?

Mr. CALIFANO. Well, I think that you certainly could increase the tax on alcohol and beer. I realize the political difficulties in doing that. But I think certainly those increases would be warranted. And, indeed, if the increases were directed at the drinks that are the entry drinks for young people, beer and wine, they would have the greatest health impact, I think.

Senator BRADLEY. Now violence also is not an addiction, it is a problem and it costs a lot of money. Gun shot wounds alone cost, what, \$4 to \$5 billion a year in health care costs. The average treatment for a gun shot wound is \$16,000 for a hospital visit.

I was thinking the other day about the gunman in Long Island that shot up the railroad and wounded 20 people and killed 5, he bought his gun for \$327 with a \$27 tax and in one afternoon, forget the 5 lives that were lost, he cost \$320,000 in health care costs 80 percent of which were covered by taxpayers.

So the reality is, do you not think we should also consider some form of tax on ammunition or on handguns or on automatic weapons?

Mr. CALIFANO. I think there ought to be very high taxes on handguns, automatic weapons and I think the ammunition tax is a slam dunk in terms of making sense and providing revenue.

Senator BRADLEY. Well, anything else that the Center for Addiction could recommend, my sense is we are going to get into this process down the road a little bit and we are going to find that we want to do more than we have the money to pay for and people are going to be looking for revenue.

Mr. CALIFANO. Well, we will. We will be happy to provide you with what we can. We are also doing——

Senator BRADLEY. Let me ask you this. Do you think that there should be different premiums, depending on whether someone, for example, is a nonsmoker or a smoker?

Mr. CALIFANO. Yes. I think in the community rating system there ought to be room to provide for encouragement for people and rewards for people to pursue healthy life styles. The health insurance, like life insurance now, is beginning to provide lower premiums to individuals who do not smoke. I think you should look at similar incentives or leave freedom to have similar incentives for people who can control cholesterol or weight or what have you.

Senator BRADLEY. How would that work actually?

Mr. CALIFANO. Well, you know, your life insurance is cheaper if you do not smoke. Your health insurance in many policies now is cheaper if you do not smoke. I think incidentally one of the pluses of having a mandate and giving thousands of people incentives to go after this in any way they want would be a substantial increase in people pushing for wellness programs over time as they look and find out how to do those programs better.

Senator BRADLEY. But you would even extend this idea through community rating to not only smoking but other aspects of healthy life styles, cholesterol, et cetera?

Mr. CALIFANO. Cholesterol, abuse of alcohol, I think, yes, I would.

Senator BRADLEY. Yes. Well, I appreciate that because I think we are going to come down to looking for some money and it would be very helpful.

Let me ask you, on the employer mandates, do you have any thought for—you want to phase it in over a long period of time, seven, 8 years and you want to cut it off above a certain level. My question to you is: What thought do you have for subsidies for small businesses and if you phase it in, how do you avoid the problem of either certain people having second class health citizenship during the interim or the Federal budget having to spend a lot more money to cover them during the interim?

Mr. CALIFANO. Well, I think we have lots of people with second class health care treatment in this country now. I think you could cover a substantial proportion of the work force initially. I think in terms of phasing it in I would probably try and do it in less than 10 years. I mean I would probably try and do it in about 5 years.

I think the subsidy could come either from tax credits or deductions or from a direct subsidy. I would rather have the subsidies designed to encourage small businesses to form cooperatives to buy insurance. I think in remarkably rapid order a business will adjust. I mean, the minimum wage essentially applies to every human being that works in this country. The exceptions are so minimal.

It works. It has not broken anybody. It did not break anybody along the way.

The CHAIRMAN. Thank you, Senator Bradley.

Can I just introduce one chart. We do not have any charts this morning. Sorry about that. A Professor of History at the University of California in Los Angeles has just done a comparison of homicides per 100,000 in the United States itself and New York City.

And starting back in 1900 we had practically no homicides—3 per 100,000. New York City always was below the national average, just a little bit below. But it followed the trend perfectly and the trend rises until 1930 and then to about 10 and then it starts going down again. New York goes up and then goes down.

Then in 1960 New York City suddenly breaks across the national line and roars up, whereas the homicides per 100,000 are about to where they were in 1930 at 10 per 100,000, they are now 30 in New York City.

And what was that? Heroin. The advent of heroin. I just pass it on to you.

Senator BRADLEY. Do you know what the homicide rate on Pine Ridge Reservation in South Dakota is? About 41.

The CHAIRMAN. Well, I think that is due to alcohol. But Senator Packwood recalls that is about the time he finished school at NYU and Washington Square was an inviting place.

Senator CHAFFEE. Mr. Chairman, there is still room in my bill to ban all handguns.

The CHAIRMAN. There is room in this bill for many things that are going to surprise people. [Laughter.]

Senator Roth, you are next, sir.

Senator ROTH. Thank you, Mr. Chairman.

It is a pleasure to see you again, Mr. Califano.

Mr. CALIFANO. Thank you, Senator.

Senator ROTH. Recently there has been quite a significant drop in the increased costs of health care. If I recall, it has gone from double digit to something like 5 percent. I wonder if you made a study as to why that is the case. Does this drop in cost mean that there are significant structural reforms taking place that are meaningful not only for today but for the future? Are they likely to continue?

There are some who, of course, argue that this all happened because of the threat of major reformed legislation. But in any event, there has been a significant drop. How do you analyze that?

Mr. CALIFANO. Well, I think last year was 5.4 percent. It is a significant drop, although it is still twice the rate of the consumer price index. I think it is a combination of things. I think there are structural changes taking place in the health care system, both on the provider side in response to the demands from the large purchasers. I think there are networks that are forming rapidly in this country to put doctors and hospitals and long-term care facilities and others under the same roof.

I do think the threat, if you will, if you want to call it that, of reform is also a significant factor there. I think you may recall—Senator Dole may recall—when we proposed hospital cost containment. The hospital costs leveled off in 1978 and 1979. As soon as the Congress backed off of hospital cost containment, they just resumed their rapid rise.

When President Nixon imposed price controls through 1973, which was the last time we had a rate as low as 5.4 percent incidentally, as soon as he lifted them, the rise immediately came. So I do think the pressure from the Congress and the State Legislatures and the President or reform have had an impact on the health care industry as well.

Senator Pryor is an expert in the pharmaceutical industry, but I do not think the pharmaceutical commitments to hold their price increases to the rate of the consumer price index or whatever would come just from competition.

Senator ROTH. You mentioned the significant breakthroughs that have been made in health care technology. One of the concerns we hear from the pharmaceutical industry today is that capital is not available, leading to research and development being cut way back, and for those reasons we are not going to see the same tempo of major breakthroughs that we have in the past.

Have you looked at that problem at all?

Mr. CALIFANO. I have not really looked at that. But I do think that as you look at the pharmaceutical industry it is important to recognize that they are the premier industry of that kind in the world and they have produced an enormous number of products that have saved tremendous amounts of money. I mean the vaccines--the polio vaccine, I think, you save \$90 for every dollar you spend in vaccine. The hypertension pills and the surgery that they have saved, I think whatever you do we would not want to lose their tremendous research capacity.

Senator ROTH. You mentioned the development of large providers putting together new networks of hospitals, doctors and other health people. Do you think competition between those organizations will keep price down?

Mr. CALIFANO. I think competition between those organizations, plus the pressure that they would get from having thousands and thousands of American business managers required to provide health care looking for the least expensive way to provide it will certainly have an impact.

And so many other things are happening. Let me just talk about that. You know, nurse practitioners are doing more and more because they are less expensive than doctors. States are under pressure to give them more authority in the medical system. So I think a lot is happening right now.

Senator ROTH. In talking about employer mandates, as you know, there is tremendous concern on the part of small business. Many of them are saying that it will minimize the number of new employees that they hire. That a mandate is going to have a very adverse affect on employment. What do you think of those opinions?

Mr. CALIFANO. I think by in large those are the same arguments that people made against the minimum wage in 1938, that we would lose lots of workers, that we would have to lay off workers, that this was a mandate that would make it impossible to create new jobs. I do not think that is so.

I do think that because of the unpredictability of health care and what it costs that there should be a phase-in for small employers. I think that part, whatever anyone thinks of the Clinton plan, that

part of it really is a conservative measure. It is building on the existing system we have in this country.

Senator ROTH. When you say phase-in, over what kind of period of time?

Mr. CALIFANO. I think you could probably do it over years. But I think, you know, there are people much more sophisticated with economic models that can calibrate that more carefully.

Senator ROTH. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Roth.

Senator Daschle?

Senator DASCHLE. Thank you, Mr. Chairman.

Mr. Secretary, I have appreciated many of your answers this morning, given the insight your vast experience provides. I was particularly interested in your discussions on the ability of market forces to contain health care costs. I think you made a very compelling argument.

As you know, the President's plan also relies on market forces at least initially. I do not know that there is much disagreement about the value of market forces as our first line of defense in containing cost. What the President is proposing is that if we are overly optimistic, as you indicated we tend to be sometimes when we project costs, if we are overly optimistic about what effect market forces could really have, then we would have premium caps backstop to ensure that we attain the kind of reduction in health care expenditures that we all say we want.

What is wrong with using premium caps as a backstop if we are so confident that market forces could work anyway?

Mr. CALIFANO. Well, I mean, if you want to use them as a backstop, I mean I think that is fine. I think the real world of caps is that they do not withstand the political pressures.

If those premium caps mean that I cannot get care for my mother or there is not enough money to put her in a nursing home or I cannot get an operation for my child, that in the real world when I write to my Senator I am going to say what are you doing to me, he is going to do something to get me relief from that and that the caps will not hold.

That is why I think it is very important to work these incentives into the systems of America—the commercial systems, the market systems, the buying systems, the wage systems. We have years of experience in demonstrating that.

Senator DASCHLE. I wonder if we are not saying the same thing then. I would think you could make the same case against market forces. If market forces somehow are causing people not to be able to acquire whatever care they feel they have to have, obviously government would probably intercede in some way.

Mr. CALIFANO. I would hope that government would intercede more than it has in terms of taking care of poor people.

Senator DASCHLE. So the objection you have to premium caps is your belief that they will not work, even though you think that market forces can work and preclude the need for caps. Is that a fair statement?

Mr. CALIFANO. I think you have to do other things. I would hope that market forces would work. I think the premium caps are illu-

sory. I think they look great when you legislate them. But when we get into the real world, I am not sure they will hold.

I think they are better, for example, than what we tried and what I did at HEW. When Medicare was first passed, and costs started to rise, they were rising in the private sector too, we put a cap on every procedure. We said we would only pay this much for this and this.

When I left the Johnson Administration there were 2,000 procedures or payment codes in 1969. When I came back as Secretary of HEW 8 years later, there were 7,000 with subcategories. And if you just look at your annual physical bill, 20 years ago it was an annual physical, \$200 or \$100. Today it is a long list of procedures.

The reason for that is, insurance companies and the government came along and said we will cap this and we will cap this and we will cap that, and then doctors added another test or procedure.

So I think there is another factor, which is the ingenuity of the American people, whether it is a tax code or a Medicare code or a welfare system. If you look at the volumes—I mean, the Chairman is probably more familiar with welfare than anyone in the country—but the volumes and volumes of books on welfare, of welfare regulations and capping this and calculating that, it is tough to make that work.

Senator DASCHLE. But the whole idea, of course, is that we are trying to find an alternative to specific price caps.

Mr. CALIFANO. I realize that.

Senator DASCHLE. We are searching for an alternative based upon purchasing pools and because otherwise we will continue to have incredible regulatory complexity.

The alliance concept, with an emphasis on market forces back-stopped by premium caps, seems to be the alternative that at least the Clinton Administration and some of us are thinking might be a much more feasible approach.

I do not know what the alternative is to this approach and the status quo. There does not seem to be a third option out there.

Mr. CALIFANO. Well, I think with respect to the alliances certainly—I think the mandate is very important. I think the commitment to cover everybody and the expansion of coverage for poor people and those uncovered is critical and I think the President has done a fantastic job in putting this subject on the front burner.

I have to tell you, quite honestly I do not think the alliances will contribute either to reducing bureaucracy or to reducing health care costs. I just think our experience with sort of State-controlled or Federal-controlled institutions like that is such that that is simply not the way it works.

Senator DASCHLE. Thank you.

Mr. CALIFANO. And if you are a patient, at least if your insurer treats you unfairly, you can go to another insurer health care provider if you have enough out there. You only have one alliance in the State and, you know, if you get treated badly in trying to get a driver's license in New York City or Danbury, CT or somewhere, you do not have any other place to go. I think that is a relevant factor here in any case.

The CHAIRMAN. Thank you, Senator Daschle.

Senator Pryor, on behalf of the pharmaceutical industry.

Senator PRYOR. Thank you, Mr. Chairman.

Well, I was not going to mention pharmaceuticals, but I will say that I watched very carefully and listened very carefully to what Secretary Califano said—he needs a glass of water, please, by the way. He may be needing to take a pill. I do not know if that is right. [Laughter.]

Mr. CALIFANO. I am not on Prozac, Senator. [Laughter.]

Senator PRYOR. I listened very carefully to what you said, Mr. Secretary, and I agree with everything you said about the pharmaceutical companies. I only wish that they would give to the American consumer the same prices that they give to consumers in other parts of the world. If they would simply do that, then I would disappear and not be on their backs so.

But having said that, you have stated, perhaps in your full statement, Mr. Secretary, or in response to Senator Bradley's question, your belief that the employer mandate should be or could be phased in.

Now let us say if all of the Democrats and Republicans gather in this little room back here 1 day late in the summer and say, OK, there is not enough money to do everything. We are going to phase-in employer mandates and we are going to phase in this benefit or that benefit.

As we look down the list, we have prescription drugs. And we have long-term care, mental health coverage, dental coverage, and Medicaid integration. We could go down the long list. Where do we start deciding what we phase in and what we don't phase in? Where do we draw the line and what is the test?

Mr. CALIFANO. I think you have to make those individual decisions and I am sure you will enjoy making them. [Laughter.]

I really think you will not have cost containment or universal coverage without an employer mandate that locks in that 60 percent—or a bit less—of the American people, just the way you have locked in the old and some of the poor.

I would focus my attention on the poor people, to be honest with you. I think there are high costs there. And I would focus my attention on two things—one, opening up so they are covered in some way or other; and, two, getting them to go to that coverage.

I mean one of the problems with prenatal care, for example, that it is not available in every corner of the country, but it is by and large available for virtually every poor pregnant woman. But we have not been able to get them to go there, for a variety of reasons.

I mean in Los Angeles they do not want to travel two hours. They cannot take three hours off their job. But in other places they just do not go. So I would hope you would think about how you would get people to do it. But I would put my money where the poor people are.

Senator PRYOR. Mr. Chairman, I am not going to ask any further questions.

Senator PRYOR. I have some questions for the panel which will be coming forward soon.

Thank you, Mr. Secretary.

The CHAIRMAN. Thank you, Senator Pryor.

Senator Dole, you have been very attentive.

Senator DOLE. I have had a chance to read your statements. There is some great material. I may borrow some of it for speeches, but I will give you the credit for it.

We have had a lot of testimony here, in fact we were told by the CBO if we do not do anything we will spend, what, \$2.2 trillion in the next 10 years and consume 20 percent of our gross domestic product. If we pass the Clinton plan we will send \$2.1 trillion and consume 19 percent of our domestic product.

Now, is there any magic? In other words, we do all this complicated government-run system and we do not save any money. Is there any magic goal out there we should be trying to attain?

Mr. CALIFANO. Well, I think if you spend 19 or 20 percent, you should spend it efficiently and that is more than enough to cover everybody in this country. Presumably what you do, while it may not have that significant an impact on how costs increase, will have a significant impact on how efficient the system is and how the dollars get spent.

We do waste a lot of money in the health care system. We perform enormous numbers of unnecessary procedures. We have an editor to the American Medical Association Journal saying a couple of years ago that half the tests and procedures performed in this country do not contribute to the diagnosis or cure of the patients.

We have tremendous excess capacity in hospital beds, as the Chairman noted. But we could hopefully eliminate some of that. You could change the malpractice reform system. We could make care available on a more timely basis. We could provide the kind of incentives that Senator Bradley mentioned for people to take care of their own health.

I mean, by and large you and I can do more for our own health than any doctor or machine or hospital or pill can do. So I mean I think it is where the dollars get spent. I do not think whatever you do is going to save significant amounts of money beyond what would be saved if you just let the system go on.

Senator DOLE. I am not just saying we have the Clinton plan. I am not certain any other plans make that much difference either. So I think we are talking about 1 percent of GDP over 10 years.

Mr. CALIFANO. But the point is that whether you think it achieves the objectives or not, what the objectives of the Clinton plan are to distribute those dollars in a way that will provide care to everybody in America.

Senator DOLE. When you talk about employer mandates, how do you treat part-time employees? I will just give you a little example. Pizza Hut happens to be headquartered in Wichita, Kansas. They have 185,000 part-time employees all across America, in every State represented here. How do you treat part-time employees when you talk about mandates?

Mr. CALIFANO. I think you treat them eventually the way we are treating them under the minimum wage. I think you have to find some cutoff. That would be part of how you would phase them in.

Senator DOLE. Because if you treat them one way, there will not be so many part-time employees and there will be a lot of people out of work. There will be young people who will be on the street instead of on the job because I think they figure it is going to add \$200 million to their costs.

Mr. CALIFANO. Presumably, most of these teenagers, young people under 23 or under 21 that are working in these places are going to be covered by their parents' health care plans.

Senator DOLE. I think about 60 percent are covered.

Mr. CALIFANO. But I do think, you know, you are talking about relatively large organizations. Is not Pizza Hut part of Pepsico? I cannot remember.

Senator DOLE. It was yesterday.

Mr. CALIFANO. Okay. [Laughter.]

Well, you know, Pepsico, one of the issues is, as somebody in the auto industry or the steel industry would say, we are now paying the health care costs of Pepsico's Pizza Hut employees or retailer's employees or hotel employees because they are not picking up their share. These are not tiny organizations.

Senator DOLE. Right.

Mr. CALIFANO. This is not the typical small businessman.

Senator DOLE. Do you know any small business people?

Mr. CALIFANO. Of course, I am a small business person.

Senator DOLE. See, I am talking about in my State where about 85 percent have 10 or fewer employees. There are a lot of States represented here where you have very small businesses—two and three people generally. And you talk about employer mandates, it may sound good for the big companies that some of us are acquainted with.

I do not think either employer mandates or individual mandates are going to survive. But you did not talk about individual responsibility. How do we instill some individual responsibility if you have first-dollar coverage as we do in many areas? How do you tell the employer since his liability is capped at 7.9 percent—he does not care what it costs above that. He is protected above that. So what is his incentive for wellness programs or anything else?

Mr. CALIFANO. I would not do it quite that way. Let me just say, one, I think you do have to make accommodations for the small employers, the kind of people you are talking about, whether you do it by a tax subsidy, by getting them into cooperatives. However you do it, you have to take care of them and make it a reasonable thing for them to do.

I think on the mandate, I would not be inclined to cap how much an employer had to pay. I would be inclined to tell him the benefits he had to provide his employee. And I think those larger employers that you were mentioning will get that cost down as low as you can get it.

I do think there is a lot to be said for individual responsibility. I think employees should be paying part of their health care bill so they know something about it. I think there should be incentives for them to take care of themselves, whether it is to quit smoking or exercise or eat properly, what have you. I think all of that is very important.

I think you would see that bloom if you said to people you have to provide this package of benefits. You figure out how to do it and make money in your business.

Senator DOLE. Do you have any recommendation on what the employee should pay, what percent?

Mr. CALIFANO. No, I do not. They have the 80/20 percent I know in the Clinton bill. I think in the Carter Administration it was 75/25 percent. I do not think there was any specific amount in the Nixon mandate, but I think at that point people were talking about a minimum of 50.

The CHAIRMAN. I believe it was 75.

Mr. CALIFANO. In the Nixon bill, too?

Senator DOLE. Could I just ask one additional questions?

The CHAIRMAN. Please, sir.

Senator DOLE. Do you believe employers should have the right to self-insure?

Mr. CALIFANO. I said in my testimony, I believe employers should have the right to self-insure, but I think their self-insurance should be subject to the same requirements in terms of portability, in terms of no pre-existing conditions, in terms of community ratings that would apply to someone else.

I think I would let employers get this insurance, get this coverage to their employees any way they wanted. If they wanted to pay each doctor bill and each hospital bill, that is fine. But I would give them freedom to do it and I think you will find they will do it.

They have adopted to a lot more onerous things than the health care system. I remember the access for the disabled. I mean, we thought—we had projections of billions of dollars and hundreds of thousands of jobs lost if we gave required access to the disabled in all these buildings and places of work and banks. There is access to the disabled everywhere.

Senator DOLE. In fact, there have been an increase in jobs because of lawyers, a lot of lawsuits under the ADA Act just now going through the courts. So I guess there will be additional jobs created.

Mr. CALIFANO. I no longer practice law, Senator.

Senator DOLE. I am not sure I ever practiced, come to think about it. [Laughter.]

Will there be a Califano plan coming out later?

Mr. CALIFANO. No, I tried with hospital cost containment. I was not able to convince you at that time. You may recall.

Senator DOLE. I do remember something about that.

The CHAIRMAN. Thank you, Senator Dole.

Senator Conrad?

Senator CONRAD. Thank you, Mr. Chairman.

Welcome, Mr. Secretary. It is good to have you here. I was just looking at a budget table that showed 10-year numbers on Medicare and Medicaid. Medicare in 1989 was \$94 billion; 1999 it is projected to be \$264 billion. Medicaid in 1989 was \$35 billion; 1999 it is projected to be \$151 billion.

If you look at the whole budget picture for the country, we now have domestic spending through the period 1998 under good control. Basically, it is flat. It is basically frozen for the whole period. It is mandatory and entitlement spending that is seeing the substantial increases. If you isolate on entitlements, you see Medicare and Medicaid are the thing that is just eating us alive.

Senator Dole referred to the gross domestic product going for health care. We are at some 14 percent today. The congressional

Budget Office tells me if we fail to act we will go to 20 percent of gross domestic product by the year 2,004. If we adopt the Clinton plan we will go to 19 percent of gross domestic product.

It really raises the fundamental question is, have we got any cost containment strategy at all under any of these plans. What really strikes me is, I have begun to wonder if the fundamental problem is not the divorcement that has occurred between who pays and who gets the service, that is, the whole third party payer concept.

I was looking with my brothers over the records of our grandfather who is a surgeon and the Chief of Staff of the major hospital in our home town when we were growing up. We were looking at his books and records. It was very interesting. They had their own system then.

You know, the prominent people in the community that had money they charged a whole lot more for the same procedure that people that were less well off in the community got for free. Kind of the middle class people at a different rate. The more I think about it, the more I wonder if we have not built a system where you divorce who pays from who gets in a way that all of us just do not pay too much attention anymore.

The person getting the service, they never ask what the cost is. The person who is providing the service, they do not ask. They know it is working pretty well for them. Have you thought about that fundamental question at all about whether or not there is a way to put the genie back in the bottle and whether this whole third party payer concept is not one that contributes to the problem?

Mr. CALIFANO. I think there is no question but that the third party payer concept contributed to the problem and does contribute to it. I think that is changing very rapidly.

I think the fact that we went for 20 years in many of our major industries with first dollar coverage had a tremendous impact. It is like having a credit card and never getting a bill.

But business now recognizes, I think, that it made itself hostage to a health industry that it was not putting any pressure on to be efficient. I think the cost shifting occurs today and it is about at the same level as it was in your grandfather's day.

I think people paying in private plans pay more so that hospitals can provide care to poor people. I think a lot of free care is provided by doctors in hospitals in this country. I think there are lots of things we can do to make the system more efficient. They are not easy.

I mentioned I do not want to harp on hospitals, but excess capacity of hospital beds, you know, many rural areas would be a lot better off with a helicopter and a paramedical team than a hospital.

Senator DOLE. I disagree.

Mr. CALIFANO. And it would be a lot less expensive for our system. I think you should find ways to do that. I think government programs really do inhibit the ability of people to do things. It is difficult. A drug formulary which most corporations are now beginning to establish, for themselves, is very hard to get passed in Congress. Competitive bidding for lab tests, for radiology tests, very hard to get total freedom to do that, for administering the system, very hard.

Those are the things that if you freed up Medicare—I cannot speak for Secretary Shalala or Administrator Vladek, but I would bet that Medicare could be run at least 10 percent less than it is now costing in a year, if you freed them up to do the things that are being done in the private sector.

Senator CONRAD. If I just may complete the thought, Mr. Chairman.

The CHAIRMAN. Please.

Senator CONRAD. I just think that the whole third party payer concept, the more I have thought about it, the more convinced I am that it is very central to the problem. You assert that that is changing, perhaps it is.

But I would say to you, when you divorce paying from who gets a service and the doctor providing that service thinks to himself, well, it does not matter, Mrs. Smith, you know, somebody else is going to pay this bill and the cost just does not enter into the relationship in any way, that alters behavior; and it alters behavior in a dramatic and I think fundamental way.

I am not sure there is any way to get the genie back in the bottle.

Mr. CALIFANO. I would agree with you. But I do think the genie is going back in the bottle, with one exception. I do not think many doctors are submitting bills and getting paid whatever they bill anymore.

I mean, I think the managed care schemes that are in place all over this country now on insurance plans have many doctors spending lots of time arguing about pieces of their bills.

The CHAIRMAN. Well, on that note and to say once again that wonderful line of yours that health care is a ministry, not an industry, we want to thank you most profoundly, Mr. Secretary. You can tell from the number of Senators who have been here.

Oh, Senator Riegle, you suddenly reappeared.

Senator RIEGLE. Yes, Mr. Chairman. I will be very brief.

The CHAIRMAN. Not at all. You have your time.

Senator RIEGLE. Thank you.

First of all, I want to thank Mr. Califano for his leadership now and over many years, for stepping forward and helping in this discussion. I have just two points I want to raise with you.

One is, I gather you are convinced that every employer is going to have to participate to some degree including the small companies, whether they travel under the banner of Pizza Hut with part-time employees, or the genuinely small outfits with maybe four or five people. Is it not an inescapable reality that in order to end the cost shifting, to get some fairness into the system and get universal coverage, every employer and employee will have to make some contribution to get this thing financed?

Mr. CALIFANO. I would agree that eventually that is correct. I mean, I would call it as I said the minimum health care bill like the minimum wage bill.

Senator RIEGLE. So there has to be some shared responsibility with employer and employee.

Mr. CALIFANO. Yes, sir.

Senator RIEGLE. I am very sensitive to the small firm. I think we will have to have subsidies for them and we can graduate in these changes.

The other thing is this, I am very struck by the fact that if you take Hawaii, which has now had for many years a universal system, it took 10 years before the full benefits began to materialize and the cost patterns broke away from the national averages.

Now, for example, health care costs out there are running about 8 percent of the economy, whereas on the mainland the rest of the States average about 14 percent. But it took 10 years before those cost lines broke apart. The way we aggregate these cost numbers to make decisions now, we do not stretch out 10, 15, 20 years to try to engineer this thing to those long-term gains. We work in a five-year budget cycle.

But is it not fair to say that the real health benefits of good preventive care and good comprehensive health care, the real dollar savings, may not show up until we get out 10, 12, 15 years, at least if Hawaii is any value to us as an experience?

Mr. CALIFANO. I think that is correct, Senator. But I think it is important to get started.

Senator RIEGLE. Well, exactly. You are never going to get there if you do not get started.

Mr. CALIFANO. And if I might—this is for you, but also especially for the Chairman who I know loves history, I would like just to read a couple of sentences from a statement.

"Before the Congress is a Medicare bill that cries out for enactment. The cost of personal health care has taken off on a straight line upward. In 1950, the annual cost of personal health care was \$10.6 billion, today it is \$28.6 billion. So the peril must be plain, unless we can enact an adequate Medicare program, a large segment of our population will be denuded financially by severe illness.

"Is it too much to ask the national community to agree to a simple low-cost program in which the American worker puts in \$1 a month of his own money and his employer puts in \$1 a month of his company's money that is tax deductible, and the government puts up nothing, so that the worker can solve his medical cost problems with dignity and not disaster? I hope we will be able to pass a Medicare program before this Congress adjourns."

That was Lyndon Johnson on December 4, 1963.

Senator RIEGLE. Thank you for that.

The CHAIRMAN. And we proceeded to do that and here we are. Again, great thanks to you, Mr. Secretary. You have been hugely helpful and we hope you will stay in touch with us as we proceed.

Mr. CALIFANO. Thank you, Senator.

The CHAIRMAN. Now, to cast a cold eye on this subject we have three eminently qualified economists from across the nation who have listened, I am sure, with great care to Secretary Califano.

Our panel on cost containment begins with John Goodman. Dr. Goodman—these are Ph.D. doctors—who is president of the National Center for Policy Analysis in Dallas. Dr. Robert Shapiro is the vice president of the Progressive Policy Institute and well known to this Senator and our committee. And Dr. Zuckerman,

who is a senior research associate in the Health Policy Center of the Urban Institute.

I suppose Secretary Califano was very much involved with the establishment of the Urban Institute. I would put down cash money to bet you that there was no health policy center when it began.

Dr. ZUCKERMAN. That is correct.

The CHAIRMAN. Yes. We are on to a new subject. Dr. Goodman, you are first in our listing.

**STATEMENT OF JOHN C. GOODMAN, PH.D., PRESIDENT,
NATIONAL CENTER FOR POLICY ANALYSIS, DALLAS, TX**

Dr. GOODMAN. Thank you, Mr. Chairman, and members of the committee. President Clinton has said that our health care system is wasteful and inefficient. My colleagues, Gary and Aldona Robbins, have used the National Center for Policy Analysis/Fiscal Associates Health Care Model to estimate how much inefficiency we have in the system and we find that the President is essentially correct. There is a lot of waste. But the President's own proposal is unlikely to solve that problem and, indeed, may make it worse.

The first source of waste comes about because of distortions that are created by public and private insurance. On the average, when we spend \$1 at a hospital these days we only pay 5 cents out of our own pocket, whereas we spend 68 cents out of our own pocket when we purchase \$1 worth of drugs.

Therefore, to patients and their physicians hospital care looks cheap and drugs look expensive, whereas from society's point of view, the reverse is often the case.

We asked what would happen if we eliminated these distortions, say, by having a uniform rate of reimbursement for public and private insurance. We found that we could reduce health care spending by about 14 percent, or at today's prices about \$140 billion, without any reduction in the quality of health care that people receive, at least in principle.

The second form of waste comes about because most people are over insured. On the average, every time we spend \$1 in the health care system only 21 cents comes out of our own pocket; and, therefore, patients and physicians are encouraged to use medical resources until the value at the margin is only 21 cents on the dollar.

We asked what would happen if we increased out-of-pocket payments by patients from \$1 out of every \$5 to \$1 out of every \$4, which is a rather modest increase. We found that we could increase savings in the health care system to 18 percent of our annual health care bill, or approximately \$180 billion at today's prices.

We also asked: What would happen if we reduced health care spending by \$180 billion? It turns out that because the terms of trade between the health and the nonhealth care sector favor the nonhealth care sector that we could increase our consumption of other goods and services by about \$300 billion if we cut health care spending by about \$180 billion.

Now these are in principle the gains that are available to us by cutting out waste and inefficiency. But how can we take advantage of this opportunity? Four solutions have basically been proposed—catastrophic insurance, catastrophic insurance combined with med-

ical savings accounts, HMOs mainly practicing managed care, and global budgets.

Of these it is our belief that the first two are the only ones likely to work and that the medical savings account option combined with catastrophic insurance is the most interesting because it still has, as far as we can tell, the most support of any single reform idea before the Congress.

The idea is to allow workers and their employers to choose high deductible policies and put the premium savings in an account tax free, where the money would grow tax free. The medical savings account would be the private property of the employee. It would be personal and portable and funds would be there to pay medical expenses not paid by third party insurance. Money not spent would continue to grow and be available at the time of retirement and could be rolled over into an IRA or private pension plan.

If people were spending money from medical savings accounts, they would have incentives to be more prudent shoppers in the medical marketplace. If everyone in America had a medical savings account, we would have 250 million people with a self-interest in cutting out waste and inefficiency, exactly the opposite of where their self-interest lies today.

Medical savings accounts would allow people to continue COBRA payments or pay premiums on a new insurance policy when they are between times when an employer is providing insurance. And finally, in this era when increasing cost control is putting downward pressure on quality in a lot of places, medical savings accounts would create countervailing power. By empowering patients we would give them the ability to maintain in many cases the quality of care that they are receiving.

I would like to conclude by urging that the Congress not choose one particular way of solving this problem, but that it create a level playing field on which many alternatives can compete. My own belief is that the one that will probably win at the end of the day is managed care not practiced inside an HMO, but managed care in a predominantly fee-for-service system with people spending money from accounts which they manage.

But I would urge you not to impose that solution on the country, but to create a level playing field under which many of these ideas compete. Let us let the market decide what is the best way to eliminate waste and inefficiency.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Goodman appears in the appendix.]

The CHAIRMAN. That was a marvel of efficiency in presentation. If the medical savings account can work as well as your description of it, we may have to revise a lot of our thinking around here, terrifyingly so.

Dr. Shapiro, good morning, sir.

**STATEMENT OF ROBERT J. SHAPIRO, PH.D., VICE PRESIDENT,
PROGRESSIVE POLICY INSTITUTE, WASHINGTON, DC**

Dr. SHAPIRO. Thank you, Mr. Chairman, for the privilege of testifying here today.

The subject of how best to control rising health care costs, so that we can ensure genuine universal coverage, is clearly a very vital one. In my judgment, the President and Congress can achieve it only if the economic logic of the plan is as sound as the social goal.

Virtually everyone can agree on the need for reform, not only to broaden access, but just as important to slow the rate of increase in health care costs. For an industry with billions of annual transactions subject to very little standardization, these reforms have to proceed step-by-step and in ways that are consistent with sound economics.

By whatever means coverage becomes more universal, the central question will remain whether to address the economic forces driving up health care prices primarily by regulatory means or market-based mechanisms.

This issue presents the most important difference between the proposals offered by Senators Breaux, Durenberger and Congressman Cooper on the one hand, and those advanced by the President. We ought to notice, however, that these two plans have many common elements that should improve the functioning of health care markets in ways that should also constrain price increases—including malpractice reforms, community rating, buying pools for small businesses, and reliable consumer information about the costs and outcomes of health plans.

In my judgment, Senator Breaux and Senator Durenberger's strategy puts together these pieces and others to provide the economic environment most conducive for universal coverage, through incentives that first, compel insurers to compete more on the basis of value and price, that second, require everyone to assume more economic responsibility for their health care choices, and third, constrain providers to meet people's basic needs more efficiently.

Today I would like to focus my remarks on one of the principle differences between the President's plan and Senators Breaux and Durenberger, namely price controls on insurance premiums and on fee-for-service medicine, versus a more market-based approach.

William Baumol has written that "every market sector affected by price controls has eventually been harmed by them" and his judgment is not a controversial one in economics. Except in cases of monopoly or oligopoly, price controls do not address the economic forces that drive up prices.

Instead, they convert those price pressures to other forums—declining quality, shortages and long queues, black and gray markets, and stratagems where suppliers tie the purchase of the controlled product to another whose price is not controlled. It is inescapable that government cannot know in advance what markets can determine only in practice, namely the cost over the coming year for the most efficient insurers and providers to deliver their basic services.

To be sure, this form of global budget will force providers to cut some costs. But the reductions will start not with what a dispassionate expert might consider unnecessary, but with whatever generates the lowest rate of return for the providers, such as preventive medicine. And by limiting the return on medical investment we will get less of it, which will mean smaller supplies of care and thus paradoxically stronger pressures on health care prices.

Nor is there economic theory or evidence to support more extensive price controls on fee-for-service medicine. Such controls will be virtually impossible to enforce in an industry like medical care with billions of annual transactions carried out at tens and thousands of different facilities, providing thousands of different services using tens of thousands of goods. In any event, health care businesses already have demonstrated a protean capacity to preserve their revenues and profits in the face of these controls.

Yet at the same time markets alone, even nondiscriminatory transparent markets, cannot do the job in an acceptable way, because pure markets would produce grave mismatches between some people's need for care and their ability to pay for it.

Medical care is different from other goods and services because it is more often truly nondiscretionary. We cannot rationally choose to delay cancer treatment as we might delay purchasing a new car, nor can we usually even choose less expensive treatment.

Insurance is designed to resolve this problem by guaranteeing that we can get expensive treatment when we need it. The essential question for market-based reform is whether to limit this to those treatments which civilized people would not want to deny anyone because he or she could not pay—principally, catastrophic illnesses and injuries, conditions affecting people's basic capacities, prenatal care and, for lower income people, routine medical care for children.

Should there be a distinction between care—

The CHAIRMAN. Please finish, Dr. Shapiro. You can use Dr. Goodman's time.

[Laughter.]

Dr. SHAPIRO. Thank you.

Should there be a distinction between care that everyone deserves as a right, as a matter of life and death or basic capacity, and care which people can have only if they are willing to pay for it? If not, then the role for market forces must be very limited, because these forces limit access to goods and services according to people's ability to pay.

The Breaux-Durenberger legislation is willing to make that distinction, in order to discipline demand for treatment. For less serious conditions, it would limit the deductibility of health care insurance to the lowest cost basic benefit package. If people want more, they have to pay for it, at least through their insurance. And if providers want to survive, they have to provide basic benefits at a competitive price.

The President's bill does not have a comparable incentive and in essence, that is why his plan must rely on price controls.

Thank you, sir.

[The prepared statement of Dr. Shapiro appears in the appendix.]

The CHAIRMAN. Thank you, Dr. Shapiro. The President's plan—would you say that last point again, that last sentence?

Dr. SHAPIRO. Yes. The President's plan does not distinguish in its financing between coverage for care we must have and coverage for care which is not nondiscretionary; and in essence, that is why his plan must rely on price controls.

The CHAIRMAN. Price controls.

Now, Dr. Zuckerman, I believe you are going to have a different view, so I wanted to make clear what you just heard from the Progressive Policy Institute. Your paper was written by Jack Hadley of the Georgetown University School of Medicine I see.

Dr. ZUCKERMAN. We coauthored this testimony, yes.

STATEMENT OF STEPHEN ZUCKERMAN, PH.D., SENIOR RESEARCH ASSOCIATE, HEALTH POLICY CENTER, THE URBAN INSTITUTE, WASHINGTON, DC

Dr. ZUCKERMAN. Thank you, Mr. Chairman. As an economist, I am going to probably have a similar diagnosis of the health care market, but maybe a different prescription.

We appreciate the opportunity to appear before the committee to discuss health care cost containment policies. I am going to organize my testimony today around four questions.

First, is there a need to use or at least be ready to use regulation in conjunction with managed competition to successfully contain costs?

Our conclusion is that the simple answer is yes. There is a great deal of uncertainty about how health care markets organized around competition will play out. Moreover, there seems to be an unwillingness to remove all of the tax subsidies for the purchase of health insurance that might, in fact, strengthen consumer incentives to choose low-cost plans.

Together, these two factors lead us to conclude that some form of explicit spending controls will be needed. I specifically am not using price controls because I think there are a lot of ways that spending can be controlled.

Stronger consumer incentives to choose low-cost plans could produce the desired efficiencies; however, no one knows how the interactions among consumers, insurers and providers will work out.

As has been pointed out, health care markets are not like other markets. Patients are unsure about how much care they are going to need and when they are going to need it. This leads them to purchase insurance, which often time leads them to over utilize care.

When you combine this with necessarily the unavoidable gap between provider and consumer information, the apparent uncertainty on the part of many providers about what course of diagnosis and treatment to follow, and the fact that many providers have some degree of monopoly power over the markets they operate in, we end up doubting that market forces will be able to successfully achieve the desired cost objectives.

As an alternative, we think some form of regulation can be used to emulate market outcomes in terms of price, quantity or spending. And this is largely what was done in the construction of the Medicare fee schedule for physician services which simplified some of the complexities that Secretary Califano was alluding to.

And even if this emulation of the competitive market is not done perfectly, regulation in our view offers greater certainty to achieve one of the policy makers desired outcomes, namely control over the rate of growth and costs.

Regulation can take many forms. In this country we have the most experience with adjusting prices in order to meet some im-

PLICIT or explicit spending targets. The alliance-wide premium targets that are proposed in the Clinton plan are admittedly less well tested, but are conceivably much easier to enforce than detailed price controls.

Regulation is often described as micro management of the physician-patient relationship. However, micro management that could interfere with clinical autonomy is much more characteristic of managed care plans than of the public policies that have been used to control spending.

The second question I would like to address is, is regulation likely to be antithetical to the incentives in managed competition? To answer this question, you need to consider the level at which spending is controlled. If spending controls are extremely tight, plans may have no choice but to price at the alliance wide premium target and this would tend to weaken the incentives in managed competition.

However, as long as the targets do not threaten the financial feasibility of plans, it seems that the incentives to provide value for money, the heart of managed competition, will be maintained. After all, if plans can undercut the alliance wide premium target to attract subscribers but do not, why is there reason to believe that they would do so under managed competition in the absence of controls? Put differently, if no price competition occurs it may be because plans believe that their ability to attract subscribers by cutting prices is limited.

People often refer to the California Public Employees Retirement System (CalPERS) experience as evidence that managed competition can, in fact, lead to lower cost containment. But, as I understand the assessments of that system, it was only until the State imposed a fairly explicit budget constraint on spending for the employee health care system that that CalPERS was willing to take a hard stand on the premium increases.

And as outlined in the Health Security Act, we think the spending limits that are proposed should leave health plans with room to compete with one another. And if they do not compete on price, cost containment goals, they may only be achieved by direct actions of the alliances.

Our third question is how reasonable are the cost containment goals of the Health Security Act? We think the Health Security Act does not try to reduce the level of spending initially. The goals are attainable. In fact, some people at the hearing today have suggested that they may, in fact, be too modest; that there is not going to be enough cost containment achieved.

In light of that, we think that they are not at all draconian. I would be happy to return to the appropriateness of the specific growth rates that are proposed during the question and answer period.

Finally, quickly can the cost containment goals be attained with regulation? Research has shown that when institutions are faced with constrained revenues, they adjust, they adjust quickly, and they try to adjust in ways that do not harm the patient's health.

We recognize that the speed with which the system responds depends, in part, on how quickly specific policies could be implemented. Implementation issues will arise at many points in health

care reform, whether it is setting up alliances or setting premium targets. But, it should not deter otherwise sound policy directions.

Thank you.

[The prepared statement of Dr. Zuckerman appears in the appendix.]

The CHAIRMAN. Thank you, Doctor.

Just so those of you here will know, because it was not widely reported, when Paul Ellwood was here just a week ago, and this issue of whether we will go to 20 percent by the year 2004, alternately with the President's bill we will go to 19 percent, and the difference which is \$150 billion, Ellwood said, listen, we are never going to get to 20 percent.

They are changing their Jackson Hole--we have a Jackson Hole II coming forth which suggests rather in the line of Secretary Califano testimony that management is beginning to do things it had not done. So that trajectory is not what it was.

Senator Packwood?

Senator PACKWOOD. As a matter of fact, I have heard Dr. Ellwood say that management has done so well in the last year or two he is beginning to have some misgivings as to whether we should enact anything for fear we might enact the wrong thing as he sees us moving along.

Dr. Goodman, let me ask you, on your catastrophic 20 percent--I pay the first 20 and then everything else is above that--are you suggesting that be a mandate?

Dr. GOODMAN. No. I do not. This is a proposal that has been made by Milton Friedman and Martin Feldstein and health economists with the American Enterprise Institute.

Senator PACKWOOD. But it would be voluntary for the person to buy that kind of a policy?

Dr. GOODMAN. Some do propose that it be a mandate.

Senator PACKWOOD. Well, the reason I ask is, I have asked any number of insurance companies, can I buy a policy where I pay the first \$10,000 and you cover the rest? They do not sell those policies. They say there is no market for them.

Dr. GOODMAN. Well, I think that is right. It is hard to find a market for them. The reason is that 85 to 90 percent of all private insurance is purchased through employers because that is where the tax subsidy is. People who purchase their own policies individually do not get any tax break for doing so. So the market is thin to begin with. There has not been much of a market for catastrophic policies.

The CHAIRMAN. We would have to change the Tax Code.

Dr. GOODMAN. Well, I think we should. There are companies, private companies, that have instituted medical savings accounts without any change in the Tax Code, but what we advocate is a level playing field. So the individual self-insurance for small medical bills gets just as much encouragement from government as third party insurance for large medical bills.

Senator PACKWOOD. Well, if you know of a company that sells those kind of policies or if anybody is listening, have them contact me, will you?

Dr. GOODMAN. I will.

Senator PACKWOOD. Now let me ask you about the 20 percent again. This is the single mother, two kids, working at the five and dime making if she is lucky \$6,000, I mean \$6 an hour or \$12,000 a year. She cannot afford \$2,000. She cannot afford 10 percent. She cannot afford 20 percent. What do we do given that? She just does not have it.

Or if she does, she has so many pressures as to how to spend that little extra money she has that the kind of preventive service you would hope people may take advantage of she will not do.

Dr. GOODMAN. There are two separate issues here. One is how much help should this woman get from government and, second, what should be the form of help. Under the current Tax Code at the Federal level, tax subsidies are about \$75 billion a year.

Senator PACKWOOD. So you are not adverse to helping her along, are you?

Dr. GOODMAN. No.

Senator PACKWOOD. Because she has to pay the first 20 percent, we do not want her to avoid going to the physician with her kids for inoculations or anything else. There has to be some way to get her there without everything being so free that there is no disincentive to go.

Dr. GOODMAN. I agree. So one question is: how much help should be given? We have favored for a long time switching the tax subsidies around from higher income families to lower income families to achieve tax fairness.

Then the second question is: In what form should help come? We would like to make the medical savings account one of the options. The reason is, what employers are doing right now in the market is raising deductibles. What that means is that often a single mother with children will forgo some preventive medical care.

But what they found in Indianapolis at Golden Rule Insurance Co., which set up its own medical savings accounts, is that those mothers would avail themselves of preventive medicine when money was in the account, even though they understood that every dollar they spent from the account is a dollar of refund they would not get at the end of the year.

Senator PACKWOOD. Let me ask Dr. Zuckerman a quick question. President Clinton's caps are based upon historical experience. Does that not tend to penalize States like Oregon that have lower per capita costs and have done a good job at keeping their costs down if the historical experience is going to be what the caps are based on.

Dr. ZUCKERMAN. To some extent that is true. Initially, the methods and data required to set these caps may not be available. The administration's proposal requires about a study and an assessment of what the regional variations in health care premiums should be over the longer run.

Part of the difficulty with implementing many of the reform proposals is that the data systems available in the United States are not all that adequate. I think there would need to be a go slow.

Senator PACKWOOD. Let me ask you, in this case the data systems are pretty good. We know what our per capita costs are in Oregon. We know what they are in Florida. I do not think this is a question of bad data. It is just that the data, assuming you follow

it, it is going to discriminate against the States that have done the best.

Dr. ZUCKERMAN. What it is going to do is reflect the local markets within each individual State and there are regional differences. Ultimately the higher cost States may need to have constraints put on them to bring them closer to the lower cost States. But I do not think that if a State has had a more efficient health care system that they should somehow be allowed to become less efficient.

Senator PACKWOOD. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, sir.

In time we are going to have to address one of the dirty little secrets of this subject, which is that different parts of the country behave very differently and the degree to which you are trying to provide universal care involves a very considerable transfer from those who do well now to those who do not. That is what the Finance Committee is always involved with.

Senator Dole?

Senator DOLE. How many companies, John, use the MSAs? I am familiar with the Golden Rule. I have been out and I have talked to Pat Rooney. In fact, I think he has a forum here next week on medical savings account.

I have talked to just one of the employees who is very satisfied with the medical savings account. Do you know how many employees are now involved in that effort?

Dr. GOODMAN. No, I do not. But I do know that a large number of employers have experimented with the employee empowerment programs. Quaker Oats, for example, has had a program in place for a decade or so that has a private sector version of medical savings accounts without the benefit of tax advantage.

Forbes Magazine encourages employees to handle their own small medical bills by giving them a bonus of \$2 for every \$1 of claims they do not turn in. Dominion Resources in Northern Virginia also has an employee empowerment program. All these companies have experimented in different ways, which seems to me to show that the market is very innovative and very entrepreneurial. That is the kind of activity I would think we should encourage.

Senator DOLE. I think there are a couple of options. Does not Golden rule roll the money over or can you take it out at the end of the year?

Dr. GOODMAN. They give the employee a refund at the end of the year. Employees have the choice of having a low deductible policy with a \$250 deductible or a 20 percent copayment. Or they can go for a \$3,000 deductible and the company will put about \$1,750 in an account through the year.

At the end of the year any money left gets refunded to the employee, but you have to pay taxes on it. So the Tax Code is really penalizing this option. Nonetheless, 80 percent of the employees chose the option and the average refund last year was \$600 per employee.

Senator DOLE. That has been in operation about a year; is that correct?

Dr. GOODMAN. Seven months of last year and now we are going into the second year.

Senator DOLE. I think Sheila Burke went with me to sort of explore this possibility and Pat Rooney is sold on the idea and the employees like it. I talked to one of the pilots who gave me a reason he chose it and why he liked it. If you are concerned about responsibility, I think this is certainly one effort to achieve it.

Dr. SHAPIRO, do you support the Breaux-Durenberger plan? They are still here. I wondered if that was your conclusion.

Dr. SHAPIRO. Yes.

Senator DOLE. I wondered by why they were hanging around. [Laughter.]

Senator DURENBERGER. We are waiting for your question.

Dr. SHAPIRO. Yes, it is my judgment that the Breaux-Durenberger plan is the one most likely to create the economic environment we need in order to responsibly provide coverage, yes.

Senator DOLE. You are for the mandatory alliance in that plan then?

Dr. SHAPIRO. Well, that plan has a mandatory alliance for small businesses.

Senator DOLE. That takes care of my State.

Dr. SHAPIRO. The basic point is that we need to create some mechanism both for enforcing the nondiscriminatory and transparent qualities of the insurance marketplace and for pooling the buying power of small businesses.

Whether these are alliances or some other structure is not really that important.

The CHAIRMAN. Just for our lexicon, by alliances you do not mean the universal one per State?

Dr. SHAPIRO. No, I do not.

The CHAIRMAN. And voluntary organizations.

Dr. SHAPIRO. Right. And I think it is very important to distinguish different kinds of alliances, as the Chairman has, and also to note that there is nothing inherent alliances developed in the Jackson Hole Group, that it would have the kind of regulatory powers that the alliances have under the—pardon me?

The CHAIRMAN. It is a purchasing organization.

Dr. SHAPIRO. Yes, it is a purchasing cooperative and really serves the function of, the same kind of role as the New York Stock Exchange. It brings together buyers and sellers and ensures that the basic terms of trade are nonfraudulent.

And in that sense—whether we call it a cooperative or an alliance or whether we construct some other entity that can serve that function—it is vital that such an entity or some set of arrangements be created to serve that function.

Senator DOLE. So I can conclude then that you are flexible on that point?

Dr. SHAPIRO. Yes.

The CHAIRMAN. Thank you, Senator Dole.

Senator Breaux?

Senator BREAUX. I thank the panel and thank the Chairman.

I would like to have some discussion on the premium caps or price controls. I really have some problems with the administration bill. It clearly cannot meet the targets without premium caps. There are some very ambitious targets, Mr. Zuckerman, in the ad-

ministration's bill as to how much of a reduction in cost they want to get in a very short period of time.

I just do not think we can do enough market reforms to get to those goals without the premium caps kicking in just a couple of years. I think history shows this. Joe Califano was talking about it, I mean, Medicare has cost controls.

There are control on fees and utilization for every service that Medicare covers and yet Medicare costs increased by over \$20 billion last year. That increase in Medicare was more than all the farm price supports cost in total. So I guess I would like some discussion, Mr. Zuckerman, as to why you think, number one, premium caps or price controls could work this time.

Dr. ZUCKERMAN. I think the evidence is very clear that at the State level, and even within the Medicare program, where explicit price regulations have been tried, they have been successful. Medicare's prospective payment system has led to much lower growth in Medicare in-patient hospital spending than would have occurred in the absence of those controls.

The recently adopted Medicare fee schedule also, at least in its first year, led to slower rates of spending than had been anticipated by the HCFA actuary.

Senator BREAUX. It is not so much cost reduction in the cost of the service, but the cost shifting.

Dr. ZUCKERMAN. Not necessarily.

Senator BREAUX. Pardon me. I do not think there is a lot of disagreement except maybe you and I on that point. Medicare costs have increased tremendously. If there has been any reduction, it is because other people have been paying for it.

Can you other two comment on that?

Dr. SHAPIRO. There has been considerable research on this question. On average hospitals charge Medicare about 90 percent of the cost of treatment and charge private insurers on average 128 percent of the cost for the same treatment. It is a very clear shift.

Senator BREAUX. Mr. Goodman, do you have a comment on that?

Dr. GOODMAN. Yes. We need to think about where we are headed. We are headed toward an increasingly competitive hospital marketplace. Now the more competitive the marketplace is the less possible it is to cost shift. In a really competitive market, there is no cost shifting.

So what is going to happen to Medicare patients is what has already been happening to Medicaid patients—that is, when you cannot cost shift, you start rationing health care.

Dr. ZUCKERMAN. The 128 average markup of payments over costs in the private sector was in existence in the early 1980's before the Medicare prospective payment system. Private payers pay more generously than government payers, but hospitals have not been able to increase their revenues from private payers as Medicare has ratcheted down on its payments.

If anything, hospitals have had more trouble dealing with private payers as a result of the growth of PPOs. Private payers have not been willing to just sit back and take increased cost shifting. The payment differential has been there historically.

Senator BREAUX. Mr. Shapiro, do you have a comment on that?

Dr. SHAPIRO. I do not know of any corporation that approaches its health care bills from the point of view of generosity. I think there is something very fundamental here. Price-setting comes at the end of an economic process, not at the beginning. It is the result of the costs of all the factors that go into whatever is being produced and of the demand for it relative to the supply.

You cannot control prices unless you affect the forces that are driving up those prices. That is why price controls historically have never worked, not in medical care, not in virtually any sector.

Bill Baumol, who I know is an associate of the Chairman has done an extensive study of this and cannot find in virtually any case one in which price controls have not ultimately harmed the sector that they have been imposed upon.

What happens when you control the price is, that you convert those forces into other forms. You do not get rid of them. The forces are still there. And so they take the form of declining quality or they take the form of long cues, long waiting times to get the good at the controlled price. They take the form of black and gray markets. They take the form of tying the controlled product to another product which is not controlled.

This is what we saw in Medicare, the Medicare cost controls in 1985, where we put on in the mid-1980's, where we controlled many prices and doctors reported that they were visiting their patients for longer periods of times. They ordered more tests that required relatively little of their own time. They shifted to more highly reimbursed procedures.

In a sector with billions of transactions taking place throughout the country with tens of thousands of different goods and services, the notion that we could control the arrangements, the incredibly complex arrangements for delivering health care with price controls simply is not supported by either theory or evidence.

Senator BREAU. I would just conclude with, I think Mr. Reischauer of the Congressional Budget Office essentially addressed this when he testified before the committee. CBO's analysis has assumed that the limits on the rate of growth of premiums would be sustained, even though they are likely to create "immense pressure and considerable tension."

I asked him if that was a term of art and he said yes.

Senator BREAU. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

Dr. ZUCKERMAN. Can I respond to that for a moment?

The CHAIRMAN. Of course, Dr. Zuckerman.

Dr. ZUCKERMAN. Markets are likely to create that same kind of immense pressure and considerable tension as limits on the growth in premiums. You are not going to contain health care costs unless sometimes difficult choices are made. Some of these difficult choices may be made as a result of competition among health plans and managed competition could lead to the lower rate of growth in costs. But, ultimately, these choices are not going to be avoided.

The CHAIRMAN. Those three points that Dr. Shapiro made about price controls—you have a decline in quality, you have long queues, or the controlled item gets attached to something that is not controlled—that is what happened to controlled wages in World War

II when they got attached to uncontrolled health care fringe benefits.

Dr. SHAPIRO. Right.

The CHAIRMAN. I get the impression economists agree on about 90 percent of these issues and they are disagreeing on 10 percent. That is the way disciplines proceed.

Now, Senator Durenberger.

Senator DURENBERGER. Mr. Chairman, thank you.

My first observation—and I am going to ask two questions, one for the record and one for response. The one for the record is a repeat of a question that Bob Dole asked earlier, and that is Dr. Reischauer says in 10 years we are going to be at 20 percent of GDP if we do nothing. He said the Clinton plan will get us to 19 percent of GDP. Then Paul Ellwood came in and said, you know, we are not going to go as high as either one of those numbers even if we do nothing.

I agree with that, simply because we cannot afford to let it get to that point. I think what is going on in Oregon and other places is beginning to tell us that. But for a variety of reasons we are going to trade off and we will substitute lower quality. We will begin to ration. We will do a lot of other things that you cannot put into a CBO testament around here. So I would agree with that.

I do not agree with the characterization, or at least I do not recall—I must say before I get to that, the next step in this if we do nothing this year is state-by-state regulation. There is no question about that. People will substitute lower quality for a higher price and they will do it by holding down the prices.

Paul Ellwood is probably correctly characterized as saying it is better if you are not going to do it right do not do it. I think that is the consensus of everyone here. But I think it should be clear that Ellwood and Breaux and Durenberger and Moynihan and everybody else who has been involved in health care reform very much wants to get the job done this year.

The CHAIRMAN. This year.

Senator DURENBERGER. And that is why the pressure is on to do it right.

My second observation—I guess my question for the record is, if it is not 19 percent or 20 percent using each of your three models against this economy, tell us for the record in the year 2004 what percent of GDP we will be spending.

The CHAIRMAN. And expect to be called back. [Laughter.]

Senator DURENBERGER. And to help you, I am going to say my estimate on Breaux-Durenberger is 10 percent.

The CHAIRMAN. Really?

Senator DURENBERGER. Okay. The second, Pete Stark says that managed competition is the unicorn, it is a myth that has never been seen. That is just not true. There are many local markets that are experiencing some form of somebody is trying to manage competition in a lot of markets in this country, very, very dysfunctional markets. There is a lot of competition going on between doctors and doctors and hospitals and doctors and hospitals and hospitals and insurers and so forth.

It probably is not being managed well. But where it is being managed at all it is being managed by coalitions, by large employ-

ers, by activities like that. So it really is not true to say that in America we do not have models that will lead some people, whether it is Breaux-Durenberger-Cooper or Chafee, et al.—in the direction of changing the rules in a medical marketplace.

The third observation is that health care is a ministry not an industry. I guess when we talk about what Joe was talking about—cigarettes, social behavior and so forth, there is clearly an element of ministry involved in the delivery of services.

But medical services are not a social good. They may have started out that way, but they are not a social good. They are goods and services that we must be able to price or we will never be able to put a value on them. And if we cannot put a value on them, we will never be able to do these policies.

So with that in mind, value in a—and I am not an economist. I probably took one course in my whole life. I have learned it all from folks like the three at the table. In this particular context, we the consumers, have to have some sense of what we are buying and the relationship between what we are buying and what we are paying for it. Right now it is hard to get that for a whole variety of reasons.

We are sheltered from the real cost of what we are buying. We are stuck with a lot of barriers to more efficient entry into the marketplace by providers that are created by the rules in this system and a lot of things like that.

And, plus, we equate quality with price and just do not have the information on which to make decisions. So if, in fact, the premise of value then is some combination of quality and price and satisfaction and all the other things that are present in every other marketplace, the heart of my question and the difference among the three people here today is, if we believe that we can get functioning markets at the local level, which is where the natural marketplace always is across this country, can we do it one purchaser, one buyer at a time, i.e. with medical savings accounts, catastrophic, whatever it is?

Or, do we have to buy at least for some period of time until we have the information we need and all that sort of thing, do we have to buy in some kind of large groups, i.e. a coop or an alliance or something like that? Or, is it hopeless—our third witness—is it hopeless to even think about the development of markets and should we go right toward having government in some way manage this system?

Dr. GOODMAN. Do we have time for answers?

The CHAIRMAN. You have all the time you need. Please, sir. I think we will start with you, Dr. Goodman. Then we will go right down our list.

Dr. GOODMAN. A very quick answer. I think ultimately the market should be able to answer your question. That is why I would suggest a level playing field on which many different approaches can be tried.

My own perception of how the market now works is that individuals on their own, paying with their own money, can often get the lowest price around, both from doctors and from hospitals. If you tell a hospital admissions office that you are insured, you cannot get a really low price.

But at many hospitals, if you say you have no insurance and you will be paying with your own credit card, you can often get the lowest price offered to any buyer.

Senator DURENBERGER. What do you do, get off the gurney, and walk over and negotiate? That is just the part I do not understand.

Dr. GOODMAN. No. Most procedures done in hospitals are elective, so people have time to think and they can call around and shop. I am not talking about bargaining in the emergency room. I am talking about going to the hospital admissions office and saying your physician says you have to have an operation; it is elective; maybe it is outpatient. What kind of deal can you make me? Many hospitals will make you a very good deal.

But again, the market is changing so rapidly right now and the competitive pressures really are intense, that it seems to me we would be foolish to try to insist that it go one way rather than another. At the end of the day, the best solution will be something none of us have thought of.

The CHAIRMAN. Dr. Shapiro?

Dr. SHAPIRO. I guess I do not agree. Medical goods really are different from other goods. It does not mean there are no market dynamics, but they are distinct ones. Once we enter a serious medical process, we usually have virtually no discretion about our treatment.

Everyone has had this experience; everyone is familiar with the enormous sense of uncertainty that occurs when a doctor says there is something wrong. We look to our doctors to relieve that uncertainty. We ask, who should treat us. We do not then shop around, the way we might for a car or an apartment.

In addition, a very large percentage of these costs are truly non-discretionary. They involve emergencies or services which we cannot choose not to have. So with regard to these services, we cannot approach cost control simply through price rationing, and say that if you do not have the money you cannot have it—the way we do with automobiles, apartments and vacations.

At the same time, that does not mean that every medical procedure and every medical treatment is nondiscretionary. Professionally cleaned teeth are not a matter of life and death or basic capacity, nor is a doctor's visit for the untreatable common cold.

We have to find a way to recognize first, that there are some medical goods which are genuinely nondiscretionary, and second, that as individuals we do not have either the information or the sense of competence to make purely individual buying decisions about medical treatment the way we do about other goods. We need reforms that protect the individual from this lack of competence and information, and that ensure that the medical care he or she must have he or she will get, regardless of ability to pay.

But the medical care which he would like to have but does not necessarily have to have, we can say he can have if he is willing to pay something for it. And as I say I think the building on the current system, not deconstructing a system which in many respects works very, very well I think is the best approach and I think is the approach in Breaux-Durenberger to say that we will retain the deductibility of employer provided health care and it

should obviously be extended to individual as well, up to the point of the lowest priced basic benefit package and in an effort for the market to make that distinction through that between the discretionary and the nondiscretionary and in addition clearly provide the subsidies that are required for people who do not have the funds to purchase that lowest priced basic insurance, to ensure that they get all the care that they truly need.

The CHAIRMAN. Dr. Zuckerman?

Dr. ZUCKERMAN. I would like to clarify the impression that I may have left the committee. I do not believe it is hopeless to rely on the market. Markets can play a role. The types of markets that are suggested under managed competition plans and something like Breaux-Durenberger that would reduce the extent of tax subsidies are very good ideas.

However, I would argue that if the government is going to put up its own money, which is what it is going to do, to provide subsidies to allow people to buy in to health care plans, then it would be prudent to have some sort of a back-up cost-containment system.

I am not necessarily suggesting that the Medicare pricing system be extended to all payers, but I do think that the idea of a premium target is reasonable for the government to consider.

Let me go back to Senator Durenberger's question about whether cost containment can be done "one buyer at a time." It is very unlikely that small employers, even if they are given the mandate, are going to have the ability to compete in the marketplace with the larger employers and achieve the kind of savings that those larger employers claim to have achieved. So, I think that the smaller employers do need some clout.

I think Dr. Shapiro and I really do agree that the health care market is a very unique market and that managed competition would play a useful role in that market. However, it is important to remember that managed competition does not imply a free and unregulated marketplace. In fact, one might find if they look in a thesaurus, that "managed" would be synonymous with "regulated." There is a great deal of regulation in managed competition. It is just that regulating spending is not part of the Jackson Hole concept.

The CHAIRMAN. Well, there you are. Let it be recorded now, we have had Paul Ellwood tell us that we will never get to 20 percent. And we have had David Durenberger said, in fact, we will get 10 percent. Let us write that down. Let us make sure we have that.

Senator Grassley, would you like to ask a concluding question?

Senator GRASSLEY. I bet you just hate to have me walk in the door at this hour. [Laughter.]

The CHAIRMAN. No. No, you are very welcome.

Senator GRASSLEY. Well, you will have a good excuse to tell Senator Byrd why you are late.

I think I will start with Mr. Goodman. Of course, I am very happy to have you state that we should make health care managers the agents of patients rather than of bureaucracy. I would like you to know that I agree with you on that point.

There has been a fair amount of concern expressed to the effect that capitated managed care plans will have an incentive to under

serve. Already in this committee, Karen Davis and Stuart Altman have expressed such concerns. An Institute of Medicine analysis has also expressed this concern.

Advocates of managed competition argue that competition would work to offset these tendencies. They argue also that risk adjustments and quality measurements will work well and offset these tendencies. I do not know whether they agree that we have those processes ready to superimpose on our system.

But I would like to have your views on what they have said about this.

Dr. GOODMAN. My views are that they are wrong and that if you create a system under which people who are really sick and need expensive medical care can move back and forth among health care plans that you will create incredible downward pressure on quality. And the more competitive that market becomes, the greater the pressure will be to lower quality.

Just to give you a number to see what I am talking about, roughly speaking in most health insurance pools in our country, about 4 percent of the patients spend half the dollars. So under managed competition these patients would be coming to your plan, say, paying only a premium of \$1500, but expecting you to provide them with surgery that may cost \$50,000.

Well, what those patients will do is they will shop for medical benefits. So if it is a heart patient, they will look around among the plans to try to find out who is the best heart doctor and what panel he is on.

Well, turn that around. The health plans then cannot afford to get a reputation of having the best heart doctor or the best cancer specialist or they will attract all the sick people and they will go bankrupt.

You cannot solve this problem with risk adjustment mechanisms or with quality controls. To the extent that you try to solve it that way, you have to admit that the competitive pressures are pushing quality down and you are going to try by regulation to establish a floor.

But for sure competition will bring you to the floor. And that seems to me not to be a good result.

Senator GRASSLEY. If the individual consumers are paying directly for health care services, could not consumer groups organize their own managed care plans or hire third party administrators who would have to work for the consumer and be most concerned about the consumer?

Dr. GOODMAN. Well, yes. You see, Mayo Clinic has a reputation of practicing managed care, which we are distinguishing from managed competition. And yet Mayo Clinic gets most of its business from fee-for-service customers.

Right now in the marketplace there are plans cropping up around the country that are essentially providing managed care services to fee-for-service patients. The thing I like about it is you get all the advantages of managed care, plus you make the doctor the agent of the patient rather than the agent of a bureaucracy, which is trying to push down on costs.

Ultimately, I think that is what most buyers will want. I think that vehicle will emerge as a winner if the playing field is level and we have real competition.

Senator GRASSLEY. Managed care plans are pretty paternalistic. It seems to me that they assume that the patients are ignorant. They assume that physicians are either venal or they are afraid of malpractice lawsuits or they do not quite know what really works in a particular case.

So it is necessary then to find somebody to manage physician/patient relationships. In some of these reform plans, it looks like it would be an insurance company or businesses who will end up doing the management. As you and others have pointed out, in capitated systems they face powerful incentives to under serve, maybe competition would work to offset these tendencies, maybe risk adjustment or quality management, and their measurements would work well and offset these tendencies.

And then, of course, as you indicated, maybe they will not. So your point is that making it possible for consumers to pay directly for health insurance or pay health care would give consumers more power in the system and help to offset the tendencies to scrimp on the services to be delivered?

Dr. GOODMAN. Well, that is correct, because if you put the money in the hand of the buyer, then the seller has to attract the buyer. But if you put all the money in the hands of the bureaucracy, that bureaucracy is not going to want the expensive patient. That bureaucracy would be very happy to see the expensive patient leave its plan. That is where the pressure is coming from to lower the quality of care.

The more competitive the market becomes under managed competition, the worse that downward pressure will be.

Senator GRASSLEY. My last question. What do you think of the Nickles plan?

Dr. GOODMAN. I think it has exactly the same problem.

Senator GRASSLEY. It has the same problem?

Dr. GOODMAN. Exactly the same problem. It does not have as much regulation, but it has the same problem.

The CHAIRMAN. That will teach Senator Grassley to ask the last question. [Laughter.]

Senator GRASSLEY. Well, maybe Nickles does not appreciate it. [Laughter.]

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, sir.

Thank you, gentlemen, so very much. You have all maintained the reputation of the economics profession very well indeed.

[Whereupon, at 12:42 p.m., the hearing was adjourned.]

APPENDIX

ADDITIONAL MATERIAL SUBMITTED

PREPARED STATEMENT OF JOSEPH A. CALIFANO, JR.¹

Mr. Chairman, Members of the Committee: It is a privilege to be invited to testify before you this morning.

Since the enactment of Kerr-Mills in 1960 and of Medicaid and Medicare in 1965, this Committee has been at the forefront of efforts to make our nation's health care system more just, protect its premier quality and contain its costs.

Your important work continues as you consider President Bill Clinton's proposal to reform the health care system. President Clinton has achieved something none of his predecessors was able to do: He has put the goal of universal coverage on the front burner of the nation's consciousness, and has led the nation toward a general consensus that every American has a right to affordable, quality health care. The challenge is to achieve that goal with sound financing and cost containment. I applaud President Clinton's courage and determination for putting his presidency behind the drive to achieve universal coverage.

This is no mean task. We have come a long way from the days when a doctor with a little black bag of potions, pills and platitudes made house calls. In 1965, we needed only 60 pages of legislation to enact Medicare and only 10 pages to enact Medicaid. The President's bill weighs in at 1,342 pages, and there are thousands of pages of competing-proposals in the legislative hoppers of the Senate and the House. The health industry has mushroomed from a \$42 billion-dollar enterprise in 1965 when Medicare was passed into a one trillion-dollar colossus, the nation's biggest business and one of its fastest growing employers.

As a White House aide in the Johnson Administration, as secretary of Health, Education and Welfare in the late '70s and as chair of the first two board committees on health care of Fortune 500 companies, I have studied and struggled with health policy matters and the administration of the health system for 30 years. I've been surprised and bruised by the unintended consequences of well-intentioned reforms, including several of my own. The following observations on the current drive to reform the health system stem from my experience, and I hope they provide some help to this distinguished Committee.

America's health care system is infernally complex. The health industry employs 11 million Americans, from the highest-skilled neurosurgeons to the lowest-skilled bed pan attendants. The financial stakes in any reform effort are enormous: a trillion-dollar pot of gold for payers and providers to fight over. The moral and ethical issues become more vexing each day as our scientific genius pushes the envelope of life and death. And though we all want lower costs, nothing is too expensive for me or my spouse, child, parent or sibling when any of them is seriously ill or suffering severe pain.

In this context, devising a system of affordable, quality care for all Americans does not lend itself to solutions that are neatly Republican or Democratic, conservative or liberal, ideologically principled or politically correct. What is needed to fulfill the promise of universal coverage is a pragmatic and careful effort that involves both the public and private sectors, an end to pointing fingers at the other guy, and

¹Mr. Califano, an attorney, is founding chairman and President of the Center on Addiction and Substance Abuse at Columbia University and Adjunct Professor of Public Health at Columbia University's Medical School and School of Public Health. He was secretary of Health, Education and Welfare from 1977 to 1979 and President Lyndon Johnson's top assistant for domestic affairs from 1965 to 1969. His next book, *Radical Surgery: Now Comes the Hard Part for American Health Care*, will be published next winter by Random House.

a willingness in each of us to take more responsibility for our own health. We must be careful to preserve the best of our system as we change it to extend quality care to all our citizens.

THE EMPLOYER MANDATE

You asked me to focus my testimony on universal coverage and cost containment. For historical and practical reasons, I believe an employer mandate is an important component of any reform that aims to fulfill these two goals. Such a mandate would capitalize and build on some of the best elements of our existing system.

Virtually all nations with universal coverage have built on their existing systems. Great Britain's scheme of national health insurance, enacted in 1946, did not stem from an infatuation with socialist principles. At the time, just after the end of World War II, almost every doctor and nurse in England was in the military and on the government payroll. The government had taken over the nation's voluntary hospitals which had collapsed under the weight of war casualties. After the war ended, the British Parliament simply legislated the status quo. Similarly, Germany's system of universal coverage was built upon worker guilds and sickness funds that performed a role not unlike the role employers and health insurers play in the United States today.

The American link between health benefits and employment dates back 50 years to World War II. The war sparked research that produced wonder drugs like penicillin and dramatic advances in surgery. People no longer went to the hospital just to ease the pain of dying; they went to get cured. Dazzled by the miracles of modern medicine, patients wanted access to them. At the same time, wartime employers scrambled to attract scarce workers. The War Labor Board held the line on pay increases, but it allowed increases in fringe benefits. Health insurance quickly became the premier fringe benefit and employers generously doled it out. The number of Americans in group hospital plans bolted from less than 5 million in 1941 to 26 million by the end of the war.

In 1959, big steel management ended a 116 day strike by agreeing to pay the entire health insurance premium and provide first-dollar coverage for workers, setting the pattern that over the next decade spread through major industries like auto manufacturing and communications. No one appreciated at the time that this was like giving every worker a credit card to use without ever having to pay a bill, and that management had made itself hostage to a health industry that had no incentive to control costs.

Since then, three American Presidents—Richard Nixon, Jimmy Carter and Bill Clinton—Independently concluded that any national scheme of universal coverage should build on the existing American system, in which some 60 percent of Americans, workers and their dependents, receive health insurance through their employment relationship. Each of the presidents' plans would require employers to provide a basic package of health care benefits for their employees—what I call a "Minimum Health Care Bill" similar to the minimum wage bill Congress enacted in the 1930s.

The mandate can be phased in over time. Congress can begin by establishing the mandate among large employers and gradually extend it to smaller businesses, if necessary helping them with subsidies or tax credits to ease their burden and encourage them to form cooperatives to pool their purchasing power. Gradual phasing makes sense not only because of federal budget concerns with respect to any subsidy, but also because of the unpredictability of reform and its effects on the health care system.

The history of the minimum wage provides a telling precedent. In 1938, Franklin D. Roosevelt convinced Congress to enact the minimum wage in the Fair Labor Standards Act. Initially, the law covered only 11 million workers, a fifth of the total labor force and a third of non-supervisory workers. Of those who were covered, only 300,000—less than three percent—were then earning less than the new minimum wage of 25 cents an hour. Not until 1966, when Lyndon Johnson persuaded the 89th Congress to act, was the law extended to cover all retail and trade employees and, for the first time, agricultural workers.

Congress could follow a similar tack today by phasing in—over a much shorter period, less than 10 years—a minimum health care bill that will assure that every American has a baseline level of health insurance. In a society as mobile as ours where citizens frequently move from state to state, a federally-defined system of minimum benefits makes good sense. With a basic package of insurance, it should be relatively easy to require that insurers have the same claims form for all patients, which would cut administrative costs. Simpler, more uniform administrative procedures would also help the watchdogs ferret out billions now lost in fraud and abuse.

The employer mandate is key to any reform for several reasons. First, it builds on a part of the existing system that, by and large, is working well. Second, it enlists the ingenuity of thousands of businessmen and women to keep health care costs down. Third, it draws a line of clear responsibility that will slow the game of hot potato economics now being played frenetically among those who pay for health care. The feds want to dump the hot potato of costs on the states and private business; the states rush to lay costs on the feds and the private sector. The current romance of many big businesses with national health insurance plans, which corporate executives once denounced as socialist, evidences their desire to toss the hot potato of costs to the feds.

The employer mandate keeps some costs off the federal budget and puts them into everyday life, throughout our systems of commerce, as part of a fair wage and the purchasing decisions Americans make. And the mandate would end the present lopsided shift of costs to employers with more than 100 workers, who pay at least \$15 billion in health care costs for employees at companies with less than 25 workers (who usually have no insurance).

The rhetoric of impassioned opposition to an employer mandate is an echo of earlier battles. Before passage of the Fair Labor Standards Act in 1938, business leaders warned that it would lead the country to a "tyrannical industrial dictatorship." They charged that Franklin Roosevelt's arguments for a mandated minimum wage was, like "the smoke screen of the cuttle fish," a cover for his plot to promote socialist planning of the U.S. economy. Some opponents asked how business could "find any time left to provide jobs if we are to persist in loading upon it these everlasting multiplying government mandates?"

In fact, American business adjusted, just as it did after the passage of the Occupational Safety and Health Act, after the passage of state laws mandating standards of cleanliness in restaurants and smoke-free space in enclosed areas, and after the passage of federal laws mandating safety standards for automobiles and access for the disabled.

We should not underestimate the ingenuity of American business, its ability to comply efficiently with reasonable government mandates and work them into its daily operations. For this reason, I urge you to give employers freedom to bargain for and provide health insurance as they see fit—directly, through managed care plans or fee-for-service doctors, from traditional insurers or new networks of health care providers.

American corporate executives have the agility to bargain more effectively than any government and have become savvy negotiators with a range of providers. They are not inhibited by the political constraints often imposed on government agencies to protect special interests, and they have made progress in making the health care system more efficient. Congress should not restrict their ability to continue doing so.

America's business managers have finally gotten smart about health care. They use their bargaining power to force doctors and hospitals to cut prices, eliminate excess capacity and reduce unnecessary tests and procedures without sacrificing medically-appropriate care. Tight-fisted employers and managed care providers are squeezing deep discounts from pharmaceutical companies. Most large corporate purchasers of health care limit reimbursement for off-patent drugs to the lowest generic price.

The response to these demands is rapidly changing the delivery of health care, independent of any action by the Congress. Hospitals, doctors, HMOs and long-term care facilities are organizing themselves in networks to deal directly and more efficiently with big corporate purchasers of health care. Large insurers are assembling their own organizations by signing up hospitals and putting doctors on salaries and regular hours.

These competitive churning in the health care market, combined with generally low inflation and political pressures to rein in costs as the President, the congress and the 50 states move to revamp health care delivery, have helped slow down the pace of inflation in medical care prices to 5.4 percent in 1993. Though still twice the rate of general inflation, that is the lowest rate of increase since President Nixon's price controls were in effect in 1973.

I believe a government mandate that employers provide a package of benefits to their employees will capitalize on these healthy trends and accelerate the process of making the delivery of health care more efficient. A mandate gives every American employer a stake in making the health care system cost-effective and responsive to the needs of its employees.

Congress can take other steps to complement the mandate and encourage efficiency in the financing and delivery of health care. Congress should require that insurance be portable from job to job, that insurers provide coverage without regard

for pre-existing conditions or a person's occupation and that they base their premiums on community ratings, which would motivate insurers to compete to provide the highest quality and least expensive care, rather than to scrap for the healthiest patients.

SUBSTANCE ABUSE AND ADDICTION

Revamping the financing and delivery of sick care is an essential element in making our system more fair and efficient. But it is not the only one. America's health care system is buffeted by over-arching problems that require the attention of Congress if we are to assure that every American has access to affordable, quality care. Substance abuse and addiction, the spread of poverty particularly among young children, violence in every social class, the aging of the population as we become the world's first four-generation society, and the explosion in knowledge and technology that make the scope of what the medical system can treat virtually limitless—all have a tremendous impact on the system and its costs.

Let me illustrate this point with regard to substance abuse and addiction, which has an enormous impact on Medicare and Medicaid, two programs within the jurisdiction of this Committee. For without an all-fronts attack on substance abuse and addiction, efforts to provide every American with all the care he or she needs at reasonable cost are doomed to fail. Substance abuse and addiction is responsible for at least \$140 billion—and perhaps as much as \$200 billion—of the one trillion dollars we will spend on health care this year:

- Some 54 million Americans are hooked on cigarettes and another 8 million are hooked on smokeless tobacco.
- More than 18 million are addicted to alcohol or abuse it.
- Some 12 million abuse legal drugs, such as tranquilizers, amphetamines and sleeping pills.
- Six million regularly smoke marijuana, and the number of high school students smoking pot is on the rise.
- Two million use cocaine weekly, including at least half a million addicted to crack.
- Up to a million are hooked on heroin, and the number is rising.
- About one million, half of them teenagers, use black-market steroids.
- More and more teens and pre-teens are sniffing everything from propane and glue to gasses in "Reddi wip" cream canisters.

Substance abuse and addiction tax every segment of our health care system. It causes or aggravates more than 70 conditions requiring hospitalization, complicates the treatment of most illnesses, prolongs hospital stays, increases morbidity and sharply raises costs. Half the nation's hospital beds hold victims of violence, auto and home accidents, cancer, heart disease, AIDS, tuberculosis, and liver, kidney and respiratory ailments—all caused or aggravated by the abuse of tobacco, alcohol and drugs. A study at the Medical College of Wisconsin found that more Medicare patients are hospitalized for alcohol-related problems than for heart attacks. Substance abuse and addiction is the largest single cause or exacerbator of cancer, cardiovascular disease and AIDS, and it combines with AIDS and tuberculosis to roam through inner cities like a modern Cerberus, the vicious three-headed dog guarding the gates of hell.

The nation's elaborate and expensive emergency rooms are largely monuments to alcohol and drug abuse. In 1991, there were more than 401,000 drug-related emergency-room episodes. In the first three months of 1993, record numbers of individuals rushed to hospital emergency rooms with adverse reactions to cocaine and heroin. Many patients ended up in the most expensive domain of the "hospital: the intensive care unit. A study at Johns Hopkins University found that substance abuse accounts for more than one third of the spending in its intensive care unit, which costs \$3,000 or more a day. Cancer and heart disease victims of cigarette smoking fill intensive care units across the nation.

The Center on Addiction and Substance Abuse at Columbia University (CASA) has found that, in 1991, Medicaid financed nearly 4 million days of hospitalization for disease or trauma related to substance abuse. At least one of every five dollars that Medicaid spends on inpatient hospital bills can be traced to this crippler and killer, at a cost of some \$8 billion this year. On average, patients with substance abuse as a secondary diagnosis are hospitalized twice as long as patients who have the same primary diagnosis but do not have a substance abuse problem. I have provided several copies of the CASA study to the Committee and ask that it be entered into the record.

The numbers in the study are low because they do not include the costs of treating innocent victims of alcohol and drug-related accidents and crimes, or the costs of teen pregnancies that occur because one or both partners are drunk or high. Nor did the study account for under-reporting due to physician concern about confidentiality. Moreover, hospital records give little attention to cigarette smoking or abuse of prescription drugs, so nicotine addiction and abuse of prescription drugs as complicating factors are understated.

Effective health care reform is at best a dicey and unpredictable enterprise, but it is also a hopeless one in the absence of a united and system-wide effort against all substance abuse on all fronts—research, prevention and treatment. I commend the President for including coverage of substance abuse treatment in his reform proposals and urge you to expand that coverage. In this regard, attached to my testimony is a proposal we developed at CASA, working with the best treatment experts in the nation at the request of First Lady Hillary Clinton. I urge you to adopt that package.

Aftercare, as well as treatment, should be included in a basic package of health benefits. Addiction is a chronic disease, more like diabetes and high blood pressure than a broken arm or pneumonia which can be fixed or cured in a single round of therapy. Continuing care is as critical to treating the alcoholic or drug addict as taking insulin is to the diabetic or taking hypertension pills is to the patient with high blood pressure.

Health care reformers worry that covering the costs of treating addiction would be a budget-buster in any national health plan. But the dollars spent on treatment are only a small part of the health care expense triggered by substance abuse and addiction. The big money—most of the \$140 billion in health care costs related to substance abuse—stems from the ailments, accidents and casualties that result from a lack of prevention and treatment.

The proposal to increase the excise tax on cigarettes is an especially important component of reform. Today I am releasing for the first time an analysis by the Center on Addiction and Substance "Abuse at Columbia University of data derived from the NIDA (National Institute of Drug Abuse) National Household Survey on Drug Abuse, which reveals the link between cigarette smoking by 12- to 17-year-olds and the use of hard drugs. For too many of these children, cigarettes are a drug of entry into the world of hard drugs.

CASA's analysis, which you will find at Attachment B to my testimony, reveals that 12- to 17-year-olds who smoke cigarettes are:

- 12 times more likely to use heroin than those who have never used cigarettes,
- 51 times more likely to use cocaine,
- 57 times more likely to use crack, and
- 23 times more likely to use marijuana.

Those 12- to 17-year-olds who smoke more than a pack of cigarettes a day are:

- 51 times more likely to use heroin than those who have never used cigarettes,
- 106 times more likely to use cocaine,
- 111 times more likely to use crack, and
- 27 times more likely to use marijuana.

Congress should increase the cigarette tax at least \$2 a pack. That would cut the number of smokers by almost 8 million people and, over time, save almost 2 million lives. Most importantly, the higher price would put cigarettes beyond the means and lunch money of most elementary and high-school students. As the Surgeon General recently confirmed, virtually no one starts smoking after they are 21 years of age.

The Food and Drug Administration reported recently that "it is our understanding that manufacturers commonly add nicotine to cigarettes" to make them more addictive. The combined impact of manufacturers spiking their cigarettes with nicotine to calibrate their addictive power and the fact that just about everyone who smokes gets hooked as a teen makes this higher tax not only an immediate revenue raiser, but an essential public health initiative to protect our children from being abused by these companies, as well as a major cost-containment measure.

OTHER COST CONTAINMENT

As the largest single purchaser of care, Congress can also encourage the trend toward consolidation among hospitals and doctors, which is long overdue. At least 250,000 excess hospital beds cost the nation some \$10 billion a year. Even after the elimination of 160,000 beds during the 1980s, only two-thirds of the remaining beds are occupied on a typical day. In many for-profit hospitals, more than half the beds

are empty. Some rural hospitals have so few patients that they cannot maintain safe levels of proficiency.

Political reality, however, makes closing a hospital as hard as shutting down a post office or military base. I suggest establishing a federal commission to identify hospitals that should be closed. Such hospitals would then be denied reimbursement from all government programs, including Medicaid and Medicare. A non-partisan, independent panel, similar to the commission that has assumed the task of recommending military closings, could identify low-volume hospitals from which all federal support should be withdrawn.

Malpractice reform could cut as much as \$30 billion from the nation's health care bill and help repair the fractured bond between patient and doctor. Doctors, once the trusted providers of care and counselling, have become the villain of choice, an unfair misperception that demoralizes physicians, drives talent from the profession and jeopardizes the prospects for meaningful reform. The stench of mistrust fouls the air between doctors and patients, insurers, nurses and hospital administrators, as lawyers profit, often unconscionably, and push doctors to perform unnecessary tests and treatments.

With the federal government's help, doctors are developing standards of care to guide them in determining when diagnostic tests and treatments are appropriate. Doctors who follow such standards should be free from malpractice liability; doctors who do not, or who are negligent or willfully improper in their practice, should be held liable. But Congress should limit recovery for pain and suffering in the absence of willful misconduct. Patients should be able to recover their medical costs, loss of income and the costs of accommodating any lingering disabilities. Contingent attorney fees should be limited and decline as the amount of recovery rises.

CONCLUSION

Universal health insurance will not be achieved by the employer mandate alone. For the poor, the old and the unemployed, the most vulnerable individuals in our society, we must look to the common treasury. Whether through a federal effort, say by expanding Medicare, or by an expansion of the federal-state partnership of Medicaid, or by some other means, the taxpayers who have should pay for the poor who have not.

Mr. Chairman, I believe that the trillion dollars Americans spend on health are more than enough to provide all our people all the care they need. Instead, we waste as much as \$250 billion on unnecessary care, administrative waste, excess capacity, untimely care, fraud and abuse. We neglect sound investments in prevention. Substance abuse and addiction, AIDS, poverty and violence drain the resources of the health system. And the quality of care that Americans receive varies, not so much with their medical needs, as with the thickness of their wallet, the location of their doctor, the generosity of their employer and the power of their union.

Mr. Chairman, you and I have struggled with this problem since the Kennedy administration. We are well versed in its complexities and have often been confounded by its surprising twists and turns. President Clinton has created a once-in-a-lifetime opportunity to enact comprehensive reform to bring equity and efficiency to American health care. I hope you and your Committee will seize this opportunity to assure that every American can share the extraordinary benefits of the nation's health care system.

And I urge the members of this Committee, as you are pressed on every side by powerful payers, providers and politicians with high financial stakes in the trillion-dollar health care pot, not to lose sight of the patients and to remember that at its core, health care is a ministry, not an industry.

Attachments.

ATTACHMENT A---RECOMMENDATIONS ON SUBSTANCE ABUSE COVERAGE AND HEALTH CARE REFORM

(Based On Results Of A Working Group Convened In New York City, March 6-7, 1993, Sponsored by: Center on Addiction and Substance Abuse at Columbia University (CASA) In Collaboration With The Brown University Center For Alcohol and Addiction Studies (CAAS))

SUBSTANCE ABUSE COVERAGE AND HEALTH CARE REFORM

Introduction

On March 6-7 1993, the Center on Addiction and Substance Abuse at Columbia University (CASA), in Collaboration with the Brown University Center for Alcohol and Addiction Studies, convened a group of top national experts in substance abuse

treatment and policy to identify what substance abuse/dependency services should be included as part of a comprehensive health care reform package.

Academic clinical and policy researchers from 19 different institutions made up the group. (For list of members. See Appendix 1). Collectively, the group is familiar with virtually all the scientific research, published and in progress, on substance abuse and dependence treatment and its outcome. No member of the group had a financial interest in any particular treatment approach. For this report, abused substances include alcohol, nicotine, legal psychoactive drugs such as tranquilizers and barbiturates, and illegal psychoactive drugs such as cocaine and heroin.

The Recommended System

The recommendations and their justification reflect the group's consensus, although there was not unanimity on every point. The recommendations are based on the assumption that health care reform will provide universal access to an integrated, managed system of services, with means to refer patients to appropriate levels of care, to assess treatment effectiveness, and to modify treatment methods based on such outcome assessments. In addition, the recommendations assume the availability of a full range of preventive services and strong linkages to the primary care medical system, which serves as an important resource for identifying substance abuse problems, as well as for prevention and treatment.

We believe that the inclusion of a substance abuse treatment benefit is a vital part of true health system reform. Substance abuse and dependence are professionally recognized, clinically diagnosable, and medically treatable conditions. Addictive diseases result in health care and related costs that will reach \$140 billion annually by the end of 1993. These diseases also impose social and economic costs, such as decreased productivity, accidents, crime and family disintegration. All Americans suffer these costs and consequences. A brief list of illustrative health care costs is attached.

The principles of the proposed system are:

—**A uniform, comprehensive diagnostic evaluation of every candidate for substance abuse treatment.** This standardized evaluation, using well-established criteria, provides the basis for patient/treatment matching and referral to an appropriate level of care. It also produces baseline data for ongoing management of each case, and permits overall quality assurance and outcomes monitoring.¹

—**Services should be available along a full continuum, from low to high intensity, so that patients can be matched through the initial diagnostic evaluation to the lowest cost level of care appropriate to the severity of the condition and the substance of abuse.**

Less expensive outpatient settings have been found by research to be as effective as more expensive in-patient care in the treatment of many individuals with substance abuse problems. The Minnesota State program, for example has demonstrated that an effective, consolidated effort can shift a considerable amount of care to lower cost, outpatient services. However, some individuals require inpatient treatment, and guidelines to identify them have been developed and are being evaluated. It is also important to keep in mind that the intensity of services, (e.g., an inpatient "day" can vary widely in type and quantity of services provided) and the nature of the providers, (e.g. professionally trained psychotherapist vs. counselor) may be a greater determinant of outcome than the setting. In addition, while longer duration of clinical contact is associated with better outcome for the more severely dependent, relatively brief interventions can be useful for a substantial number of alcohol abusers.

—**Treatment needs to be modifiable via periodic evaluation and outcome measures by a care co-ordinator/case manager.** Such changes should be based on practice guidelines and related to clinical findings. This type of ongoing clinical review occurs at present in many areas of medicine.

—**The specific services that the substance abuse benefit in any health reform proposal should include are:**

- a. Evaluation, including diagnosis and referral.
- b. Detoxification in a variety of settings.
- c. Residential treatment, both short and long-term.
- d. Hospitalizations, primarily for medical complications or associated psychiatric problems, e.g. suicidal ideation, major depression.

¹Health care reform should also address physician and other provider training needs through professional schools, state and national professional organizations and an improved system of in-service training. This training will be needed to enhance the ability of primary care providers to better assess and refer substance abusing patients in need, and to assist specialists.

e. Community outpatient treatment, including services that range from brief counseling to day and evening treatment of varying intensity, as well as family therapy. Such family therapy may be especially critical where children of addicted parents are involved.

f. Pharmacotherapeutic intervention including both short term for acute situations and long-term maintenance such as with methadone or disulfiram (Antabuse).²

g. After care, as appropriate.

—Limits should not be set by the number of inpatient days or outpatient visits. Substance abuse and dependency should be treated like other chronic conditions such as diabetes and hypertension. A rigorous initial evaluation and ongoing monitoring of clinical severity, as well as case management, offer the greatest promise of achieving maximum efficiency and effectiveness. There is cost offset data showing that appropriate substance abuse treatment can decrease other health care costs.

A benefit package that prescribes an arbitrary number of inpatient days and/or outpatient visits in order to control costs is most likely to lead to inappropriate utilization in settings and intensity of care, and hinder the flexibility needed to achieve cost effective outcomes.

If some limit is deemed necessary, we would recommend that a national global dollar cap for coverage of all substance treatment be established, as part of an overall health care budget cap, rather than a cap on individual services. The amount allocated to individual managed health systems, e.g. Accountable Health Plans (AHPs), should be adjusted by risk and geographic location. The average annual size of this cap could be set at approximately \$60 per capita.

Many provider groups for other ailments will advocate their inclusion in a national health insurance program. However, the advantages of including substance abuse treatment are unique. Epidemiologic and economic research show that substance abuse is a pervasive risk factor for a wide variety of other health problems which add considerably to morbidity and related health care costs. *Substance abuse treatment represents an important weapon in the cost containment arsenal* and, over time, can greatly reduce the incidence of other health problems, such as heart disease, Cancer, and trauma.

—Substance abuse treatment should be integrated into the mainstream of the health care system and covered as part of a basic package of benefits in any health care reform proposal.

Research on substance abuse treatment has advanced to the point where its inclusion in a universal system of managed care can be designed with confidence that it will work efficiently and effectively.

Addictive diseases as well as the individuals who require treatment for them have long been stigmatized and marginalized. The prejudice, misunderstanding, fear and denial surrounding these problems have affected the behavior of consumers and providers of health care. As a result, many public and private insurers offer no coverage, or coverage that encourages providers to act in a manner that is irrational and needlessly costly. For example: private insurance often covers intensive hospital and inpatient treatment, but limits or fails to cover ambulatory lower cost interventions which might be more appropriate. Similarly, under Medicaid, all states pay for hospital-based treatment, but few cover long-term residential programs which are often more appropriate. Medicare has no explicit coverage for drug abuse treatment.

Other Key Points

- **Substance abuse treatment, as part of a basic package of health care coverage, is affordable.**

Payers and purchasers have been reluctant to cover substance abuse treatment because, among other reasons, they consider it subject to almost infinite demand. The reality is that although *need* is substantial, *demand* is low.

Estimates by the Institute of Medicine and the Department of Health and Human Services suggest that there are 6 million persons in need of treatment primarily for drug abuse (more than 3% of the adolescent and adult population) and approximately 18.5 million persons who need treatment for alcohol abuse (almost 10% of the adolescent and adult population).

² Innovative treatments and technologies will be developed from time to time, so specific provisions should allow for their inclusion once proven effective and efficient through research, as would be the case with any other medical condition.

But the need for services and actual demand are quite different. 1991 Medstat figures for a number of major U.S. corporations that provided substance abuse coverage indicated that, out of 4.6 million covered lives, approximately 15,000 received inpatient and outpatient treatment. Thus, less than 1% of those eligible for treatment (0.33%) received treatment.

Public sector rates are similar in some states and substantially higher in others. For example, in 1992, of approximately 4.4 million Minnesotans, approximately 46,000 persons were in treatment (33,000 in detoxification), about 1% of the total state population. In 1991, of 18 million New Yorkers, approximately 360,000 were admitted to treatment, roughly 2% of the population. New York is the state often considered to have the worst substance abuse problem in the nation.

The evidence to date suggests that the demand for treatment, even with universal access, would not add dramatically to costs. In order to reap the benefits of diminishing the health and social costs of substance abuse problem, universal access to these services would cost approximately \$60 per American,³ a figure that would actually add little to the cost of a basic benefit package.

There is concrete research evidence that, in general, substance abuse treatment is cost effective, saving the country substantially more in a variety of costs than such treatment itself costs.

A good example is the treatment of nicotine dependence and resulting cost savings in other areas in health care. In the past, it was estimated that of the 50+ million addicted smokers, 18 million would try to quit each year, 90% or more unassisted, and by the end of the year, 93% would have relapsed, leaving 1.3 million successes. With minimal intervention, the success rate would have increased to approximately 2 million.

With the advent of nicotine gum and the nicotine patch, it is estimated that 3 to 4 million individuals per year might be successful in stopping smoking by using these pharmacologic aids and primary care providers. In the past year, 5 million patches or gum were used. The long term quitting rate of individuals receiving this intervention was 2 to 3 times that of the earlier groups. The implications of this for other health costs were striking. In a review presented to the Food and Drug Administration, of 3 million individuals who had received the patch during the 7 month monitoring period, only 33 heart attacks were reported, whereas the expected rate for that group was over 2,000 heart attacks. In spite of these data, many prescription plans refuse to cover these pharmacologic interventions on the grounds that they are prevention (of heart disease or lung cancer) rather than treatment (of nicotine dependence) and the plans do not cover prevention.

While the savings from treatment of alcohol and drug abuse may not have been as precisely calculated, they can be substantial. One study, for example, showed a 24% decrease in health care costs for the group of treated alcoholics in comparison to the untreated group. In another study, one Fortune 100 company looked at the initial savings of their Employee Assistance Program. Medical costs for each employee for the three years prior to their beginning substance abuse treatment averaged \$2068 per year. One full year following the initial treatment, average medical cost was \$165. When the cost of substance abuse treatment (not a recurring cost) is added in, the company still saved \$500 per employee (about 25%). Moreover, absenteeism was drastically reduced.

- **Despite the data regarding limited demand for services, we recognize that the managed systems of care, e.g., Accountable Health Plans (AHPs), will have concerns about their exposure resulting from adverse risk and the small segment of the population with persistent, chronic problems. To respond to this concern, three possible approaches to limit an individual provider system exposure here discussed:**

—A public reinsurance pool to provide stop loss protection over a predetermined amount of exposure for any AHP. This reinsurance can apply specifically to the substance abuse benefit or be part of a larger reinsurance mechanism.

—The use of a disability rather than indemnity benefit that offers a fixed dollar amount of services for a user based on the level of required treatment. The level of care needed would be determined by the evaluation and resulting plan of care.

—A dollar cap on the overall amount of services available to any individual user, either during a benefit year or on a lifetime basis.

³This estimate is based upon a review of utilization and cost data. It assumes 3.5 million treatment users including an increase for the expanded access to coverage at an average cost per user of \$4,300. These numbers do not factor in increased use of less costly outpatient services resulting from the likely evaluation assessment, or any savings as a result of decreased health care costs that would be a result of expanded access to treatment.

Among the working group, there was general agreement with the first approach, and marked disagreement with the last two unless they were generally applied throughout the system reform.

• **Habilitation**

While not part of the benefit, needed habitation and social services should be linked with the treatment services. These should be coordinated by a case manager, but, like other social programs for the needy, financed largely with public funds other than from the health budget.

APPENDIX A—SUBSTANCE ABUSE COVERAGE AND HEALTH CARE REFORM GROUP MEETING

CHAired BY: Herbert D. Kleber, M.D. and David C. Lewis, M.D.

RAPPOrTEUR: Diana Chapman Walsh, Ph.D.

Listing of Participants

- M. Douglas Anglin, Ph.D., Director, Drug Abuse Research Center University of California at Los Angeles, School of Medicine, Adjunct Associate Professor
- Thomas F. Babor, Ph.D., Professor of Psychiatry, Scientific Director, Alcohol Research Center, University of Connecticut Health Center
- Thomas Badger, Ph.D., Professor, Department of Pediatrics and Director of Research, Arkansas Children's Hospital Research Center, University of Arkansas for Medical Science
- Lawrence S. Brown, Jr. M.D., M.P.H., Senior Vice President, Division of Medical Services, Addiction Research Treatment Corporation, New York City, Associate Clinical Professor of Medicine, Harlem Hospital and Columbia University College of Physicians and Surgeons
- Raul Caetano, M.D., Ph.D., Senior Scientist and Director, Alcohol Research Group, Medical Research Institute, Adjunct Associate Professor, School of Public Health, University of California at Berkeley
- Wendy Chavkin, M.D., Associate Professor of Clinical Public Health and Obstetrics and Gynecology, School of Public Health, Columbia University
- Mary Jane England, M.D., President, Washington Business Group on Health
- Henrick J. Harwood, Health Economist, Lewin—VHI, Inc.
- Jack Henningfield, Ph.D., Chief, Clinical Pharmacology Branch NIDA, Addiction Research Center, Baltimore, Maryland
- Ralph Hingson, Sc.D., Chairman and Professor, Social and Behavioral Sciences Department, School of Public Health, Boston University
- Constance M. Horgan, Sc. D., Research Professor and Chair, Department of Substance Abuse, Institute for Health Policy, Heller School, Brandeis University
- Herbert D. Kleber, M.D., Executive Vice President & Medical Director, Center on Addiction and Substance Abuse, Professor of Psychiatry and Director, Division on substance Abuse, College of Physicians and Surgeons and NYS Psychiatric Institute, Columbia University
- David C. Lewis, M.D., Professor of Medicine and Community Health, Director, Center for Alcohol and Addiction Studies, Brown University
- Barbara McCrady, Ph. D., Professor of Psychology and Clinical Director, Center of Alcohol Studies, Rutgers University
- Tom McLellan, Ph.D., Professor of Psychiatry and Director, Treatment Research Institute, University of Pennsylvania
- Jeffrey C. Merrill, Vice President and Director of Policy Research and Analysis, Center on Addiction and Substance Abuse, and Visiting Professor of Health Policy and Management, Columbia University
- Mark V. Pauly, Ph.D., Bendheim Professor and Chairman, Health Care Systems Department, Director of Research at the Leonard Davis Institute of Health Economics, Wharton School, University of Pennsylvania
- Cynthia P. Turnure, Ph.D., Executive Director, Chemical Dependency Programs, Minnesota Department of Human Services
- Diana Chapman Walsh, Ph.D., Professor and Chair, Department of Health and Social Behavior, Harvard University School of Public Health
- Constance M. Weisner, Dr.P.H., Senior Scientist, Alcohol Research Group, Medical Research Institute, Adjunct Assistant Professor, School of Public Health, University of California at Berkeley
- Sarah F. Mullady, CEAP, Employee Assistance Program Consultant, Center on Addiction and Substance Abuse, Former Director, Employee Assistance Program, Champion International Corporation
- Eric Wagner, Ph.D., Post Doctoral Research Fellow, Brown University

Lois B. Morris, Science Writer

BRIEFING PAPER

We estimate that, by the end of this year, all substance abuse and addiction—legal and illegal drugs, alcohol and nicotine—will cost the health care system some \$140 billion—about one out of every seven of the one trillion dollars we will be spending on health care.

Tobacco:

Cigarettes and other forms of tobacco are responsible for the premature death of some 500,000 people a year.(reference 2)

- Cigarettes cause 18 percent of all coronary heart disease and 30 percent of all fatal cancer—the top two crippling diseases in the United States.(1,10)
- 87 percent of all lung cancer can be traced to cigarettes.(1) As of 1986, lung cancer surpassed breast cancer as the leading terminal cancer among women.(5)
- The EPA recently designated second-hand smoke as a known human carcinogen, along with only ten other compounds. Exposure to parents smoke causes 150,000 to 300,000 cases annually of lower respiratory infections such as bronchitis and pneumonia in infants and young children.(22)
- Smoking by women during pregnancy retards fetal growth, doubling the risk of delivering a low-birth weight baby; newborns exposed to cigarettes in utero have a 25 to 50 percent increased risk of fetal and infant death.(6)

Estimates for the price we pay in added health care costs for smokers—to say nothing of the health care costs of passive smoking—range from \$22 to \$50 billion a year.(2,16)

Alcohol:

Alcohol abuse is responsible for at least 100,000 deaths a year.(2)

- Alcohol is the leading cause of chronic liver disease, including cirrhosis. Alcohol abuse can lead to many serious gastrointestinal problems (including esophageal cancer and pancreatitis), nutritional and metabolic disorders, cardiovascular problems and neurologic disorders.(13)
- The AMA estimates that 25 to 40 percent of patients in general hospital beds are being treated for complications of alcoholism.(2)
- Fetal alcohol syndrome is the third most frequent cause of birth defects associated with mental retardation.(21)
- 40 percent of all Americans will be involved in an alcohol-related car accident that requires medical care sometime in their lives.(7)

The estimated cost of health care linked to alcohol abuse is \$86 billion a year.(2)

Drugs:

Drug abuse leads to a wide array of diseases, overwhelms emergency rooms, and jeopardizes the health of our children.

- 75 percent of trauma victims test positive for drug use.(19)
- Some 375,000 babies born each year in the U.S. are exposed to illicit drugs in the womb. These babies face higher risk of stroke at birth, physical deformity and mental deficiency.(15)
- Confirmed reports of child abuse or neglect have increased 228 percent over the past decade. More than half of these reports— and 75 percent of reports of child deaths—involve drug abuse by the parents.(19)
- Intravenous drug use is implicated in a third of all AIDS cases found in teenagers and adults. 71 percent of all female AIDS cases are linked to intravenous drug use.(12) (This does not include the significant percentage of AIDS cases due to unprotected sex prompted by non-intravenous drug and alcohol abuse.)
- Drug abuse can lead to endocarditis, cellulitis and hepatitis. Other diseases, including TB, result from a weakening of the immune system and the debilitating life style of many addicts. Drug abuse can cause mental illness, vascular problems and malnutrition.(11,14)

CASA's preliminary estimate is that drug abuse accounts for added health care costs ranging from \$20 to \$30 billion.(9)

Substance abuse and addiction account for \$140 billion of our soon-to-be one trillion dollar annual health care bill.

Compare this to the costs of:

- Excess hospital beds—\$6 to \$8 billion a year.(3)

- Medical malpractice—\$20 to \$30 billion annually in legal fees and defensive tests and procedures.(4,18)
- Unnecessary coronary bypasses—about \$4 billion a year.(8)
- Excess angiograms—about \$1.4 billion a year.(8)
- Unnecessary caesarean sections—about \$1 billion a year.(20)

Efforts to eliminate unnecessary administrative costs could result in savings of zero to \$25 billion, depending on the bureaucracy required to operate a new system.

Limiting payments to hospitals and doctors to the rate of increase of the consumer price index could result in savings of \$19 billion.¹

REFERENCES

1. American Cancer Society. (1992). *Cancer facts & figures—1992*. Atlanta: American Cancer Society.
2. American Medical Association. (1993). *Factors contributing to the health care cost problem*. Chicago: American Medical Association.
3. Anders, G. (1993, February 22). As outpatient care gains, communities need to trim their excess hospital beds. *Wall Street Journal*, p. B1.
4. Califano, J. A. Rationing health care: The unnecessary solution. *University of Pennsylvania Law Review*, 140 (5), 1525–1538.
5. Centers for Disease Control. (1989). *Reducing the health consequences of smoking: 25 years of progress: A report of the Surgeon General* (DHHS Pub. No. (CDC) 89-8411). Rockville, MD: U.S. Department of Health and Human Services.
6. Centers for Disease Control. (1990). *The health benefits of smoking cessation: A report of the Surgeon General, 1990* (DHHS Pub. No. (CDC) 90-8416). Rockville, MD: U.S. Department of Health and Human Services.
7. Factors potentially associated with reductions in alcohol-related traffic fatalities—1990 and 1991. (1992). *JAMA*, 269(2), 202–207.
8. Graboys, T.B., Biegelson, B., Lampert, S., Blatt, C.M., & Lown, B. (1992). Results of a second-opinion trial among patients recommended for coronary angiography. *JAMA*, 268(18), 2357–2540.
9. Harwood, H.J., Napolitano, D.M., Kristiansen, P., & Collins, J.J. (1984). *Economic costs to society of alcohol and drug abuse and mental illness, 1980*. Research Triangle Park, NC: Research Triangle Institute.
10. Hauswald, M.(1989). Cost of smoking: An emergency department analysis. *American Journal of Emergency Medicine*, 7(2), 187–190.
11. Hoffman, R. S., & Goldfrank, L. R. (1990). The impact of drug abuse and addiction on society. *Emergency Medical Clinics of North America*, 8(3), 467–480.
12. National Commission on Acquired Immune Deficiency Syndrome. (1991). *The twin epidemics of substance abuse and HIV: Report*. Washington, DC: National Commission on Acquired Immune Deficiency Syndrome.
13. National Institute on Alcohol Abuse and Alcoholism. (1990). *Seventh special report to the U.S. Congress on alcohol and health from the Secretary of Health and Human Services* (DHHS Pub. No. (ADM) 90-1656). Rockville, MD: U.S. Department of Health and Human Services.
14. National Institute on Drug Abuse. (1991). *Drug abuse and drug abuse research: The third triennial report to Congress*. Rockville, MD: U.S. Department of Health and Human Services.
15. Pinkney. (1989, October 6). Drugs in pregnancy: A growing crisis with no easy solution. *American Medical News*, p. 47.
16. Rice, D.P., Hodgson, T.A., Sinsheimer, P., Browner, W., & Kopstein, A.N. The economic costs of the health effects of smoking, 1984. *Milbank Quarterly*, 64(4), 489–547.
17. Rich, S. (1993, February 3). Defensive medicine changes could save billions, study says. *Washington Post*, p. A2.
18. Rubin, R.J., & Mandelson, D.N. (1993). *Estimating the costs of defensive medicine*. Fairfax, VA: Lewin-VHI.
19. Select Committee on Narcotics Abuse and Control. (1992). *On the edge of the American dream: A social and economic profile in 1992: A report by the Chairman*. Washington, DC: Government Printing Office.
20. Silver, L, & Wolfe, S.M. (1989). *Unnecessary caesarean sections: How to cure a national epidemic*. Washington, DC: Public Citizens Health Research Group.

¹In 1992, the consumer price index (CPI) was 8.8% for hospitals and 5.7% for physician services. The total CPI (Urban) was 2.9%. Multiplying the 1990 cost of hospital services (\$258 billion) by 8.8% yields an increase of \$23 billion; multiplying the 1990 cost of physician services (\$129 billion) by 5.7% yields an increase of \$7 billion. If these costs could be held to the CPIU, the increases would be held to \$7 billion and \$4 billion respectively—\$19 billion savings.

21. U.S. Department Of Health and Human Services. (1991). *Healthy people 2000: National health promotion and disease prevention objectives* (Report No. (PHS) 91-502 12). Washington, DC: U.S. Government Printing Office.

22. U.S. Environmental Protection Agency. (1992). *Respiratory health effects of passive smoking: Lung cancer and other disorders* (Report No. EPA/600/6/90/0006F). Washington, DC: U.S. Environmental Protection Agency.

ATTACHMENT B—PROBABILITY OF USING DRUGS FOR SMOKERS AND
NON-SMOKERS (AGES 12-17)

Drug Use	Never Smoked	All Smokers		Heavy Smokers ³	
	Percent ¹	Percent	Relative risk ²	Percent	Relative risk
Any illicit substance	7.2	67.7	9.4	78.9	11.0
Heroin	0.1	1.2	12.0	5.1	51.0
Cocaine	0.3	15.4	51.3	31.7	105.7
Crack	0.1	5.7	57.0	11.1	111.0
Marijuana	2.5	57.5	23.0	68.2	27.3

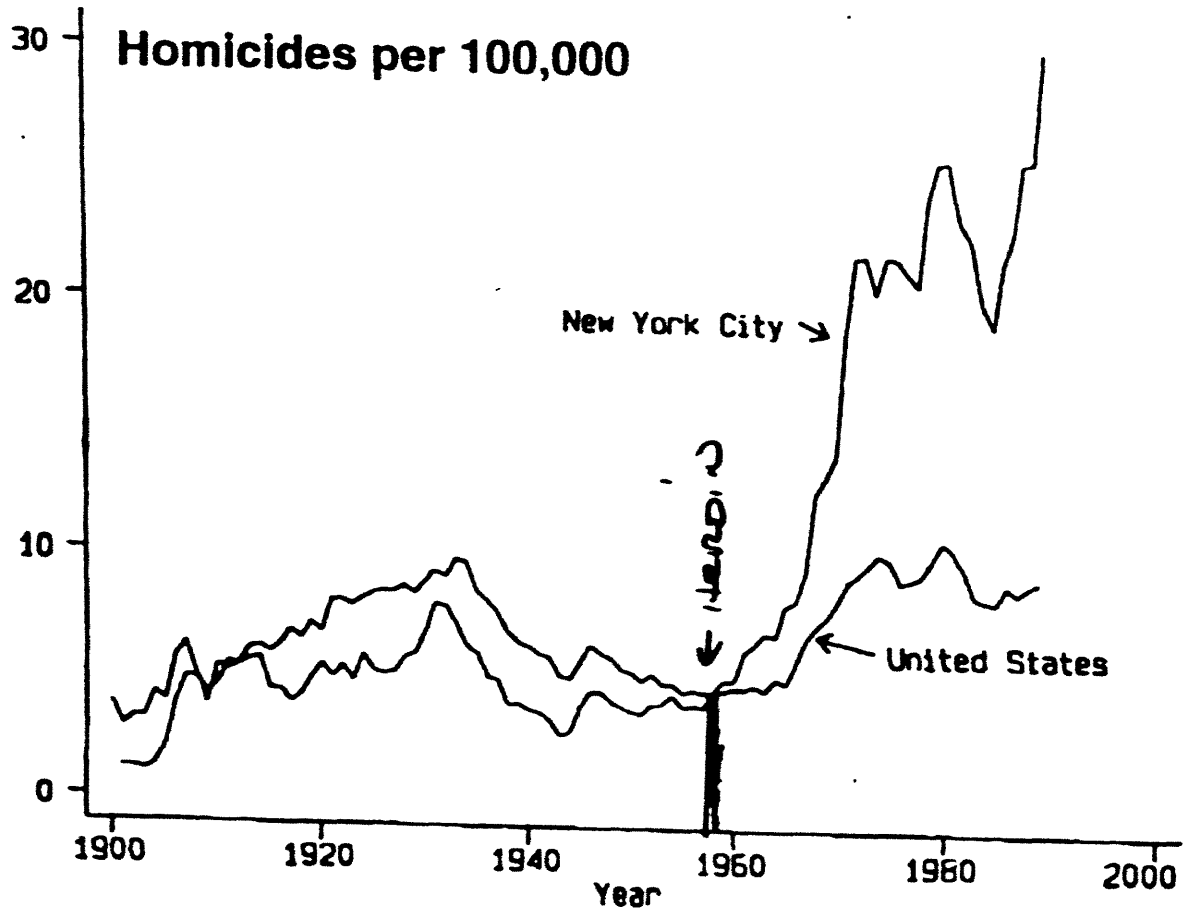
¹ Percent of those using a given substance

² Relative Risk is the increased probability of using the substance compared to those who have never smoked. For example, a relative risk of 12 means that the smoker is 12 times more likely to use heroin than someone who has never used cigarettes

³ Heavy smokers are individuals who smoke more than one pack a day.

All data derived from National Institute of Drug Abuse (NIDA) National Household Survey on Drug Abuse, 1991.

[For additional information, contact Jeffrey C. Merrill, Vice President and Director of Policy Research and Analysis, 212-841-5240.]



Source: Professor Eric Monkkonen
Department of History/UCLA

THE COST OF SUBSTANCE ABUSE TO AMERICA'S HEALTH CARE SYSTEM

REPORT 1: MEDICAID HOSPITAL COSTS, A CASA REPORT, JULY 16, 1993

(This study was conducted by Jeffrey Merrill, Vice President for Policy and Research at CASA, Kimberley Fox, Senior Program Manager, and Han-hua Chang, Research Assistant. The study was funded by a grant from the Henry J. Kaiser Family Foundation, with some additional core support from The Robert Wood Johnson Foundation, Carnegie Corporation of New York, The Commonwealth Fund, The Charles A. Dana Foundation, Inc.; and the Ford Foundation.)

FOREWORD

Substance abuse and addiction is Public Health Enemy Number One in America. The grim reality, shrouded for so long in our individual and national self-denial, is that any health reform that hopes to offer care to all Americans at a reasonable cost must mount a all-fronts attack on all substance abuse—legal and illegal drugs, alcohol and nicotine.

The Central missions of CASA—the Center on Addiction and Substance Abuse at Columbia University—are to identify the cost of substance abuse throughout America society and inform the American people of those costs and the impact of substance abuse on their lives; to Find out what works for whom in prevention and treatment; and to encourage all individuals and institutions to take responsibility to deal with substance abuse.

This CASA study, largely funded by the Henry J. Kaiser Family Foundation,* is the initial Component of the first comprehensive and systematic analysis of the cost that all substance abuse imposes on America's health care system. This report, the first in a series, assesses the impact of substance abuse and addiction on inpatient hospital costs in the Medicaid program. Future studies will identify the costs of substance abuse to the rest of the Medicaid program and to other payers like Medicare, the Blues, commercial insurers, self-insured corporations and individuals.

We began our work with Medicaid because the program serves some of the most vulnerable individuals in our society, including poor pregnant women and infants and a disproportionate number of AIDS victims disenfranchised from private coverage; because most governors regard this program as the greatest burden on their state budgets; and because the Kaiser Family Foundation had identified Medicaid as one of its top priorities, establishing a distinguished commission to examine the program last year.

The results have profound implications for those who would reform America's health care system: at least one of every five dollars Medicaid spends on hospital care, and one in every five Medicaid hospital days, are attributable to substance abuse. For 1991, the latest year for which detailed information is available and the year on which this study is based, that is \$4.2 billion of the \$21.6 billion Medicaid paid for hospital care. Based on the fiscal year 1994 estimates of Medicaid expenditures of \$41 billion for hospital care, the portion attributable to substance abuse will exceed \$7.4 billion.

I say "at least" because these numbers are certainly low. The research is incomplete in documenting the full impact of substance abuse on morbidity. The incidence of alcohol and drug abuse is underreported due to physicians concern about confidentiality and patient embarrassment. There is little identification of cigarette smoking or abuse of prescription drugs in hospital records, so nicotine addiction as a complicating factor is understated, as are complications from addictive prescription drugs. While the study counts the extra days of care used by substance abusers, the estimates do not adequately reflect the increased resources used during many of these additional days, e.g., in an Intensive Care Unit. Moreover, our analysis does not account for costs of individuals who go on Medicaid as a result of disability or poverty related to substance abuse.

Among the new and deeply troubling information in this report:

- More than 70 Conditions requiring hospitalization are attributable in whole or in part to substance abuse.
- On average, Medicaid patients with substance abuse as a secondary diagnosis are hospitalized twice as long as patients with the same primary diagnosis and no substance abuse problem.
- Males under 15 years of age with substance abuse as a primary or secondary diagnosis stay four times longer than those with no such diagnoses (16.4 days

* With some additional core support from The Robert Wood Johnson Foundation; Carnegie Corporation of New York; The Commonwealth Fund; The Charles A. Dana Foundation, Inc.; and the Ford Foundation.

compared to 3.9 days). Females in the same age group stay almost three times longer (9.8 days compared to 3.6 days).

- Substance abuse problems complicate treatment for specific illnesses. Patients treated for burns, pneumonia, and septicemia who have a secondary diagnosis of substance abuse stay more than twice as long as those without such a diagnosis.

We are releasing these results of the hospital segment of our analysis now because we believe they are of critical significance to the Administration, the Congress, state government and other policymakers who are considering reform of the Medicaid program and the health care system. Medicaid provides no explicit benefit for prevention or treatment of substance abuse and there is no federal requirement that states provide such benefits, although some states offer limited coverage. Yet, funds invested in substance abuse prevention and treatment would seem to offer an opportunity for substantial immediate and long term savings. Indeed, the potential for savings in this connection dwarfs possible cost containment in many other areas, such as eliminating unnecessary procedures or excess capacity. Failure to deal with substance abuse will sentence Medicaid to continuing escalating costs, which for the past several years have run at triple the rise in the consumer price index. The implications for the entire health care system are obvious.

This study was conducted by CASA under the direction of Jeffrey Merrill, CASA's Vice President for Policy and Research and a professor at Columbia University School of Public Health, and Kimberley Fox, senior program manager and health policy analyst. Their research could not have been accomplished without the valuable advice of a number of distinguished physicians, epidemiologists, and economists. For their time, assistance, and expertise, I would like to thank Wendy Chavkin, M.D.; Mary Dufour, M.D.; Oliver Fein, M.D.; Lewis Goldfrank, M.D.; Harry Haverkos, M.D.; Jeffrey Kelman, M.D.; Ellen Morrison, M.D.; Michael Thun, M.D.; Joan Bartlett; Mimi Fahs, Ph.D.; Rick Harwood, Ph.D.; and the remarkable Dorothy Rice, ScD, to whom I have been indebted since my years as Secretary of Health and Education and Welfare in the late 1970's. I extend special appreciation to Dr. Ray Arons and his dedicated staff at the Office of Casemix Studies at The Presbyterian Hospital who did much of the hospital discharge data analysis and Eileen Connolly in the Medical Records Department, who provided her expert advice on medical coding.

The remaining studies in this series on the health care system are scheduled for completion by the end of next year. When all phases of this study are completed, we will be able to portray an accurate—and, I believe, frightening—picture of the impact of substance abuse, not only on rising health care costs, but on the health of our nation's citizens.

Joseph A. Califano, Jr., Chairman and President, CASA

I. INTRODUCTION

Health care reform has emerged as a major issue on our nation's domestic agenda. But, as the history of health system reform efforts has repeatedly demonstrated, providing quality care to all Americans at reasonable cost is no mean task. It requires an examination of all the factors that contribute to health care inflation, including administrative costs and inefficiency, inappropriate and excessive use of services, malpractice and defensive medicine, emerging technologies, and excess capacity. Eliminating unnecessary Caesarean sections may save \$1 billion, eliminating unnecessary bypass surgeries may save a little more, reducing excess capacity might save several billion, but, in the hierarchy of cost containment opportunities, another cost of far greater magnitude ranks high on the list: that of reducing substance abuse and addiction in all its forms—including tobacco, alcohol and drugs.

CASA—The Center on Addiction and Substance Abuse at Columbia University—is conducting the First national, comprehensive study of the costs of all substance abuse—legal and illegal drugs, alcohol, and tobacco—to the nation's health care system. The First phase of this study, funded by the Henry J. Kaiser Family Foundation, focuses on the inpatient hospital costs of the Medicaid program. Subsequent reports will assess the costs of substance abuse to the rest of Medicaid (e.g., outpatient hospital costs, emergency room services, payments to physicians), Medicare, other public programs, Blue Cross/Blue Shield, commercial insurers, institutions and individuals.

Impact of Substance Abuse and Addiction on Health Care

Substance abuse and addiction is not confined to one illness. Its costs to the system go well beyond what is spent on direct treatment. Substance abuse is ubiq-

uitous, reaching every corner of health care from ailments such as cancer and cardiovascular disease to trauma, birth complications and AIDS. Substance addiction and abuse is the sole cause for diseases such as alcohol cirrhosis and fetal alcohol syndrome. It is also a major risk factor for other costly health problems, including lung cancer and coronary heart disease. It complicates all sorts of otherwise unrelated diseases and ailments, such as severe burns and pneumonia, adding days and dollars to treatment.

Estimates vary about the total direct and indirect cost of substance abuse to the health care system: they run as high as \$140 billion a year and, thus, represent a significant portion of the total health care bill. Whatever the cost, it is clear that achieving meaningful health care reform will be difficult without addressing the problem of substance abuse.

Substance abuse affects health care expenditures in both the long-term and the short-term. What we are seeing in health care expenditures, including Medicaid's, is the result of the cumulative effects of using and abusing substances over many years. This leads to illnesses such as heart disease and cancer. However, some costs stem from the more immediate medical effects of substance abuse—birth complications, injuries resulting from violence and accidents, AIDS, and strokes among younger people who overdose on drugs. Reducing the longer-term costs is important, but these shorter-term costs have special relevance in the context of health care reform, since they promise more immediate savings. While substance abuse will never be eliminated entirely, some consequences are so immediate that even gradual reductions in use will produce savings in the short term.

Medicaid and Substance Abuse

Medicaid was chosen as the initial area for analysis for a variety of reasons. First, the skyrocketing costs of the Medicaid program top the concerns of nearly every governor in our nation. The program does not provide adequate health care to poor people, yet its costs are breaking state budgets. The current crisis prompted the Henry J. Kaiser Family Foundation to create a commission to examine Medicaid and investigate ways to improve the program while containing costs.

Second, the Medicaid program covers a large number of pregnant women and children. Substance abuse has a significant impact not only on pregnancy and birth outcomes but also on life-long health care costs for infants born to substance-abusing mothers. Lastly, the growing problem and mounting costs of AIDS is disproportionately borne by the Medicaid program since it is often the payer of last resort for a population disenfranchised from the private insurance system.

In any assessment of where best to target limited resources, the impact of substance abuse on Medicaid expenditures must be considered. This study demonstrates that substance abuse takes a heavy toll on already limited Federal and state tax dollars, yet there is no explicit reimbursement of substance abuse treatment or prevention services under Medicaid, nor are states required to offer such benefits (though some states offer limited services).

Substance abuse is not a problem only for Medicaid recipients, nor are they necessarily the most costly population in this regard. Smoking, alcohol and drug abuse are equal opportunity problems affecting all segments of our society regardless of income, race or social status. Indeed, the techniques we have developed to analyze Medicaid costs through medical and epidemiologic evidence forms the foundation for our broader study of the relationship between substance abuse and morbidity across all populations and all payers.

Background

Enacted in 1965, Medicaid was intended to take care of the medical needs of low-income individuals who were either part of families with dependent children, permanently and totally disabled, or elderly. The program is not only directed at the acute care needs of this population, but also finances long-term care for the needy elderly and chronically ill.

Unlike Medicare, which is considered social insurance and funded through a combination of payroll taxes, premiums, and general Federal revenues, Medicaid is a welfare program, with eligibility linked to the Aid to Families with Dependent Children (AFDC) and Supplemental Security Income (SSI) programs, and is funded through general revenues generated by the states and Federal government.

Medicaid is a state-administered program in which the Federal government matches state payments on a formula basis. While all states are required to meet certain federal requirements with respect to eligibility and benefits, Considerable latitude is permitted in determining eligibility, the inclusion of additional benefits, and the method and level of payment for services.

In fiscal year 1994, the Combined Federal and state Payments under the Medicaid program are estimated to reach \$146 billion. Of this, total hospital costs (including psychiatric facilities) will represent 28 percent or \$41 billion. Since 1980, Medicaid costs have grown at an annual average rate of 13 percent, as opposed to only a 4.4 percent annual increase in the Consumer Price Index (CPI).

II. METHODS

Many studies have sought to estimate the cost of substance abuse, in one form or another, to society (See Chapter V). For the most part, these studies have analyzed the cost of one or two substances. None has estimated the costs of all substances to a particular insurer.

While building upon earlier work, we go beyond it in a number of ways. CASA's study quantifies in a single report the total cost of substance abuse in all its forms (tobacco, alcohol, and legal and illegal drugs). It enlarges earlier efforts to incorporate findings from epidemiologic research in health care cost analyses. Based on the best available epidemiologic studies, we have determined the proportion of patients who acquired diseases or conditions as a result of the abuse of alcohol, drugs, or tobacco. These related costs are factored into our total cost estimate. Finally, this study suggests areas for further research and for new policy directions to address the problem of substance abuse and its costs.

The following section briefly describes CASA's methodology for estimating Medicaid inpatient hospital costs related to substance abuse. A technical paper describing this methodology in more detail is being prepared for subsequent publication.

General Hospital Inpatient Costs

In order to estimate hospital Costs associated with substance abuse, we have divided these costs into four general categories:

- (1) Direct treatment of substance abuse;
- (2) Treatment of medical conditions totally attributable to substance abuse;
- (3) Treatment of medical conditions where substance abuse is a major risk factor; and
- (4) Treatment for medical conditions whose length of stay was extended due to complications arising from a secondary diagnosis of substance abuse.

We calculated the costs for each category by multiplying the number of hospital days attributable to substance abuse for the diseases and conditions in each category by an average inpatient hospital cost per day. To estimate the number of Medicaid substance abuse-related days in each category, we used hospital utilization data from the 1991 National Hospital Discharge Survey (NHDS)¹ applying the following criteria:

(1) *Direct Treatment*—If the discharge had a primary diagnosis of either substance dependence or substance-induced psychosis or poisoning, the hospital stay was assumed to be for the direct treatment of the substance abuse problem. For these diagnoses, 100% of the hospital days were attributed to substance abuse.

(2) *Treatment of Diseases Totally Attributable to Substance Abuse*—In Category 1, the hospital stay was specifically for the treatment of the substance abuse problem. For this and the next category, the hospital stay was for treatment of a medical disease that may have been caused by the use or abuse of a substance. In this category are discharges that had a diagnosis that either specifically mentioned a substance in its name (e.g. alcoholic cirrhosis), or that the National Institute on Alcoholism and Alcohol Abuse considers as solely attributable to alcohol (e.g. pellagra), or that involve a secondary diagnosis of substance abuse in 100% of the NHDS cases reported (e.g. esophageal varices). Since the hospital stay was for medical treatment of diseases caused solely by substance abuse, 100% of these hospital days were attributed to substance abuse.

(3) *Treatment of Diseases Where Substance Abuse is a Major Risk Factor*—From an extensive review of epidemiologic research (see Bibliography), CASA

¹The National Hospital Discharge Survey is conducted annually by the National Center for Health Statistics. It is a national sample of more than 400 short-stay hospitals, producing over 200,000 discharges annually. The data are abstracted from the patients' medical records and include demographic information, up to five diagnoses coded according to the International Classification of Disease (ICD-9-CM), surgical procedures, length of stay, and expected source of payment. The sample is weighted to derive national estimates of hospital utilization.

identified 72 conditions and diseases that have substance abuse as a major, but not the exclusive risk factor. These include diseases such as lung cancer and low birth weight associated with smoking; accidents and cardiovascular diseases associated with alcohol use; and premature strokes and AIDS associated with drug use. The prospective, population-based or case control studies used for this analysis often calculated (or provided sufficient data for CASA to calculate) a Population Attributable Risk (PAR) for a specific substance and disease. PAR is an epidemiologic term meaning the percentage of a given illness that could be prevented if the use of the substance were eliminated.² In other words, the PAR for Cigarettes and lung cancer is 87% indicating that 87% of lung cancers could have been prevented if there were no cigarette smoking. Based on extensive research, we assigned a PAR for each of the 72 substance-abuse related diseases (which are listed in the Appendix). With the help of a medical records coder, we then identified the diagnostic codes associated with these diseases. For each Medicaid discharge that involved any of these primary diagnoses, we multiplied the associated PAR for that disease by the total number of Medicaid days reported for that diagnosis to determine the days attributable to substance abuse.

Two health problems, AIDS and birth complications proved particularly difficult with respect to estimating their costs resulting from substance abuse. For example, determining AIDS days was difficult, given that an AIDS-related condition (such as pneumocystosis) is often the primary diagnosis and AIDS is only listed secondarily. In fact, only 10,000 Medicaid discharges had AIDS as the primary diagnosis, clearly an underestimate. To further complicate matters, not all cases that have AIDS as a secondary diagnosis are hospitalized due to AIDS: someone may be hospitalized for an appendicitis and only coincidentally have AIDS. Thus, these hospital days could not be attributed to AIDS or substance abuse. To get a more precise estimate of AIDS-related hospital days, we identified the primary diagnoses for all Medicaid discharges that had a secondary diagnosis of AIDS. Then, consulting with physicians specializing in AIDS care and research, we selected those primary diagnoses that are AIDS-related. These AIDS-related hospital days were added to the hospital days for patients discharged with a primary AIDS diagnosis and then multiplied by the percentage of Intravenous Drug Use (IVDU) as determined by the Center for Disease Control (CDC) AIDS Surveillance (see Footnote 1) to determine substance abuse related AIDS days.³

Birth complications also required special analysis. Since the abuse of a substance is not responsible for the admission (i.e., the birth itself), but only for certain associated complications, we needed to calculate the marginal impact of those complications. For alcohol, the number of incremental days was a simple calculation of the difference in the number of days where alcohol was indicated as a secondary diagnosis. With respect to the impact of smoking, a PAR was applied to low birth weight babies and the number of days was calculated as described above. However, the length of stay for a normal neonate (2.3 days for each discharge) was deducted from this since, absent the complication, this number of days still would have been used. For cocaine-exposed babies, costs related to birth complications were estimated based upon a 1986 study by Phibbs, et al of the added days associated with babies exposed to cocaine and other drugs. The results of this study (based upon a multivariate analysis) estimated that, in the case of a baby exposed to cocaine, the average length of stay was eleven (11) days longer than for one without this exposure. To estimate the

²These PARs are based on the best available epidemiologic research investigating the relationship between substance abuse and morbidity. For some diseases and conditions, there was clear evidence that a relationship exists between substance abuse and the occurrence of the condition, but prospective or case control studies which calculate PARs had not been conducted. In these cases, we employed other measures than PARs, including estimates from large surveys and from medical experts. For example, in the case of AIDS, we used 1992 Center for Disease Control (CDC) surveillance data to estimate the percentage of these cases that were caused by intravenous drug use (IVDU). This surveillance data does not establish causality, it merely categorizes new cases by the risk groups they fall into. In 1992, 55% of new pediatric AIDS cases, and 33% of adult cases fell into the IVDU risk group. We applied these percentages to total reported Medicaid AIDS days to estimate those that were substance abuse-related.

³A similar problem exists for other diseases such as lung cancer where, after the initial diagnosis, future hospitalizations would be for other problems or procedures such as respiratory distress or chemotherapy. However, disentangling the overlap between alternative causes for these other diagnoses and those attributable to the lung cancer made it difficult to count those days in our estimates. Thus, there is reason to believe that our estimates are low since this problem would exist for a number of diagnoses.

incremental days attributable to drugs, the total number of Medicaid births involving maternal cocaine use (8% of all births) was multiplied by 11 days.

(4) *Additional Days for Medical Treatment Due to Substance Abuse Complications*—In addition to being a risk factor for getting certain illnesses, active substance abuse at the time of hospitalization can also complicate an illness and add to the patient's length of Stay. For example, substance abuse can compromise the immune system, reducing the body's ability to fight infection or some substance abuse problems (e.g., delirium tremens) need to be stabilized before doctors can treat the primary medical condition. To estimate the cost of substance abuse comorbidity, we computed the difference in length of stay between those discharges with the same primary diagnosis with and without substance abuse as a secondary diagnoses, controlling for age and sex. The total number of incremental days identified in this way were counted as substance abuse-related Medicaid days.⁴

For each of these four categories, we estimated 1991 costs by multiplying the identified substance abuse-related days by an average hospital inpatient per diem cost of \$750. This per diem estimate was based on 1990 Medicaid costs per day inflated by the hospital component of the CPI to 1991 levels.

Psychiatric Hospital Inpatient Costs

Since the National Hospital Discharge Survey only includes general hospitals, we employed a different method to estimate substance abuse-related Medicaid psychiatric hospital inpatient costs. The 1991 Survey of the National Association of Psychiatric Health Systems indicates that 11% of patients in their facilities had a primary diagnosis of alcohol or substance-related disorders. Multiplying this percentage by 1991 Medicaid expenditures on psychiatric inpatient care, we estimated that substance abuse-related illness in psychiatric hospitals accounted for \$238 million in Medicaid costs in 1991.

This is a conservative estimate of substance abuse's impact on psychiatric hospitals. Psychiatric hospitals often do not list substance abuse as the primary diagnosis because many insurers will not pay for psychiatric care unless the primary diagnoses is a specific psychiatric disorder. A large percentage of the psychiatric inpatient population are dual-diagnosed with a psychiatric disorder as the primary diagnosis and a substance abuse disorder as the secondary diagnoses. The limitations of our data restricted us from estimating the costs of these clients, but anecdotally we know that the dual-diagnosed population is increasing and that these clients use a much greater percentage of psychiatric hospital staff resources.

Underestimation Issues

These estimates of the cost of substance abuse to Medicaid are likely to be lower than the actual costs. First, while we have attempted to pull together all available epidemiologic research on the health effects of substance abuse, more research is needed. Our results only reflect the current state of the art in this area.⁵ Second, studies reveal that identification and reporting of substance abuse problems by medical practitioners is poor. For example, estimates of underreporting of substance abuse secondary diagnoses run as high as 60%. For reasons of confidentiality and concern over insurance reimbursement, physicians are reluctant to record substance abuse unless it relates directly to the primary diagnosis or the treatment plan. Assuming that only 40% of cases with substance abuse actually listed it on the medical record, the complicating costs of substance abuse comorbidity may be two and a half times higher than estimated here. Third, there is little identification of tobacco use or abuse of prescription medications on the medical record: our estimates only include the complications of alcohol and illicit drug abuse. Fourth, using an average

⁴ With respect to this fourth category, our analysis understates the impact of substance abuse comorbidity due to limitations of medical reporting (See Underestimation Issues).

⁵ The association between illegal drug use and resulting illness has not been as thoroughly studied as that of smoking and alcohol because drug use is less prevalent in the general population and more difficult to identify since subjects are reluctant to admit openly to illegal conduct. Alcohol studies are also somewhat limited, due in part to the greater difficulty in establishing level of use (self-reporting of alcohol use is less reliable than that of tobacco because heavy use of alcohol has a negative social stigma). Even for cigarette smoking, a great deal of research is available on illnesses highly prevalent in the population such as lung cancer and heart disease, but less is available for less prevalent diseases, such as Crohn's disease. Thus, our study only includes those diseases and conditions that have been clearly documented as related to substance abuse. We attempted to use the best research available, recognizing that the field of epidemiology is constantly evolving and sharpening its findings. Further inquiry into other related conditions would most likely significantly increase substance abuse-related Medicaid hospitalization costs.

hospital cost of \$750 per day may be low if substance abusers require a greater intensity of services. For example, if substance abuse burn patients are more likely to stay longer in the Intensive Care Unit (ICU) at an average cost per day of \$3,000, these additional costs would not be captured in our analysis.⁶ Finally, our estimates do not include general hospitalization costs of caring for people who join the Medicaid rolls, and benefit from its Coverage, due to job loss, disability, or poverty, related to substance abuse.

III. RESULTS

In 1991, Medicaid spent \$4.2 billion, or 19.2 percent, of its \$21.6 billion in inpatient hospital expenditures on substance abuse-related care. Based upon these results, it is estimated that for fiscal year 1994, substance abuse related costs would rise to \$7.4 billion. The largest share of Medicaid substance abuse costs in hospitals—\$3.4 billion or 81 percent of the total costs—was for medical treatment of substance abuse-related illnesses and conditions and for the increased length of stay required for patients with a coexisting substance abuse disorder. Treatment for obvious substance abuse disorders such as drug overdoses, delirium tremens, drug or alcohol dependence and abuse, and substance abuse psychoses in general and psychiatric hospitals accounted for \$0.7 billion of the \$4.2 billion.

Most surprising, our analysis of the epidemiologic evidence reveals that 72 conditions requiring hospitalization are wholly or partially attributable to substance abuse (they are listed in the Appendix). And this list is probably not complete; though we reviewed more than 3,000 articles and papers, we were limited by what epidemiologic research has been done to date.

The following charts and tables display and describe our findings in detail.

Charts 1-4

Charts 1 and 2 summarize the impact of substance abuse on Medicaid inpatient hospital utilization and Costs. Charts 3 and 4 break down these results by substance and by the short and long-term savings that Can be accrued as a result of reducing substance abuse.

Substance abuse-related hospital care accounted for 19.2% of total Medicaid hospital costs and 20% of total days in 1991. The reason for the discrepancy between the percentage of costs and days is that some of the days are in psychiatric hospitals which have a lower average cost per day than that of acute care, general hospitals.

Chart 3 breaks down substance abuse-related costs by the substance involved. Tobacco and illicit drugs contribute more to Medicaid hospital costs than alcohol. The unexpectedly high proportion of hospitalizations attributed to illicit drug use is due to birth complications resulting from cocaine use (Phibbs et al). Since Medicaid disproportionately serves women and children, a very large share of overall Medicaid hospitalization costs are, therefore, for births and birth complications.

The drug-related costs associated with birth complications may be somewhat overstated: while a significant portion of these costs were attributable to drugs, some may also be attributable to alcohol since many drug addicts also abuse alcohol. The high correlation between drug and alcohol use among these pregnant women makes it hard to separate out the effects or determine which substance is the real culprit. In either case, whether as a result of alcohol or drugs, or both, the problem of adverse birth outcomes is strongly associated with substance abuse.

Chart 4 breaks down the short- and long-term impact of substance abuse on morbidity. The \$2.93 billion total in Chart 4 does not add to the total in Chart I, since Chart 4 includes only costs related to substance abuse as a risk factor in other conditions and does not take into account substance abuse as either a secondary diagnosis or a direct treatment cost. The reason for including this table is to note that reductions in substance abuse can have a real and immediate impact on costs. In the case of birth outcomes, trauma, AIDS, and strokes among younger people, reducing substance abuse can have a significant immediate effect on health spending. By contrast, in the case of diseases like lung cancer, where the disease is acquired through long term abuse of a substance, reducing current substance abuse will not immediately affect health care costs—the savings would be accrued over time as less people in the future acquire those diseases.

Chart 5

Chart 5 breaks out the substance abuse costs in terms of the four Categories of Costs. The largest share—71 percent—of substance abuse costs are for treatment of diseases and conditions where substance abuse is a major risk factor. Direct treat-

⁶ A study at Johns Hopkins Hospital revealed that 28 percent of 435 ICU admissions and 39 percent of ICU costs were substance abuse-related (Baldwin et al).

ment of substance abuse disorders, such as detox units, accounted for only 19 percent of substance abuse-related Medicaid costs.

Chart 6

Chart 6 details the direct treatment Costs for substance abuse in general hospitals. These Costs break down fairly evenly between alcohol and drugs. This chart does not include the approximately \$240 million for substance abuse treatment in psychiatric facilities. The direct treatment costs in general hospitals are often not for any therapeutic treatment but, rather, for short-term treatment of immediate symptoms (e.g., stabilizing or detoxifying the patient). Costs in psychiatric hospitals include more long-term therapies such as psychotherapy and drug rehabilitation.

Charts 7-8

The next two Charts portray in some detail the impact of substance abuse as a major risk factor in a variety of diseases. For 1991, 3.9 million hospital days costing Medicaid close to \$3 billion dollars were due to diseases or trauma where substance abuse was a major attributable risk factor. These charts portray the pervasive impact substance abuse has on all aspects of health care. Babies born with complications due to the mother's abuse of substances during pregnancy are the major contributor to these costs and account for 32% of all Medicaid hospital days. Cardiovascular diseases (15.7%) and respiratory diseases (15.7%) are the second and third leading diseases where substance abuse is a major risk factor. The Appendix shows the specific attributable risks of the various substances to diseases identified through the review of the epidemiologic literature.

Chart 9

The attributable risks used for this study may understate the impact of substance abuse in precipitating some diseases because they were primarily based upon only one substance. People who abuse multiple substances have a much higher risk of getting these diseases than those who abuse only one substance. Our PARs do not take into account the synergistic effect of the abuse of multiple substances in part because epidemiologic research has not thoroughly assessed the synergistic effects of poly-substance use, and because prevalence rates for people who abuse more than one substance—on Medicaid or in the general population—are not available.

Chart 9 highlights the synergistic effect of dual-drug use: heavy drinking combined with heavy smoking dramatically increases the risk of throat cancer. People who smoke and drink are 135 times more likely to get throat cancer than those who abstain from both. In addition, they are 27 times more likely to get this disease than people who only smoke. This is also true for oral cavity cancer. Those who drink and smoke are 24 times more likely to contract oral cavity cancer than those who do not smoke or drink; they are 10 times more likely to contract this cancer than those who only drink.

Charts 10-14

Charts 10 through 14 highlight the differences in length of stay for Medicaid patients with and without a secondary diagnosis of substance abuse—by substance, by age and sex, and by selected diseases and conditions. As noted in the methods section, our estimates of the additional days of care required to treat patients with a secondary diagnosis of substance abuse are limited by the medical reporting of these problems.

Cigarette smoking is rarely if ever recorded as a secondary diagnosis; yet, for some conditions (such as pneumonia) continued heavy smoking lengthens the course of recovery.

Even for alcohol and drugs, studies show that as much as 60% of cases with secondary substance abuse problems go unrecorded. If true, many patients who have a substance abuse problem are incorrectly placed in the category of patients with no secondary diagnosis; since they have a longer average length of stay (ALOS), they artificially inflate the ALOS for the category without a substance abuse diagnosis, thus reducing the true difference in length of stay.

Moreover, the data can demonstrate a longer length of stay for many diseases where substance abuse is a comorbid condition, but they cannot portray the greater intensity of care that many of these patients must receive as a result of a substance abuse problem. As discussed above, many of the additional burn days may be spent in the Intensive Care Unit (ICU) where additional costs per day are much higher than the \$750 average daily cost we used to compute cost differences in length of stay. This also understates the cost of substance abuse to Medicaid.

Chart 10 shows that the ALOS of the Medicaid patient without a secondary diagnosis of substance abuse is 4.99 days. When a patient has a secondary diagnosis of drug abuse the ALOS jumps to 8.4 days. With a secondary diagnosis of alcohol

abuse, the ALOS increases to 8.94. If the patient has a secondary diagnosis of both alcohol and drug abuse, the ALOS jumps to 9.83 days, nearly double the ALOS for the patient without a secondary diagnosis of substance abuse. These figures represent average lengths of stay, but as can be seen from Charts 12-14, some diseases demonstrate much more significant differences.

The ALOS was in fact shorter for some patients with a secondary diagnosis of substance abuse. This does *not* imply that these patients benefited from the use of alcohol or drugs. Rather, the differences probably result from an aberration in the data due to the small sample of patients within these diagnoses, or from the financial or social undesirability of these patients, which can lead to early discharge or transfer (dumping) to another facility. More research is needed to examine the disposition of such patients with respect to inadequate or incomplete medical care, or a lack of sufficient attention to treating their substance abuse problem.

Chart 11 compares the ALOS by sex and age for those with and without a secondary diagnosis of substance abuse. Males stay 4.2 days longer with a substance abuse problem, and females 3.1 days longer.

Much of the difference in ALOS in the under 15 age group is accounted for by the effect of substance abuse on newborns (see the next chart). Note that the ALOS is greater for both genders and all age levels for those with a secondary diagnosis of substance abuse with the exception of males in the 15-44 age bracket. Given the fact that Medicaid covers men in much of the age range from 21 to 64 only when they have a serious and permanent disability, the "undesirable" hypothesis described previously may explain this, since this group includes those with chronic alcohol or drinking problems as well as those diagnosed as having both mental illness and chemical dependency problems. Hospitals may stabilize these individuals and then discharge or transfer them quickly to nursing homes or psychiatric facilities, accounting for their shorter length of stay.

According to Chart 12, babies born to mothers who abuse substances during pregnancy remain almost three times longer in the hospital than babies born to mothers who did not abuse substances. In utero substance abuse exposure often results in low birth weight, premature delivery, and its sequelae, mental retardation, and congenital malformations. Here again, the difference in ALOS does not include the effect of smoking during pregnancy, which would likely make these differences even more dramatic since smoking is associated with low birth weight and other adverse effects.

Chart 13 reveals that AIDS patients with substance abuse as a secondary diagnosis stay about one-third longer than those without this diagnosis. Nationwide, 32% of all adult and 55% of all pediatric AIDS cases are attributable to intravenous drug use. Considering that AIDS is a protracted disease that may take ten years or more to run its course and involves multiple hospital stays, the total impact of even a third longer length of stay has significant cost implications.

Medicaid patients with a primary diagnosis of burns, pneumonia, or septicemia and a secondary diagnosis of substance abuse stay more than twice as long in the hospital as Medicaid patients with the same primary diagnosis but no substance abuse (Chart 14). For example, burn patients with a secondary diagnosis of substance abuse have an ALOS of 12.6 days compared to 5.6 days for burn patients without the secondary diagnosis.

Chart 15

This chart details the percentage of individuals in both the Medicaid and general populations who use each respective substance. The prevalence of drinking and drug use are projected from national figures from the National Health Interview Survey data adjusting for a larger female to male ratio in the Medicaid population (females have a lower drinking rate) and for a lower socio-economic status (those in lower socio-economic status have higher drinking prevalence). The figures do not account for overlapping use of drugs.

Medicaid-specific smoking prevalence rates by age and sex were obtained from the National Medical Expenditure Survey. The significantly higher percentages for smoking among the Medicaid population are of concern, particularly since these figures are most pronounced for women during their reproductive years.

The numbers on alcohol and drug use are self-reported. Since individuals tend to be reluctant to admit to alcohol abuse or illegal drug use, consumption rates for heavy alcohol use or drug use are likely to be significantly understated for the whole population, not just for Medicaid.

Chart 16

Chart 16 details how many pregnant women in the Medicaid population continue to smoke. These figures reflect an assumption that the 15% of Medicaid women stop

smoking when they realize they are pregnant (the percentage that applies to women in lower socio-economic categories) as contrasted with a 21% decrease in smoking for women of higher socio-economic status.

The higher female to male ratio in the Medicaid population than in the general U.S. population, combined with a higher rate of cigarette smoking for Medicaid women during their reproductive years, contribute to the high Medicaid costs for birth complications and disorders.

Chart 17

In an era of competition, prospective payment and cost-consciousness, patients with comorbid substance abuse problems are less attractive to most hospitals. Since they are likely to use more resources, they may be less profitable to the institution than a patient without such complications. Patients perceived as socially and financially undesirable can place a hospital at a competitive disadvantage.

This problem can be seen most dramatically with respect to Medicaid where some form of prospective payment is used as the basis for reimbursement. For example, as Chart 17 indicates, patients with a secondary diagnosis of alcohol or drug use have an average case mix index that is 41% higher than for those patients without a secondary diagnosis. The case mix index is a measure of resource consumption for patients for a given group of diagnoses and often serves as the basis for payment. However, these patients stay on average 68% longer in the hospital than patients without a substance abuse problem. Thus, they may be more expensive than level of reimbursement would reflect. As a result, those hospitals that have a larger share of patients with substance abuse as a comorbid condition may be at serious financial disadvantage. This, in turn, makes such patients less attractive, and limits their access to hospital care.

IV. POLICY IMPLICATIONS

At least one in five dollars that Medicaid spends on hospital care is related to substance abuse. This finding of the CASA study, combined with its identification of over 70 medical conditions attributable in whole or in part to substance abuse, has profound implications for substance abuse prevention and treatment under the Medicaid program. Moreover, given the pervasiveness of smoking, and alcohol and drug abuse through all segments of American society, the implications go beyond Medicaid to the entire health care system in this country.

Investing in Research

We need to increase our support for research that will tell us what works in prevention and treatment, for whom, and at what cost. Through the Federal Agency for Health Care Policy and Research and the National Institutes of Health, we are currently investing a considerable amount of money in evaluating and identifying more cost-effective treatment approaches for a variety of medical problems. Given the tremendous cost of substance abuse and its impact on such a wide range of medical problems, greater investment in evaluating substance abuse treatment may yield even greater benefits in reducing morbidity and costs.

In addition, with respect to basic research into the causes of diseases, the Federal government invests almost \$10 billion studying diseases such as AIDS, cancer and cardiovascular diseases. Yet, it spends only 5% of that amount on research into what causes substance addiction and abuse, a major risk factor for these and many other ailments.

Finally, while a considerable body of epidemiologic research already exists identifying the relationship between various substances and morbidity, there are still many gaps in our knowledge base. The interaction of smoking with a wide range of diseases has been well established; yet, the research is much less thorough with respect to alcohol, and is even more sketchy for legal and illegal drugs. It is important that we get a better understanding of the risks presented to us by these substances separately and synergistically.

Guaranteeing Treatment

We need to ensure that appropriate substance abuse treatment and continuing care is available to all who need it and is covered in all public and private insurance programs. This includes coverage for treatment of all substance abuse, including cigarettes.⁷ Currently, the Medicaid program has no explicit substance abuse treatment benefit and no mandate that the states provide such services. Limitations on

⁷For Medicaid, the number of women in the reproductive years who smoke, combined with high rate of birth complications, argues strongly for smoking cessation programs.

the kinds of facilities and counselors who can be reimbursed further restricts access.⁸

Treatment in general appears to suffer from misplaced priorities. In a short-sighted effort to cut costs, and due to skepticism about treatment effectiveness, the Administration, Congress, and private payers have been cutting back on the kinds of treatment that they cover. The reduction in private coverage shifts more of the cost back to the public sector, including Medicaid.

A distinguished working group of 19 experts in drug abuse research and treatment convened by CASA in collaboration with The Brown University Center of Alcohol and Addiction studies, concluded in March of this year, that "the inclusion of a substance abuse treatment benefit is a vital part of true health system reform." In response to this concern, the group designed a low-cost comprehensive benefit package.⁹

Increasing Access

In addition to expanding the services covered under existing programs, we need to ensure that no one who needs help is excluded by virtue of being ineligible for coverage. Currently, low-income male IV drug users between the ages of 21 and 64 are ineligible to participate in the Medicaid program.

Finally, we need to target prevention and treatment efforts to high-cost, vulnerable individuals. Services must be made more accessible to attract at-risk but hard-to-reach individuals in inner city schools, shelters, community health centers, etc. Pregnant women are a particularly important group to reach. Substance abuse-related complications of newborns account for a staggering 32.3% of all Medicaid hospital days. Yet many treatment centers will not treat pregnant women because of concerns about legal liability. The GAO estimated that only about 11% of the pregnant women in need of drug treatment actually receive care.

V. PREVIOUS RESEARCH

Alcohol and Other Drug Cost Studies

At present the most comprehensive studies on the economic costs of alcohol and other drug use are those commissioned by the Alcohol, Drug Abuse and Mental Health Administration in the 1980s. Cruze (1981) and Harwood (1984) studied the combined cost impact of alcohol and drug abuse and mental illness to society. Both studies, conducted by the Research Triangle Institute (RTI), estimated the total economic impact of alcohol and drug abuse and mental illness (ADM) disorders, including the direct costs of diagnoses and treatment of patients suffering from these illnesses, indirect costs associated with loss of earnings due to reduced or lost productivity, premature death, and other related costs.

In their estimates of treatment and costs, the RTI studies refined previous estimates by "identifying specific diseases and illnesses that are related to alcohol, drug abuse, and mental illness (ADM) and allocating costs based on the proportions of the illnesses or diseases that are attributable to ADM." However, these attributable proportions were almost solely alcohol-related: no drug-related illnesses were included. In some cases, furthermore, estimates ranged from 0.2% to 70%. Nevertheless, this work did provide a analysis of the alcohol literature and established a clear link between epidemiologic research and cost analysis.

In 1988, Rice, et al updated Harwood's cost analysis. Like Harwood, Rice attempted to estimate the total societal costs of alcohol, drug abuse, and mental illness (direct health care costs only accounted for 24% of these total costs). For estimating direct health care costs, however, Rice did not use the attributable percentages employed by Harwood. Instead, she created a methodology for addressing issues of comorbidity. Using the National Hospital Discharge Survey (NHDS), Rice first estimated the cost of alcohol, drug, or mental illness-related as a primary diagnoses following Harwood's model. Then, recognizing that secondary diagnoses of substance abuse complicates the treatment of other diseases and thus adds to hospital costs, Rice also calculated the additional days of care reported for all primary diagnoses that had a secondary ADM diagnosis. Rice acknowledges at the outset that her estimates are low, restricted by the information reported on the medical records. In fact, many studies have documented that underreporting of secondary diagnoses is common, especially for conditions such as substance abuse that do not

⁸ Medicaid is an underused resource with respect to substance abuse. For a more complete discussion of what is possible under the Medicaid program, CASA has recently (April, 1993) prepared a study entitled "Maximizing the Use of Medicaid Under the ACCESS Demonstration Program, An Opportunity for Change."

⁹ This document, available through CASA, was entitled "Recommendations on Substance Abuse Coverage and Health Care Reform." The paper was issued in March of this year.

require direct treatment but contribute to longer stays and are considered embarrassing by the patient.

Costs of Smoking

Quantifying the costs of smoking has been a major public health issue since the 1960's. Annually, the Surgeon General issues a report on smoking and health which summarizes all current epidemiologic evidence on the relationship between smoking and disease and death. The most noteworthy of these was *Reducing Health Consequences of Smoking: 25 Years of Progress*, issued in 1989, which reported smoking attributable fractions (SAFs) for ten selected causes of death using data collected in a four year, fifty state study conducted by the National Cancer Society. These SAFs represent the proportion of deaths for a given disease that could have been avoided if cigarette smoking were eliminated.

Many economic cost studies have relied on these estimates to calculate the number of smoking-attributable deaths for specific regions and the number of years of potential life lost as a result of smoking. Some have also employed these mortality statistics to estimate hospital utilization and costs. However, mortality SAFs, which measure smokers' risk of dying of a disease, are different than morbidity SAFs, or smokers' risk of contracting a disease. Thus, mortality SAFs cannot be used reliably for estimating morbidity or hospital costs.

Recognizing the shortcomings of using mortality SAFs in estimating health care costs, Rice (1986) developed a different methodology for identifying smokers' attributable risk of using health services using NHIS data. For people who had neoplastic, circulatory, and respiratory diseases, Rice analyzed the use of hospital days and physician visits by smokers compared to non-smokers by age and sex. From these ratios Rice was able to calculate morbidity attributable risks which she then applied to hospital and outpatient expenditures for these diseases to estimate annual smoking-related health care costs. While not as disease-specific as the mortality-based studies, Rice's methodology set a standard for estimating annual health care costs associated with smoking.

In addition to these point-in-time estimates, others have studied the lifetime costs of smoking. For example, Manning concludes that the cumulative impact of excess medical care required by smokers at all ages far outweighs shorter life expectancy. Hodgson using survey data from the National Medical Expenditures Survey (NMES) and the National Health Interview Survey (NHIS), breaks down the differences in smokers and non-smokers expenditures by payer, revealing that over the long term, payers that cover the younger age groups (i.e. private insurers and Medicaid) bear a greater burden of smokers' costs than does, for example, Medicare. These studies have current relevance in countering the arguments that measures designed to reduce smoking (e.g., increased cigarette tax) will, in fact, increase health care costs.

Other studies have estimated the costs of specific diseases (Harwood, 1985), of specific sub-populations (Phibbs, 1991; Rivo, 1990), of distinct hospital departments (Hauswald, 1989), and of state health expenditures (Rice, 1991; Spiegel, 1990) associated with one or more substance. Most of these studies employed some version of the Rice or Harwood methodology. CASA's study also starts with Rice and Harwood's previous work, incorporating both the concept of disease-specific attributable risks to substance abuse and the marginal affects of substance abuse as a secondary diagnosis

APPENDIX—DISEASES/CONDITIONS ATTRIBUTABLE TO SUBSTANCE ABUSE IN EPIDEMIOLOGIC RESEARCH (In percent)

Disease Category	Substance	Attributable Risks
Abortion	Smoking	15
AIDS—adults	I.V. Drug Use	32
AIDS-<13yrs.	I.V. Drug Use	55
Anal Cancer	Smoking	46
Angina Pectoris	Smoking	16
Asthma	Smoking and Passive Smoke	27
Bladder Cancer-males	Smoking	53
Bladder Cancer-female	Smoking	43
Brain Tumor	Smoking	20
Brain Tumor	Alcohol	27
Breast Cancer	Alcohol	13
Burns	Alcohol and Drugs	25

APPENDIX—DISEASES/CONDITIONS ATTRIBUTABLE TO SUBSTANCE ABUSE IN EPIDEMIOLOGIC RESEARCH—Continued

(In percent)

Disease Category	Substance	Attributable Risks
Cardiomyopathy	Alcohol	40
Cataracts—Female	Smoking	6
Cervical Cancer	Smoking	21
Cheek and Gum Cancer	Smokeless Tobacco	87
Cirrhosis	Alcohol	74
Colorectal Cancer	Alcohol	17
Congenital Defects	Smoking	21
Congenital syphilis	Cocaine	9
COPD—Male	Smoking	84
COPD—Female	Smoking	79
Coronary Artery Disease	Smoking	74
Coronary Heart Disease	Smoking	52
Crohn's Disease	Smoking	59
Dementia	Alcohol and Drugs	11
Diabetes—Female	Smoking	8
Duodenal Ulcers	Alcohol 5.	
Duodenal Ulcers	Smoking	52
Ectopic Pregnancy	Smoking	74
Endocarditis	IV Drugs	75
Epilepsy	Alcohol	30
Esophageal Cancer	Alcohol and Smoking	80
Head and Neck Cancer	Alcohol and Smoking,	50
Hepatitis A	IV Drugs	6
Hepatitis B	IV Drugs	12
Hepatitis C	IV Drugs	36
Hypertension	Alcohol	11
Influenza	Smoking	45
Kidney Cancer	Smoking	33
Laryngeal Cancer—Female	Alcohol and Smoking	80
Laryngeal Cancer—Male	Alcohol and Smoking	94
Leukemia	Smoking	30
Liver Cancer	Alcohol	29
Low Back Pain	Smoking	10
Low Birth Weight	Smoking	42
Lower Respiratory Illness (Acute Bronchitis & Pneumonia)	Passive Smoke	24
Lung Cancer—Males	Smoking	88
Lung Cancer—Females	Smoking	74
Myocardial Infarction—Female	Smoking	76
Myocardial Infarction—Male	Smoking	33
Oral Cavity Cancer	Alcohol and Smokeless Tobacco	85
Other Respir. Diseases—Male	Smoking	37
Other Respir. Diseases—Female	Smoking	35
Pancreatitis, Chronic	Alcohol	72
Pancreatitis, Acute	Alcohol	47
Pancreatic Cancer—Male	Smoking	41
Pancreatic cancer—Female	Smoking	19
Pelvic Inflammatory Disease	Smoking	33
Peptic Ulcers—Female	Smoking	29
Peripheral Vascular Disease (PVD)	Smoking	75
Perinatal Death	Smoking	17
Periodontitis	Smoking	40
Pharyngeal Cancer	Alcohol and Smoking	80
Pneumonia—Female	Smoking	35
Pneumonia—Male	Smoking	36
Pregnancy—Bleeding	Smoking	19
Pregnancy—Premature Rupture	Smoking	32
Pregnancy—Sportan. Abortion	Smoking and Cocaine	41
Pregnancy—Abrupt. Placentae	Smoking	42
Pregnancy—Placenta Previa	Smoking	43
Preterm Delivery	Smoking	25

APPENDIX—DISEASES/CONDITIONS ATTRIBUTABLE TO SUBSTANCE ABUSE IN EPIDEMIOLOGIC RESEARCH—Continued

(In percent)

Disease Category	Substance	Attributable Risks
Renal Cancer—Male	Smoking	39
Renal Cancer—Female	Smoking	32
Renal Pelvis Cancer	Smoking	60
Rheumatoid Arthritis	Smoking	17
Seizures	Alcohol	41
Stomach Cancer—Male	Smoking	39
Stomach Cancer—Female	Smoking	33
Stomach Ulcers	Alcohol	13
Stomach Ulcers—Male	Smoking	34
Stroke	Smoking and Cocaine	65
Trauma	Alcohol and Drugs	40
Tubal Pregnancy	Smoking	36
Ureter Cancer	Smoking	71

DATABASES

CASA Substance Abuse Epidemiologic Database, 1993. Based on a Medline search of studies establishing an epidemiologic link between the abuse of a substance and a medical disorder or disease. Included with each citation are the relative risks and the reported or calculated population attributable risk.

Health Care Financing Administration—Office of the Actuary—Medicaid Hospital Inpatient Data, F.Y. 1987–1982. A time series of actual Medicaid hospital expenditures.

National Association of Psychiatric Hospitals Annual Survey, 1992. A database of the clinical and administrative operations of 261 private psychiatric hospitals in the U.S. Trends in psychiatric discharges by principal diagnoses included alcohol related disorders and substance related disorders. Admissions are also broken down by payer.

National Health Interview Survey (NHIS), 1991. The 1991 National Center for Health Statistics survey on health status, acute and chronic conditions, and medical care use of the general U. S. population. Data is collected through personal household interviews of about 50,000 households involving 125,000 persons.

National Hospital Discharge Survey (NHDS), 1991. The 1991 survey of approximately 500 short-stay hospitals in the United States. Administered by the National Center for Health Statistics. Data is collected through a random sample of discharges and the associated medical records of some 200,000 cases. Data includes admissions, diagnoses, and procedures.

National Household Survey for Drug Abuse: Population Estimates, 1991. Approximately 32,600 households at 125 sampling units in the United States were interviewed in order to estimate the extent of drug abuse in the United States. The data was collected by the National Institute on Drug Abuse, US DHHS.

National Medical Expenditure Survey, 1987. 38,500 persons were interviewed in the Household Survey of the 1987 National Expenditure Survey (NMES). Along with many areas of health care utilization, population characteristics such as demographic and family relationships, income, disability, employment, health insurance status, and utilization data were collected. For our study, we used NMES data on the prevalence and levels of smoking.

BIBLIOGRAPHY

1. Aaronson, L.S., & Macnee, C.L. (1989). Tobacco, alcohol and caffeine use during pregnancy. *Journal of Obstetric, Gynecologic, and Neonatal Nursing*, 18(4), 279-287.

2. Adams, P.F., & Benson, V. (1991). *Current estimates from the National Health Interview Survey. National Center for Health Statistics. Vital and Health Statistics Series, 10(181).* (DHHS Publication No. PHS 92-1509). Washington, DC: U.S. Government Printing Office.

3. Advisory Committee to the Surgeon General (1986). *The health consequences of using smokeless tobacco: A report of the Advisory Committee to the Surgeon General.* Atlanta, GA: U.S. Department of Health and Human Services.

4. Alameda County Low Birth Weight Study Group. (1990). Cigarette smoking and the risk of low birth weight: A comparison in black and white women. *Epidemiology*, 1, 201-205.
5. Amler, R.W., & Dull, H.B. (1987). *Closing the gap: The burden of unnecessary illness*. New York: Oxford University Press.
6. Aspen Systems Corporation, comp. (1991). *Bibliography on smoking and health*. (DHHS Publication No. CDC 92-8399). Atlanta, GA: Centers for Disease Control.
7. Avila, M.H., Liang, M.H., Willett, W. C., Stampfer, M.J., Colditz G.A., Rosner, B., Roberts, W.N., Hennekens, C. H., & Speizer F. E. (1990). Reproductive factors, smoking, and the risk for rheumatoid arthritis. *Epidemiology*, 1, 285-291.
8. Baghurst P.A., McMichael, A.J., Slavotinek, A.H., Baghurst, K.I., Boyle, P., & Walker, A.M. (1991). A case-control study of diet and cancer of the pancreas. *American Journal of Epidemiology*, 134(2), 167-179.
9. Baldwin, W.A., Rosenfeld, B.A., Breslow, M.j., Buchman, T.G., Deutschman, C.S., & Moore, R.D. (1993). Substance abuse-related admissions to adult intensive care. *Chest*, 103(1), 21-25.
10. Bauchner, H., Zuckerman, B., McClain, M., Frank, D., Fried, L.E., & Kayne, H. (1988). Risk of sudden infant death syndrome among infants with in utero exposure to cocaine. *Journal of Pediatrics*, 113(5), 831-834.
11. Beilin, L.J. (1987). Epidemiology of alcohol and hypertension. *Advances in Alcohol and Substance Abuse*, 6(3), 69-87.
12. Beilin, L.J., & Puddey, I.B. (1992). Alcohol and hypertension. *Clinical and Experimental Hypertension [A]*, 14(1-2), 119-138.
13. Bell, J., The, E., Patel, A., Lewis, J., & Batey, R. (1988). The detection of at-risk drinking in a teaching hospital. *Medical Journal of Australia*, 149, 351-355.
14. Benichou, J. (1991). Methods of adjustment for estimating the attributable risk in case-control studies: A review. *Statistics in Medicine* 10, 1753-1773.
15. Bernstein, L., Jacobsberg, L., Ashman, T., Musagni, G., Goodwin, C. W., & Perry, S. (1992). Detection of alcoholism among burn patients. *Hospital and Community Psychiatry*, 43(3), 255-256.
16. Berrino, F. (1986). The combined effects of smoking and other agents. In D.G. Zaridze, & R. Peto (Eds.), *Tobacco: A major international hazard*, (pp. 167-171). Lyon, France: International Agency for Research on Cancer.
17. Berry, R.E., & Boland, J.P. (1977). *The economic cost of alcohol abuse*. New York: Free Press.
18. Blitzer, P.H. (1988). Epidemiology of head and neck cancer. *Seminars in Oncology*, 15(1), 2-9.
19. Blot, W.J. (1992). Alcohol and cancer. *Cancer Research*, 52 (Supplement), 21195-21235.
20. Blot, W.J., McLaughlin, J.K., Winn, D.M., Austin, D.F., Greenberg, R.S., Preston-Martin, S., Bernstein, L., Schoenberg, J.B., Stenhausen, A., & Fraumeni, J.F. (1988). Smoking and drinking in relation to oral and pharyngeal cancer. *Cancer Research*, 48(11), 3282-3287.
21. Bonita, R. (1986). Cigarette smoking, hypertension and the risk of subarachnoid hemorrhage: A population-based case-control study. *Stroke*, 17(5), 831-835.
22. Boyle, P., Hsieh, C.C., Maisonneuve, P., La Vecchia, C., Macfarlane, G.J., Walker, A.M., & Trichopoulos, D. (1989). Epidemiology of pancreas cancer (1988). *International Journal of Pancreatology*, 5, 327-346.
23. Bracken, M.B., Eskenazi, B., Sachse, K., McSharry, J.E., Hellenbrand, K., & Leo-Summers, L. (1990). Association of cocaine use with sperm concentration, motility, and morphology. *Fertility and Sterility*, 53(2), 315-322.
24. Brennan, F.N., & Lyttle J.A. (1987). Alcohol and seizures: A review. *Journal of the Royal Society of Medicine* 80 571-573.
25. Brinton, L.A., Nasca, P.C., Mallin, K., Baptiste, M.S., Wilbanks, G.D., & Richart, R.M. (1990). Case-control study of cancer of the vulva. *Obstetrics and Gynecology*, 75(5), 859-866.
26. Brock, K.E., MacLennan, R., Brinton, L.A., Melnick, J.L., Adam, E., Mock, P.A., & Berry, G. (1989). Smoking and infectious agents and risk of in situ cervical cancer in Sydney, Australia. *Cancer Research*, 49(17), 4925-4928.
27. Brown, J., King, A., & Francis, C.K. (1991). Cardiovascular effects of alcohol, cocaine, and acquired immune deficiency. *Cardiovascular Clinics*, 21(3), 341-376.
28. Brownson, R.C., Chang, J.C., & Davis, J.R. (1991). Cigarette smoking and risk of adult leukemia. *American Journal of Epidemiology*, 134(9), 938-941.
29. Brownson, R.C., Novotny, T.E., & Perry, M.C. (1993). Cigarette smoking and adult leukemia: A meta-analysis. *Archives of Internal Medicine*, 153, 469-475.

30. Burch, J.D., Craib, K.J.P., Miller, A.B., Risch, H.A., & Howe, G.R. (1987). An exploratory case-control study of brain tumors in adults. *Journal of the National Cancer Institute*, 78(4), 601-609.
31. Burch, J.D., Howe, G.R., Miller, A.B., & Semenciw, R. (1981). Tobacco, alcohol, asbestos, and nickel in the etiology of cancer of the larynx: A case-control study. *Journal of the National Cancer Institute*, 67(6), 1219-1224.
32. Burch, J.D., Rohan, T.E., Howe, G.R., Risch, H.A., Hill, G.B., Steele, R., & Miller, A.B. (1989). Risk of bladder cancer by source and type of tobacco exposure: A case-control study. *International Journal of Cancer*, 44(4), 622-628.
33. Burke, T.R. (1988). The economic impact of alcohol abuse and alcoholism. *Public Health Reports*, 103(6), 554-568.
34. Burkman R.T. (1988). Obesity, stress, and smoking: Their role as cardiovascular risk factors in women. *American Journal of Obstetrics and Gynecology*, 158(6, part 2), 1592-1597.
35. Burns P.B., & Swanson, G.M. (1991). Risk of urinary bladder cancer among blacks and whites: The role of cigarette use and occupation. *Cancer Causes and Control*, 2(6), 371-379.
36. Calkins, B.M. (1989). A meta-analysis of the role of smoking in inflammatory bowel disease. *Digestive Diseases and Sciences*, 34(12), 1841-1854.
37. Centers for Disease Control (1991). *HIV/AIDS surveillance*. Atlanta, GA: Centers for Disease Control.
38. Chick, J., Rund, D., & Gilbert, M. (1991). Orthopaedic trauma in men: The relative risk among drinkers and the prevalence of problem drinking in male orthopaedic admissions. *Annals of the Royal College of Surgeons of England*, 73, 311-315.
39. Chow, W., Daling, J.R., Weiss, N.S., & Voigt, L.F. (1988). Maternal cigarette smoking and tubal pregnancy. *Obstetrics and Gynecology*, 71(2), 167-170.
40. Chyou, P., Nomura, A.M.Y., & Stemmermann, G.N. (1992). A prospective study of attributable risk of cancer due to cigarette smoking. *American Journal of Public Health*, 82(1), 37-40.
41. Cleary, P.D., Miller, M., Bush, B.T., Warburg, M.M., Delbanco, T.L., & Aronson, M.D. (1988). Prevalence and recognition of alcohol abuse in a primary care population. *American Journal of Medicine*, 85, 466-471.
42. Cohen, S.M., & Johansson, S.L. (1992). Epidemiology and etiology of bladder cancer. *Urologic Clinics of North America*, 19(3), 421-428.
43. Connolly, G.N., Winn, D.M., Hecht, S.S., Henningfield, J.E., Walker, B., & Hoffman, D. (1986). The reemergence of smokeless tobacco. *New England Journal of Medicine*, 314(16), 1020-1027.
44. Cruze, A.M., Harwood, H.J., Kristiansen, P.L., Collins, J.J., & Jones, D.C. (1981). *Economic costs to society of alcohol and drug abuse and mental illness—1977. Volume I: Report*. (Report No. RTI/1923/00-14F). Research Triangle Park, NC: Research Triangle Institute.
45. Cruze, A.M., Harwood, H.J., Kristiansen, P.L., Collins, J.J., & Jones, D.C. (1981). *Economic costs to society of alcohol and drug abuse and mental illness—1977. Volume II: Technical appendices*. (Report No. RTI/1923/00-14F). Research Triangle Park, NC: Research Triangle Institute.
46. Cuzick, J., & Babiker, A.G. (1989). Pancreatic cancer, alcohol, diabetes mellitus and gall-bladder disease. *International Journal of Cancer* 43, 415-421.
47. Dagenais, G.R., Robitaille, N., Lupien, P.J., Christen, A., Gingras, S., Moorjani, S., Meyer, F., & Rochon, J. (1990). First coronary heart disease event rates in relation to major risk factors: Quebec cardiovascular study. *Canadian Journal of Cardiology*, 6(7), 274-280.
48. D'Avanzo, B., Negri, E., La Vecchia, C., Gramenzi, A., Bianchi, C., Francheschi, S., & Boyle, P. (1990). Cigarette smoking and bladder cancer. *European Journal of Cancer*, 26(6), 714-718.
49. Dayal, H.H., & Wilkinson, G.S. (1989). Epidemiology of renal cell cancer. *Seminars in Urology*, 7(3), 139-143.
50. Deyo, R.A., & Bass, J.E. (1989). Lifestyle and low-back pain: The influence of smoking and obesity. *Spine*, 14(5), 501-506.
51. Donnan, G.A., McNeil, J.J., Adena, M.A., Doyle, A.E., O'Malley, H.M., & Neill, G.C. (1989). Smoking as a risk factor for cerebral ischemia. *Lancet*, 2(8664), 643-647.
52. Drake, R.E., McGlaughlin, P., Pepper, B., & Minkoff, K. (1991). Dual diagnosis of major mental illness and substance disorder: An overview. *New Directions for Mental Health Services* 50 3-12.
53. Ehrlich, R., Kattan, M., Godbold, J., Saltzberg, D.S., Grimm, K.T., Landrigan, P.J., & Lilienfeld, D.E. (1992). Childhood asthma and passive smoking: Urinary

- cotinine as a biomarker of exposure. *American Review of Respiratory Disease*, 145(3), 594-599.
54. Fielding, J.E. (1985). Smoking: Health effects and control. *New England Journal of Medicine*, 313(8), 491-498.
55. Friedman, H.S. (1984). Cardiovascular effects of alcohol with particular reference to the heart. *Alcohol*, 1, 333-339.
56. Frischer, T., Kuehr, J., Meinert, R., Karmaus, W., Barth, R., Hertmann-Kunz, E., & Urbanek, R. (1992). Maternal smoking in early childhood: A risk factor for bronchial responsiveness to exercise in primary-school children. *Journal of Pediatrics*, 121(1), 17-22.
57. Gibbs, D.A., Hamill, D.N., & Magruder-Habib, K. (1991). Populations at increased risk of HIV infection: Current knowledge and limitations. *Journal of Acquired Immune Deficiency Syndromes*, 4, 881-889.
58. Gill, J.S., Shipley, M.J., Tsementzis, S.A., Hornby, R.S., Gill, S.K., Hitchcock, E.R., & Beevers, D.G. (1991). Alcohol consumption—A risk factor for hemorrhagic and non-hemorrhagic stroke. *American Journal of Medicine* 90, 489-497.
59. Goldbaum, G., Daling, J., & Milham, S. (1990). Risk factors for gastroschisis. *Teratology* 42(4), 397-403.
60. Gorsky, R.D., Schwartz, E., & Dennis, D. (1990). The morbidity, mortality, and economic costs of cigarette smoking in New Hampshire. *Journal of Community Health*, 15(3), 175-183.
61. Graham, N.M.H. (1990). The epidemiology of acute respiratory infections in children and adults: A global perspective. *Epidemiologic Reviews* 12, 149-178.
62. Gray, G.E. (1989). Nutrition and dementia. *Journal of the American Dietetic Association*, 89(12), 1795-1802.
63. Handler, A., Davis, F., Ferre, C., & Yeko, T. (1989). The relationship of smoking and ectopic pregnancy. *American Journal Public Health*, 79(9), 1239-1242.
64. Hankinson, S.E., Willett, W.C., Colditz, W.C., Seddon, J.M., Rosner, B., Speizer, F.E., & Stampfer, M.J. (1992). A prospective study of cigarette smoking and risk of cataract surgery in women. *Journal of the American Medical Association*, 268, 994-998.
65. Hartge, P., Silverman, D., Hoover, R., Schairer, C., Altman, R., Austin, D., Cantor, K., Child, M., Key, C., Marrett, L.D., Mason, T.J., Meigs, W.J., Myers, M.H., Narayana, A., Sullivan, W.J., Swanson, G.M., Thomas, D., & West, D. (1987). Changing cigarette habits and bladder cancer risk: A case-control study. *Journal of the National Cancer Institute*, 78(6), 1119-1125.
66. Harwood, H.J., Napolitano, D.M., Kristiansen, P.L., & Collins, J.J. (1984). *Economic costs to society of alcohol and drug abuse and mental illness: 1980*. (Report No. RTI/2734/00-01FR). Research Triangle Park, NC: Research Triangle Institute.
67. Harwood, H.J., & Napolitano, D.M. (1985). Economic implications of the fetal alcohol syndrome. *Alcohol Health and Research World*, 10(1), 38-44.
68. Hauser, W.A., Ng, S.K.C., & Brust, J.C.M. (1988). Alcohol, seizures, and epilepsy. *Epilepsia*, 29(Suppl. 2), S66-S78.
69. Hauswald, M. (1989). The cost of smoking: An emergency department analysis. *American Journal of Emergency Medicine*, 7(2), 187-190.
70. Haverkos, H.W. (1991). Infectious diseases and drug abuse: Prevention and treatment in the drug abuse treatment system. *Journal of Substance Abuse Treatment* 8, 269-275.
71. Haverkos, H.W., Genser, S.G., Grace, W.C., & Smeriglio, V.L. (1991). Complications of drug misuse. *Current Opinion in Psychiatry*, 4, 454-459.
72. Haverkos, H.W., & Lange, W.R. (1990). Serious infections other than human immunodeficiency virus among intravenous drug abusers. *Journal of Infectious Diseases*, 161, 894-902.
73. Heien, D.M., & Pittman, D.J. (1993). The external costs of alcohol abuse. *Journal of Studies on Alcohol*, 54, 302-307.
74. Heien D.M., & Pittman, D.J. (1989). The economic costs of alcohol abuse: An assessment of current methods and estimates. *Journal of Studies on Alcohol*, 50(6), 567-579.
75. Hennekens, C.H. (1983). Alcohol. In N.M. Kaplan, & J. Stamler (Eds.), *Prevention of coronary heart disease: Practical management of the risk factors*, (pp. 130-138). Philadelphia: Saunders.
76. Heuch, I., Kvale, G., & Bjelke, E. (1983). Use of alcohol, tobacco and coffee, and risk of pancreatic cancer. *British Journal of Cancer*, 48, 637-643.
77. Hirayama, T. (1977). Changing patterns of cancer in Japan with special reference to the decrease in stomach cancer mortality. Book A: Incidence of cancer in humans. In H.H. Hiatt, J.D. Watson, & J.A. Winsten (eds.), *Origins of human cancer*, (pp. 55-75). Cold Spring Harbor, NY: Cold Spring Harbor Laboratory.

78. Hodgson T.A. (1992). Cigarette smoking and lifetime medical expenditures. *Milbank Quarterly*, 70(1), 81-125.
79. Holly, E.A., Whittemore, A.S., Aston, D.A., Ahn, D.K., Nickoloff, B.J., & Kristiansen, J.J. (1989). Anal cancer incidence: Genital warts, anal fissure or fistula, hemorrhoids, and smoking. *Journal of the National Cancer Institute* 81, 1726-1731.
80. Howe, G., Rohan, T., Decarli, A., Iscovich, J., Kaldor, J., Katsouyanni, K., Marubini, E., Miller, A., Riboli, E., Toniolo, P., & Trichopoulos, D. (1991). The association between alcohol and breast cancer risk: Evidence from the combined analysis of six dietary case-control studies. *International Journal of Cancer* 47, 707-710.
81. Jenkins, M.A., Hopper, J.L., Flander, L.B., Carlin, J.B., & Giles, G.G. (1993). The associations between childhood asthma and atopy, and parental asthma, hay fever and smoking. *Paediatric and Perinatal Epidemiology*, 7(1), 67-76.
82. Jernigan, D.H., Mosher, J.F., & Reed, D.F. (1989). Alcohol-related problems and public hospitals: Defining a new role in prevention. *Journal of Public Health Policy*, 10(3), 324-352.
83. Kannel, W.B., & Higgins, M. (1990). Smoking and hypertension as predictors of cardiovascular risk in population studies. *Journal of Hypertension. Supplement*, 8(5), S3-S8.
84. Kashkin, K.B. (1989). Hooked on hormones? An anabolic steroid addiction hypothesis. *Journal of the American Medical Association*, 262, 3166-3170.
85. Kato, I., Tominga, S., & Ikari, A. (1990). A case-control study of male colorectal cancer in Aichi Prefecture, Japan, with special reference to occupational activity level, drinking habits and family history. *Japanese Journal of Cancer Research*, 81(2), 115-121.
86. Kawanishi, M., Nakamoto, A., Konemori, G., Horiuchi, I., & Kajiyama, G. (1990). Coronary sclerosis risk factors in males with special reference to lipoproteins and apoproteins: Establishing an index. *Hiroshima Journal of Medical Sciences*, 39(3), 61-64.
87. Khoury, M.J., Gomes-Farias, M., & Mulinare, J. (1989). Does maternal cigarette smoking during pregnancy cause cleft lip and palate in offspring? *American Journal of Diseases of Children*, 143, 333-337.
88. Kiesler, C.A., Simpkins, C., & Morton, T. (1990). Predicting length of hospital stay for psychiatric inpatients. *Hospital and Community Psychiatry*, 41(2), 149-154.
89. Kofoed, L. (1991). Assessment of comorbid psychiatric illness and substance disorders. *New Directions for Mental Health Services*, 50, 43-55.
90. Komajda, M., Richard, J.L., Bouhour, J.B., Sacrez, A., Bourdonnec, C., Gerbaux, A., Rozensztajn, L., Lablanche, J.M., Matinat, D., Morand, P., & Grosgeat, Y. (1986). Dilated cardiomyopathy and the level of alcohol consumption: A planned multicentre case control study. *European Heart Journal* 7, 512-519.
91. Kune, G.A., & Vitetta, L. (1992). Alcohol consumption and the etiology of colorectal cancer: A review of the scientific evidence from 1957 to 1991. *Nutrition and Cancer*, 18(2), 97-111.
92. Kuritz, S.J., & Landis, J.R. (1988). Summary attributable risk estimation from unmatched case-control data. *Statistics in Medicine*, 7, 507-517.
93. La Vecchia, C., Franceschi, S., Decarli, A., Fasoli, M., Gentile, A., & Tognoni, G. (1986). Cigarette smoking and the risk of cervical neoplasia. *American Journal of Epidemiology*, 123(1), 22-29.
94. La Vecchia, C., Negri, E., D'Avanzo, B., & Franceschi, S. (1990). Smoking and renal cell carcinoma. *Cancer Research*, 50, 5231-5233.
95. LaKier, J.B. (1992). Smoking and cardiovascular disease. *American Journal of Medicine*, 93(Suppl 1A), 8S-12S.
96. Layde, P.M. (1989). Smoking and cervical cancer: Cause or coincidence? *Journal of the American Medical Association*, 261, 1631-1633.
97. Leske, M.C., Chylack, L.T., & Wu, S. (1991). The lens opacities case-control study: Risk factors for cataract. *Archives of Ophthalmology*, 109, 244-251.
98. Licciardone, J.C., Brownson, R.C., Chang, J.C., & Wilkins, J.R. (1990). Uterine cervical cancer risk in cigarette smokers: A meta-analytic study. *American Journal of Preventive Medicine*, 6(5), 274-281.
99. Lilienfeld, A.M. (1980). *Foundations of epidemiology*. New York: Oxford University Press. 191-218, 342-353.
100. Lindenbaum, G.A., Carroll, S.F., Daskal, I., & Kapusnick, R. (1989). Patterns of alcohol and drug abuse in an urban trauma center: The increasing role of cocaine abuse. *Journal of Trauma*, 29(12), 1654-1658.
101. Lipsky, B.A., Boyko, E.J., Inui, T.S., & Koepsell, T.D. (1986). Risk factors for acquiring pneumococcal infections. *Archives of Internal Medicine*, 146(11), 2179-2185.

102. London, S.J., Colditz, G.A., Stampfer, M.J., Willett, W.C., Rosner, B.A., & Speizer, F.E. (1989). Prospective study of smoking and the risk of breast cancer. *Journal of the National Cancer Institute*, 81(21), 1625-1631.
103. Longnecker, M.P., Berlin, J.A., Orza, M.J., & Chalmers, T.C. (1988). A meta-analysis of alcohol consumption in relation to risk of breast cancer. *Journal of the American Medical Association*, 260(6), 652-656.
104. Longnecker, M.P., Orza, M.J., Adams, M.E., Vioque, J., & Chalmers, T.C. (1990). A meta-analysis of alcoholic beverage consumption in relation to risk of colorectal cancer. *Cancer Causes and Control*, 1, 59-68.
105. Longstreth, W.T., Koepsell, T.D., Yerby, M.S., & van Belle, G. (1985). Risk factors of subarachnoid hemorrhage. *Stroke*, 16(3), 377-385.
106. Love, B.B., Biller, J., Jones, M.P., Adams, H.P., & Bruno, A. (1990). Cigarette smoking: A risk factor for cerebral infarction in young adults. *Archives of Neurology*, 47(6), 693-698.
107. Lowenfels, A.B., & Zevola, S.A. (1989). Alcohol and breast cancer: An overview. *Alcoholism: Clinical and Experimental Research*, 13(1), 109-111.
108. Lutinger, B., Graham, K., Einarson, T.R., & Koren, G. (1991). Relationship between gestational cocaine use and pregnancy outcome: A meta-analysis. *Teratology*, 44, 405-414.
109. Mack, T.M., Yu, M.C., Hanisch, R., & Henderson, B.E. (1986). Pancreas cancer and smoking, beverage consumption, and past medical history. *Journal of the National Cancer Institute*, 76(1), 49-60.
110. Maheswaran, R., Potter, J.F., & Beevers, D.G. (1986). The role of alcohol in hypertension. *Journal of Clinical Hypertension*, 2(2), 172-178.
111. Malin, H.J., & Munch, N.E. (1980). *Implicated alcohol and disease entities: Alcohol as factor in the nation's health*. No place of publication cited: General Electric Company.
112. Malloy, M.H., Hoffman, H.J., & Peterson, D.R. (1992). Sudden infant death syndrome and maternal smoking. *American Journal of Public Health*, 82(10), 1380-1382.
113. Manson, J.E., Tosteson, H., Ridker, P.M., Satterfield, S., Herbert, P., O'Connor, G.T., Buring, J.E., & Hennekens, C.H. (1992). The primary prevention of myocardial infarction. *New England Journal of Medicine*, 326(21), 1406-1416.
114. Marchbanks, P.A., Lee, N.C., & Peterson, H.B. (1990). Cigarette smoking as a risk factor for pelvic inflammatory disease. *American Journal of Obstetrics and Gynecology* 162(3), 639-644.
115. Marcy, T.W., & Merrill, W.W. (1987). Cigarette smoking and respiratory tract infection. *Clinics in Chest Medicine*, 8(3), 381-391.
116. Mayes, L.C., Granger, R.H., Bronstein, M.H., & Zuckerman, B. (1992). The problem of prenatal cocaine exposure: A rush to judgement. *Journal of the American Medical Association*, 267, 406-408.
117. McBride, P.E. (1992). The health consequences of smoking: Cardiovascular diseases. *Medical Clinics of North America*, 76(2), 333-353.
118. McIntosh, I.D. (1984). Smoking and pregnancy: Attributable risks and public health implications. *Canadian Journal of Public Health*, 75, 141-148.
119. McLaughlin, J.K., Silverman, D.T., Hsing, A.W., Ross, R.K., Schoenberg, J.B., Yu, M.C., Stemhagen, A., Lynch, C.F., Blot, W.J., & Fraumeni, J.F. (1992). Cigarette smoking and cancers of the renal pelvis and ureter. *Cancer Research*, 52, 254-257.
120. Merletti, F., Boffetta, P., Ciccone, G., Mashberg, A., & Terracini, B. (1989). Role of tobacco and alcoholic beverages in the etiology of cancer of the oral cavity/oropharynx in Torino, Italy. *Cancer Research*, 49, 4919-4924.
121. Mills, P.K., Newell, G.R., Beeson, W.L., Fraser, G.E., & Phillips, R.L. (1990). History of cigarette smoking and risk of leukemia and myeloma: Results from the Adventist health study. *Journal of the National Cancer Institute*, 82(23), 1832-1836.
122. Mirkin, I.R., Remington, P.L., Moss, M., & Anderson, H. (1989). Liver cancer in Wisconsin: The potential for prevention. *Wisconsin Medical Journal*, 89(2), 49-53.
123. Moore, R.D., Bone, L.R., Geller, G., Mamon, J.A., Stokes, E.J., & Levine, D.M. (1989). Prevalence, detection, and treatment of alcoholism in hospitalized patients. *Journal of the American Medical Association*, 261(3), 403-407.
124. Morrison, A.S., Buring, J.E., Verhoek, W.G., Aoki, K., Leck, I., Ohno, Y., & Obata, K. (1984). An international study of smoking and bladder cancer. *Journal of Urology*, 131, 650-654.
125. Muir, C.S., & Zaridze, D.G. (1986). Smokeless tobacco and cancer: An overview. In D. G. Zaridze, & R. Peto (Eds.), *Tobacco: A major international hazard*, (pp. 35-43). Lyon, France: International Agency for Research on Cancer.

126. Muscat, J.E., & Wynder, E.L. (1992). Tobacco, alcohol, asbestos, and occupational risk factors for laryngeal cancer. *Cancer*, 69, 2244-2251.
127. Myhra, W., Davis, M., Mueller, B.A., & Kickok, D. (1992). Maternal smoking and the risk of polyhydramnios. *American Journal of Public Health*, 82(2), 176-179.
128. Negri, E., La Vecchia, C., Franceschi, S., Decarli, A., & Bruzzi, P. (1992). Attributable risks for oesophageal cancer in Northern Italy. *European Journal of Cancer*, 28A(6/7), 1167-1171.
129. Newcomb, P.A., & Carbone, P.P. (1992). The health consequences of smoking: Cancer. *Medical Clinics of North America*, 76(2), 305-331.
130. Nomura, A., Kolonel, L.N., & Yoshizawa, C.N. (1989). Smoking, alcohol, occupation, and hair dye use in cancer of the lower urinary tract. *American Journal of Epidemiology*, 130(6), 1159-1163.
131. Paffenbarger, R.S., Hyde, R.T., Wing, A.L., & Hsieh, C. (1986). Cigarette smoking and cardiovascular diseases. In D.G. Zaridze, & R. Peto (Eds.), *Tobacco: A major international hazard*, (pp. 45-59). Lyon, France: International Agency for Research on Cancer.
132. Parazzini, F., Hildebrandt, A., Ferraroni, M., La Vecchia, C., & Brinton, L.A. (1990). Relative and attributable risk for cervical cancer: A comparative study in the United States and Italy. *International Journal of Epidemiology*, 19(3), 539-545.
133. Parker, D.L., Shultz, J.M., Gertz, L., Berkelman R., & Remington, P.L. (1987). The social and economic costs of alcohol abuse in Minnesota, 1983. *American Journal of Public Health*, 77(8), 982-986.
134. Pell, S., & D'Alonzo, C.A. (1968). The prevalence of chronic disease among problem drinkers. *Archives of Environmental Health*, 16, 679-684.
135. Perucci, C.A., Davoli, M., Rapiti, E., Abeni, D.D., & Forastiere, F. (1991). Mortality of intravenous drug users in Rome: A cohort study. *American Journal of Public Health*, 81, 1307-1310.
136. Phibbs, C.S., Bateman, D.A., & Schwartz, R.M. (1991). The neonatal costs of maternal cocaine use. *Journal of the American Medical Association*, 266(11), 1521-1526.
137. Phillips, R.S., Tuomala, R.E., Feldblum, P.J., Schachter, J., Rosenberg, M.J., & Aronson, M.D. (1992). The effect of cigarette smoking, Chlamydia trachomatis infection, and vaginal douching on ectopic pregnancy. *Obstetrics and Gynecology*, 79(1), 85-90.
138. Pierce, J.A. (1988). Antitrypsin and emphysema: Perspective and prospects. *Journal of American Medical Association*, 259, 2890-2895.
139. Research Triangle Institute (1991). *National Household Survey on Drug Abuse: Population estimates 1991*. (DHHS Publication No. ADM 92-1887). Rockville, MD: National Institute on Drug Abuse.
140. Rice, D.P., Hodgson, T.A., Sinsheimer, P., Browner, W., & Ropstein, A.N. (1986). The economic costs of the health effects of smoking, 1984. *Milbank Quarterly*, 64(4), 489-547.
141. Rice, D.P., Kelman, S., Miller, L.S., & Dunmeyer, S. (1990). *The economic costs of alcohol and drug abuse and mental illness: 1985*. (DHHS Publication No. ADM 90-1694). Washington, DC: U.S. Government Printing Office.
142. Rice, D.P., Kelman, S., & Miller, L.S. (1991). Economic cost of drug abuse. *NIDA Research Monograph*, 113, 10-32.
143. Rice, D.P., Kelman, S., & Miller, L.S. (1991). Estimates of economic costs of alcohol and drug abuse and mental illness, 1985 and 1988. *Public Health Reports*, 106(3), 280-291.
144. Rice, D.P., & Kelman, S. (1989). Measuring comorbidity and overlap in the hospitalization cost for alcohol and drug abuse and mental illness. *Inquiry*, 26, 249-260.
145. Rice, D.P., & Max, W. (1992). *The cost of smoking in California, 1989*. San Francisco: Institute for Health and Aging, School of Nursing, University of California.
146. Rimm, E.B., Manson, J.E., Stampfer, M.J., Colditz, G.A., Willett, W.C., Rosner, B., Hennekens, C.H., & Speizer, F.E. (1993). Cigarette smoking and the risk of diabetes in women. *American Journal of Public Health*, 83(2), 211-214.
147. Rivo, M.L., Kofie, V., Schwartz, E., Levy, M.E., & Tuckson, R.V. (1989). Comparisons of black and white smoking-attributable mortality, morbidity, and economic costs in the District of Columbia. *Journal of the National Medical Association*, 81(11), 1125-1130.
148. Ross, R.K., Paganini-Hill, A., Landolph, J., Gerkins, V., & Henderson, B.E. (1989). Analgesics, cigarette smoking, and other risk factors for cancer of the renal pelvis and ureter. *Cancer Research*, 49, 1046-1048.
149. Rothman, K.J. (1986). *Modern epidemiology*. Boston: Little, Brown.

150. Ryan P., Lee, M.W., North, J.B., & McMichael, A.J. (1992). Risk factor for tumors of the brain and meninges: Results from the Adelaide adult brain tumor study. *International Journal of Cancer*, 51, 20-27.
151. Schiffers, E., Jamart, J., & Renard, V. (1987). Tobacco ad occupation as risk factors in bladder cancer: A case-control study in southern Belgium. *International Journal of Cancer*, 39, 287-292.
152. Schottenfeld, D. (1979). Alcohol as a co-factor in the etiology of cancer. *Cancer*, 43, 1962-1966.
153. Schottenfeld, D. (1992). The etiology and prevention of aerodigestive tract cancers. In G. R. Newell, & W. K. Hong (Eds.), *Biology and prevention of aerodigestive tract cancers*, (pp. 1-19). New York: Plenum.
154. Sherman, C.B. (1991). Health effects of cigarette smoking. *Clinics in Chest Medicine*, 12(4), 643-658.
155. Sherman, C.B. (1992). The health consequences of cigarette smoking: Pulmonary diseases. *Medical Clinics of North America*, 76(2), 355-375.
156. Shinton, R., & Beevers, G. (1989). Meta-analysis of relation between cigarette smoking and stroke. *British Medical Journal*, 298, 789-794.
157. Shopland, D.R., Eyre, H.J., & Pechacek, T.F. (1991). Smoking-attributable cancer mortality in 1991: Is lung cancer now the leading cause of death among smokers in the United States? *Journal of the National Cancer Institute*, 83(16), 1142-1148.
158. Shultz, J.M., Novotny, T.E., & Rice, D.P. (1991). Quantifying the disease impact of cigarette smoking with SAMMEC II software. *Public Health Reports*, 106(3), 326-333.
159. Shultz, J.M., Rice, D.P., Parker, D.L., Goodman, R. A., Stroh, G., & Chalmers, N. (1991). Quantifying the disease impact of alcohol with ARDI software. *Public Health Reports*, 106(4), 443-450.
160. Shultz, J.M., Novotny, T.E., & Rice, D.P. (undated). *SAMMEC 2.1 computer software and documentation*. Atlanta, GA: Centers for Disease Control.
161. Simpson, R.J., & Smith, N.G.A. (1986). Maternal smoking and low birthweight: Implications for antenatal care. *Journal of Epidemiology and Community Health*, 40, 223-227.
162. Smoking-attributable mortality, morbidity, and economic costs--California, 1985. (1989). *Morbidity and Mortality Weekly Review*, 38(16), 272-275.
163. Soderstrom, C.A., Trifillis, A.L., Shankar, B.S., Clark, W.E., & Cowley, R.A. (1988). Marijuana and alcohol use among 1023 trauma patients: A prospective study. *Archives of Surgery*, 123, 733-737.
164. Sood, A.K. (1991). Cigarette smoking ad cervical cancer: Meta-analysis and critical review of recent studies. *American Journal of Preventive Medicine*, 7(4), 208-213.
165. Spiegel, R.A., & Cole, T.B. (1990). Smoking-attributable mortality, morbidity and economic costs in North Carolina. *North Carolina Medical Journal*, 51(11), 589-592.
166. Spriggs, D.A., French, J.M., Murdy, J.M., Bates, D., & James, O.F. (1990). Historical risk factors for stroke: A case control study. *Age and Ageing*, 19(5), 280-287.
167. Steel, E. (1992). Epidemiologic studies of HIV/AIDS ad drug abuse. *American Journal of Drug and Alcohol Abuse*, 18(2), 167-175.
168. Stergachis, A., Scholes, D., Daling, J.R., Weiss N.S., & Chu, J. (1991). Maternal cigarette smoking and the risk of tubal pregnancy. *American Journal of Epidemiology*, 133(4), 332-337.
169. Suguihara, C., & Bancalari, E. (1991). Substance abuse during pregnancy: Effects on respiratory function in the infant. *Seminars in Perinatology*, 15(4), 302-309.
170. Tuyns, A.J., Esteve, J., Raymond, L., Berrino, F., Benhamou, E., Blanchet F., Boffetta, P., Crosignai, P., del Moral, A., Lehman, W., Marletti, F., Pequignot, G., Riboli, E., Sancho-Garnier, H., Terracini, B., Zubiri, A., & Zubiri, L. (1988). Cancer of the larynx/hypopharynx, tobacco and alcohol: IARC international case-control study in Turin and Varese (Italy), Zaragoza and Navarra (Spain), Geneva (Switzerland) and Calvados (France). *International Journal of Cancer*, 41, 483-491.
171. Tweedie, R.L., & Mengersen, K.L. (1992). Lung cancer and passive smoking: Reconciling the biochemical and epidemiological approaches. *British Journal of Cancer*, 66, 700-705.
172. U.S. Department of Health ad Human Services (1990). *The health benefits of smoking cessation: A report of the Surgeon General*. (DHHS Publication No. CDC 90-8416). Washington, DC: U.S. Government Printing Office.

173. U.S. Department of Health and Human Services (1992). *Health United States 1991 and prevention profile*. (DHHS Publication No. PHS 92-1232). Washington, DC: U.S. Government Printing Office.
174. U.S. Department of Health and Human Services (1989). *Reducing the health consequences of smoking: 25 years of progress: A report of the Surgeon General*. (DHHS Publication No. CDC 89-8411). Washington, DC: U.S. Government Printing Office.
175. U.S. Department of Health and Human Services (1987). *Sixth special report to the U.S. Congress on alcohol and health from the Secretary of Health and Human Services*. Washington, DC: U.S. Government Printing Office.
176. U.S. Department of Health and Human Services (1990). *Smoking and health: A national status report: A report to Congress (2nd ed.)*. (DHHS Publication No. CDC 87-8396). Washington, DC: U.S. Government Printing Office.
177. U.S. Environmental Protection Agency (1992). *Respiratory health effects of passive smoking: Lung cancer and other disorders: (EPA/600/6-90/006F)*. Washington, DC: U.S. Environmental Protection Agency.
178. Virji, S.K., & Cottingham, E. (1991). Risk factors associated with preterm deliveries among racial groups in a national sample of married mothers. *American Journal of Perinatology*, 8(5), 347-353.
179. Voigt, L.F., Hollenbach, K.A., Krohn, M.A., Daling, J.R., & Hickok, D.E. (1990). The relationship of abruptio placentae with maternal smoking and small for gestational age infants. *Obstetrics and Gynecology*, 75(5), 771-771.
180. Weissman, M.M., Myers, J.K., & Harding, P.S. (1980). Prevalence and psychiatric heterogeneity of alcoholism in a United States urban community. *Journal of Studies on Alcohol*, 41(7), 672-681.
181. Willers, S., Svenonius, E., & Skarping, G. (1991). Passive smoking and childhood asthma: Urinary cotinine levels in children with asthma and in referents. *Allergy*, 46(5), 330-334.
182. Willett, W.C., Green, A., Stampfer, M.J., Speizer, F.E., Colditz, G.A., Rosner, B., Monson, R.R., Stason, W., & Hennekens, C.H. (1987). Relative and absolute excess risks of coronary heart disease among women who smoke cigarettes. *New England Journal of Medicine*, 317(21), 1303-1309.
183. Willett, W.C., Stampfer, M.J., & Colditz, G.A. (1989). Does alcohol consumption influence the risk of developing breast cancer? Two views. *Important Advances in Oncology*, 267-281.
184. Williams, M.A., Mittendorf, R., & Monson, R.R. (1991). Chronic hypertension, cigarette smoking, and abruptio placentae. *Epidemiology*, 2(6), 450-453.
185. Williams, M.A., Mittendorf, R., Lieberman, E., Monson, R.R., Schoenbaum, S.C., & Genest, D.R. (1991). Cigarette smoking during pregnancy in relation to placenta previa. *American Journal of Obstetrics and Gynecology*, 165, 28-32.
186. Williams, M.A., Mittendorf, R., Stubblefield, P.G., Lieberman, E., Schoenbaum, S. C., & Monson, R.R. (1992). Cigarettes, coffee, and preterm premature rupture of the membranes. *American Journal of Epidemiology*, 135(8), 895-903.
187. Winkelstein, W. (1990). Smoking and cervical cancer—current status: A review. *American Journal of Epidemiology*, 131(6), 945-957.
188. Winn, D.M. (1992). Smokeless tobacco and aerodigestive tract cancers: Recent research directions. In G.R. Newell, & W.K. Hong (Eds.), *The biology and prevention of aerodigestive tract cancers*, (pp. 36-46). New York: Plenum.
189. Wynder, E.L., Hall, N.E., & Polansky, M. (1983). Epidemiology of coffee and pancreatic cancer. *Cancer Research*, 43(8), 3900-3906.
190. Yen, S., Hsieh, C.C., & MacMahon, B. (1982). Consumption of alcohol and tobacco and other risk factors for pancreatitis. *American Journal of Epidemiology*, 116(3), 407-414.
191. Yoder, L., & Rubin, M. (1992). The epidemiology of cervical cancer and its precursors. *Oncology Nursing Forum*, 19(3), 485-493.
192. Zhang, J., & Fried, D.B. (1992). Relationship of maternal smoking during pregnancy to placenta previa. *American Journal of Preventive Medicine*, 8(5), 278-282.
193. Zwaag, R.V., Lemp, G.F., Hughes, J.P., Ramanathan, K.B., Sullivan, J.M., Schick, E.C., & Mirvis, D.M. (1988). The effect of cigarette smoking on the pattern of coronary atherosclerosis. *Chest*, 84(2), 290-295.

Chart 1: Estimated 1991 Substance Abuse Impact on Medicaid Inpatient Hospital Costs

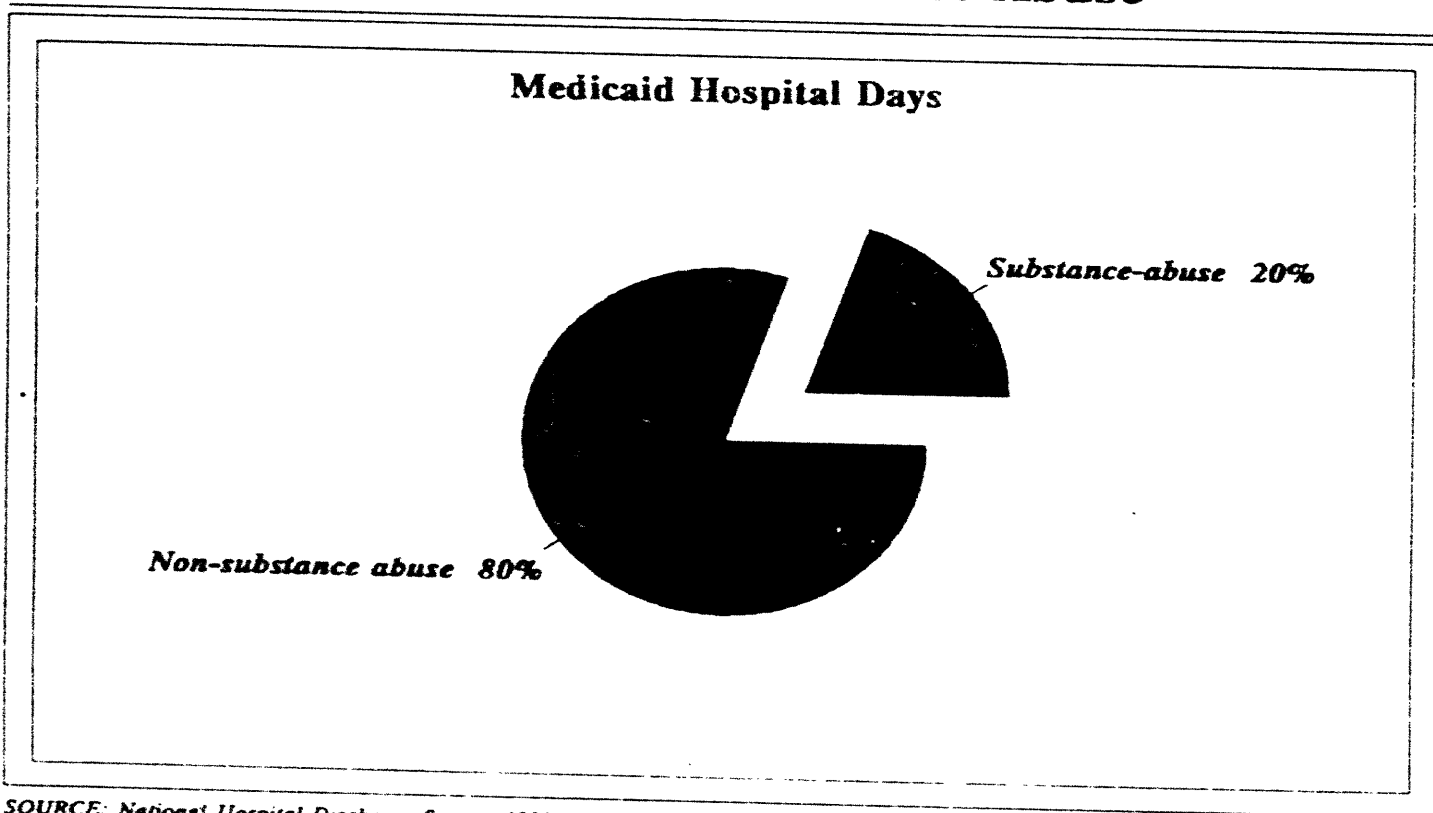
Substance Abuse-Related Costs \$4.2 billion

Total Hospital Costs \$21.6 billion

% of Total 19.2%

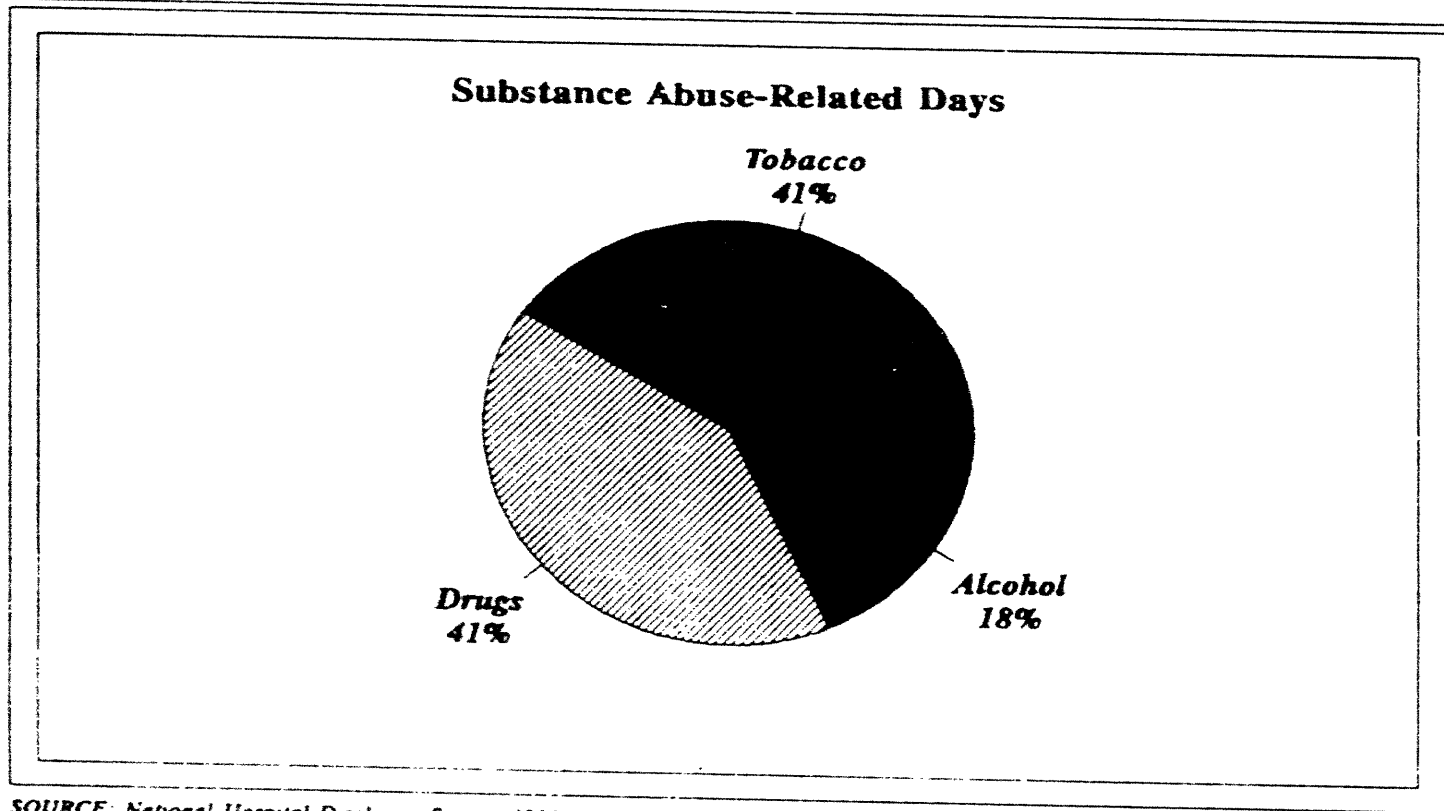
*SOURCES: National Hospital Discharge Survey 1991; Health Care Financing Administration -
Office of the Actuary - 1993 Medicaid Statistics*

**Chart 2: 1 out of 5 Medicaid Hospital Days
Associated with Substance Abuse**



SOURCE: National Hospital Discharge Survey, 1991

Chart 3: Medicaid Substance Abuse-Related Hospital Days by Substance



SOURCE: National Hospital Discharge Survey, 1991.

Chart 4: Substance Abuse and Medicaid
Short and Long-Term Costs

- Short-term Costs \$1.93 billion
- Long-term Costs \$1.00 billion

Chart 5: Substance Abuse Costs to Medicaid

Total Hospital Care, 1991

		% of Total
1. Direct Treatment for Substance Abuse	\$776,305,150	18.7
General Hospitals - Inpatient	\$538,607,250	
Psychiatric Hospitals	\$237,697,900	
2. Treatment for Diseases/Conditions Totally Attributable to Substance Abuse	\$112,014,143	2.7
3. Treatment for Diseases/Conditions Where Substance Abuse Is a Major Risk Factor	\$2,932,558,132	70.5
4. Additional Days Required for Patients with A Secondary Diagnosis of Substance Abuse	\$336,461,250	8.1
Substance Abuse Total	\$4,157,444,995	

SOURCES National Hospital Discharge Survey, 1991; 1992 HCFA Statistics,
National Association of Psychiatric Hospitals Annual Survey 1992.

Chart 6: Medicaid Direct Treatment Days and Costs of Substance Abuse *in U.S. General Hospitals, 1991*

DIRECT TREATMENT CLASSIFICATION	DAYS	% of all Direct Treatment Days
Alcohol Dependence Syndrome	290,934	
Alcohol Psychoses	65,539	
Nondependent Alcohol Abuse	23,024	
Alcohol Poisoning	931	
SUBTOTAL - Alcohol	380,428	53%
Drug Dependence	218,066	
Drug Poisoning	53,095	
Nondependent Abuse of Drugs	51,861	
Drug Psychoses	14,692	
SUBTOTAL - Drugs	337,715	47%
DIRECT TREATMENT DAYS	718,143	100%
DIRECT TREATMENT COSTS (DIRECT TREATMENT DAYS X \$750/day in 1991)	\$538,607,250	

SOURCE: National Hospital Discharge Survey, 1991.

Chart 6: Medicaid Direct Treatment Days and Costs of Substance Abuse *in U.S. General Hospitals, 1991*

DIRECT TREATMENT CLASSIFICATION	DAYS	% of all Direct Treatment Days
Alcohol Dependence Syndrome	290,934	
Alcohol Psychoses	65,539	
Nondependent Alcohol Abuse	23,024	
Alcohol Poisoning	931	
SUBTOTAL - Alcohol	380,428	53%
Drug Dependence	218,066	
Drug Poisoning	53,095	
Nondependent Abuse of Drugs	51,861	
Drug Psychoses	14,692	
SUBTOTAL - Drugs	337,715	47%
DIRECT TREATMENT DAYS	718,143	100%
DIRECT TREATMENT COSTS (DIRECT TREATMENT DAYS X \$750/day in 1991)	\$538,607,250	

SOURCE: National Hospital Discharge Survey, 1991.

Chart 7: Medicaid Days for Diseases with Substance Abuse as a Major Risk Factor

U.S. General Hospitals, 1991

Disease/ Condition	Days	% of Total Days
Newborn/Neonate Complications	1,261,366	32.3
Cardiovascular Disease	614,463	15.7
Respiratory Disease	612,974	15.7
Burns/Trauma	355,791	9.1
Ncoplastms	265,899	6.8
AIDS	211,627	5.4
Cerebrovascular Disease	189,406	4.8
Pregnancy Complications	155,483	4.0
Digestive Disease	113,343	2.9
Other	129,726	3.3
 TOTAL 1991 MEDICAID DAYS	 3,910,078	
TOTAL 1991 MEDICAID COSTS	\$2,932,558,132	

*SOURCES: National Hospital Discharge Survey, 1991.
CASA Substance Abuse Epidemiologic Database, 1993.*

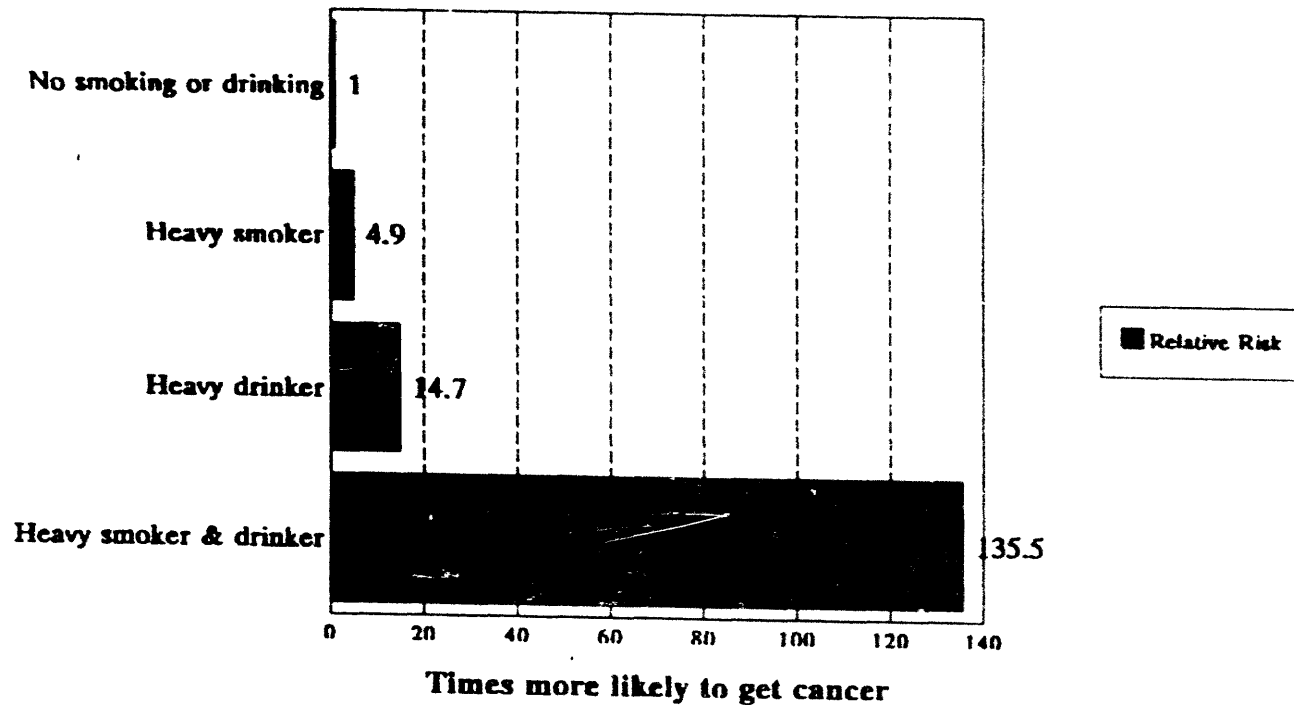
**CHART 8: DETAILED BREAKDOWN OF MEDICAID DAYS
ATTRIBUTABLE TO SUBSTANCE ABUSE AS A MAJOR RISK
FACTOR**

Disease	Days
AIDS	211,627
Complications in Pregnancy	155,483
Abortion	1,067
Abortion Placentae	4,878
Ectopic Pregnancy	23,970
Premature Rupture of Membrane	11,163
Spontaneous Abortion	11,452
Placenta Previa	40,981
Preterm Delivery	61,971
Neoplasms	265,899
Bladder	4,077
Brain	16,923
Breast	4,183
Cervix	8,873
Colon/Rectum	16,968
Esophagus	20,396
Kidney	5,953
Larynx	15,890
Liver	3,562
Lung	77,955
Oral Cavity	21,199
Pancreas	4,497
Stomach	12,503
Ureter	1,749
Other	51,171
Respiratory Disease	612,974
Asthma	102,447
Bronchitis	50,405
COPD	125,828
Emphysema	16,754
Influenza	7,237
Pneumonia	224,787
Other Respiratory	85,517

<u>Disease</u>	<u>Days</u>
<u>Cardiovascular Disease</u>	<u>614,463</u>
Cardiomyopathy	5,271
Coronary Heart Disease	324,114
Endocarditis	48,894
Hypertension	21,148
Myocardial Infarction	87,741
Peripheral Vascular Disease	127,296
<u>Cerebrovascular Disease (Stroke)</u>	<u>189,406</u>
<u>Trauma</u>	<u>339,478</u>
<u>Burns</u>	<u>16,313</u>
<u>Newborns</u>	<u>1,261,366</u>
Congenital Defects	79,616
Low Birth Weight	155,006
Birth w/Cocaine Complications	1,026,744
<u>Digestive System</u>	<u>113,343</u>
Crohn's Disease	7,516
Pancreatitis	84,468
Peptic Ulcer	1,102
Stomach Ulcers	9,470
Duodenal Ulcer	10,787
<u>Other</u>	<u>129,726</u>
Dementia	8,101
Epilepsy	14,878
Hepatitis A-C	5,756
Diabetes	3,405
Leukemia	40,243
Low Back Pain	4,026
Pelvic Inflammatory Disease	35,705
Rheumatoid Arthritis	9,832
Seizures	7,780
<u>Total 1991 Days</u>	<u>3,910,078</u>
<u>Total 1991 Medicaid Costs</u>	<u>2,932,558,132</u>

**Numbers may not add to total due to rounding*

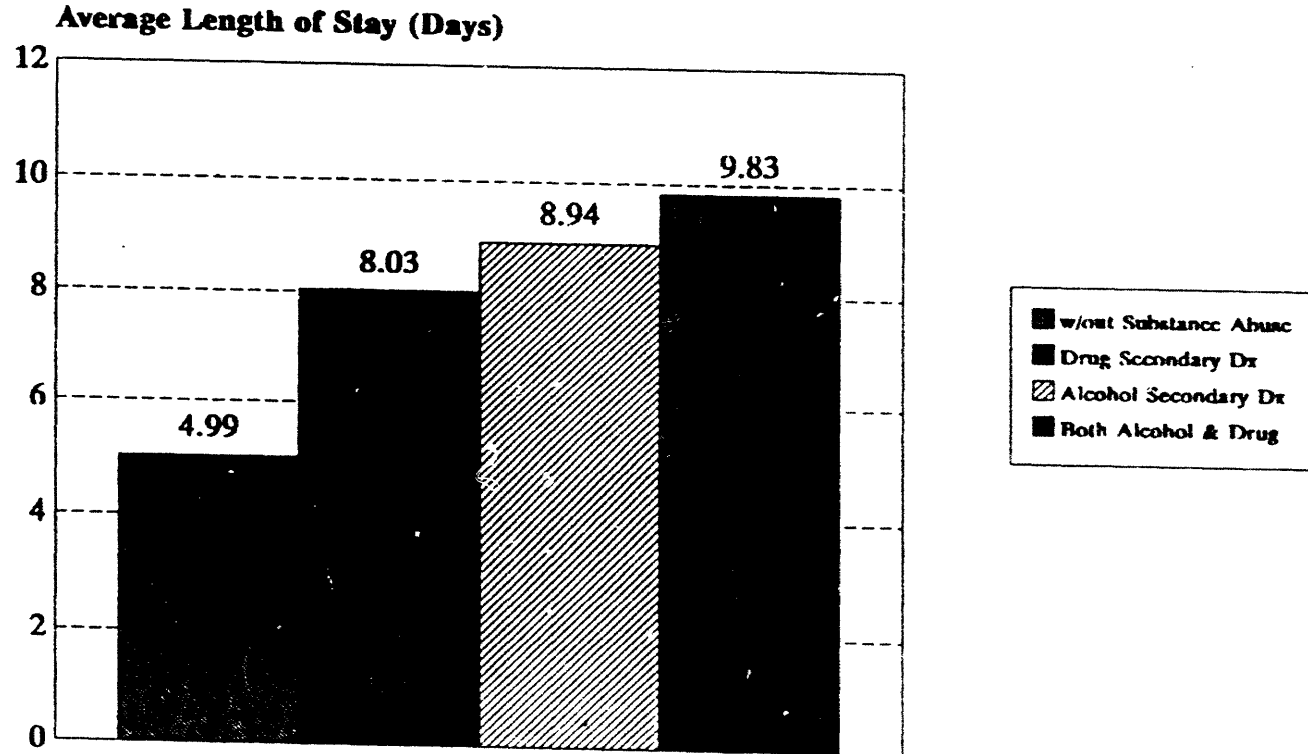
Chart 9: Heavy Smoking and Drinking Increases the Risk of Throat Cancer Synergistically
Relative Risks for Hypopharyngeal/Epilaryngeal Cancer by Substance Abuse



SOURCE: Tuyns. *Cancer of Larynx/Hypopharynx, Tobacco & Alcohol. Int. J. Cancer.* 41, 483-491 (1988).

Chart 10: Medicaid Length of Stay

With and Without Substance Abuse Secondary Dx



SOURCE: National Hospital Discharge Survey, 1991.

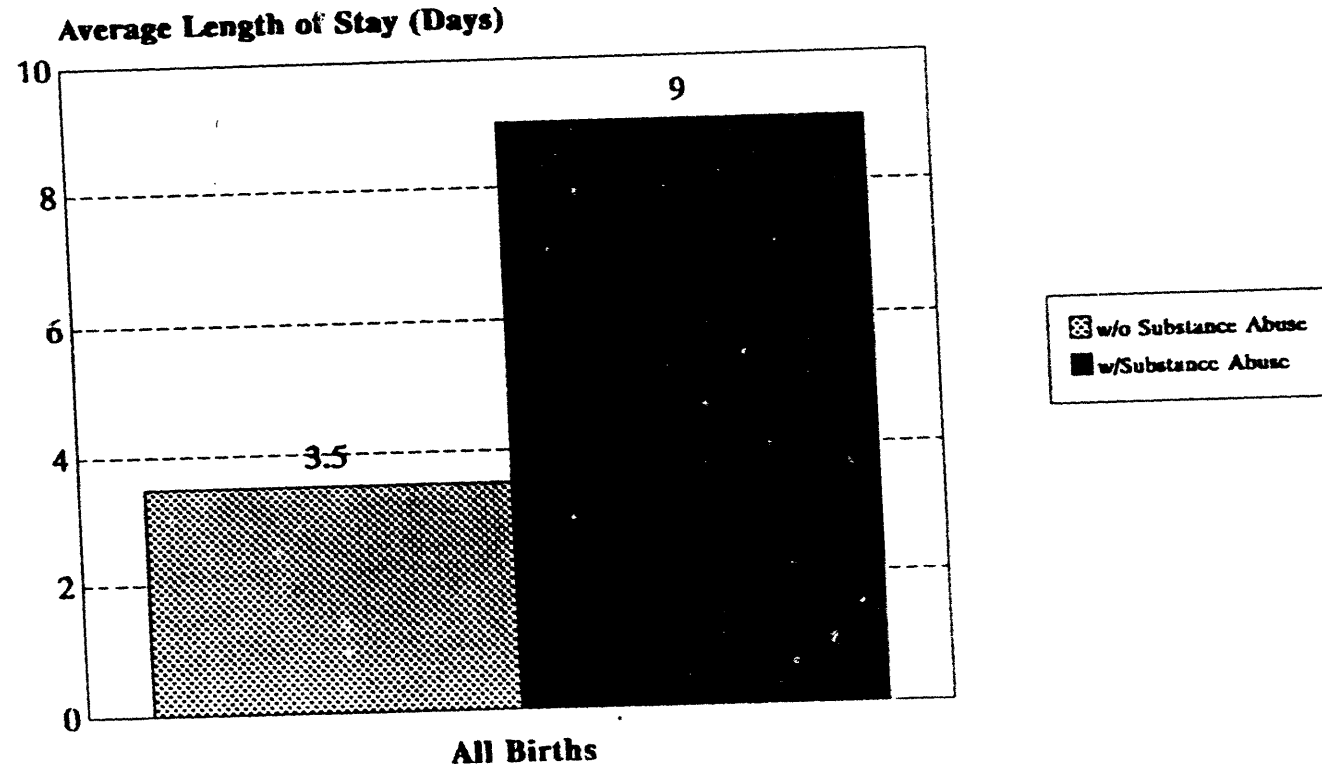
Chart 11: Medicaid Average Length of Stay, 1991
W/ and W/out Secondary Diagnosis of Substance Abuse

	Without Substance Abuse	With Substance Abuse	Total Additional Costs
Male	5.5	9.7	\$101,577,000
<15	3.9	16.4	
15-44	9.9	8.8	
45-64	8.2	9.9	
65+	8.9	14.8	
Female	4.3	7.4	
<15	3.6	9.8	
15-44	3.7	6.8	
45-64	8.6	8.6	
65+	11.0	12.3	
TOTAL			\$336,461,250

SOURCE: National Hospital Discharge Survey, 1991.

Chart 12: Babies Exposed to Substances Stay Longer

Average Length of Stay for Babies with and without Exposure to Substance Abuse

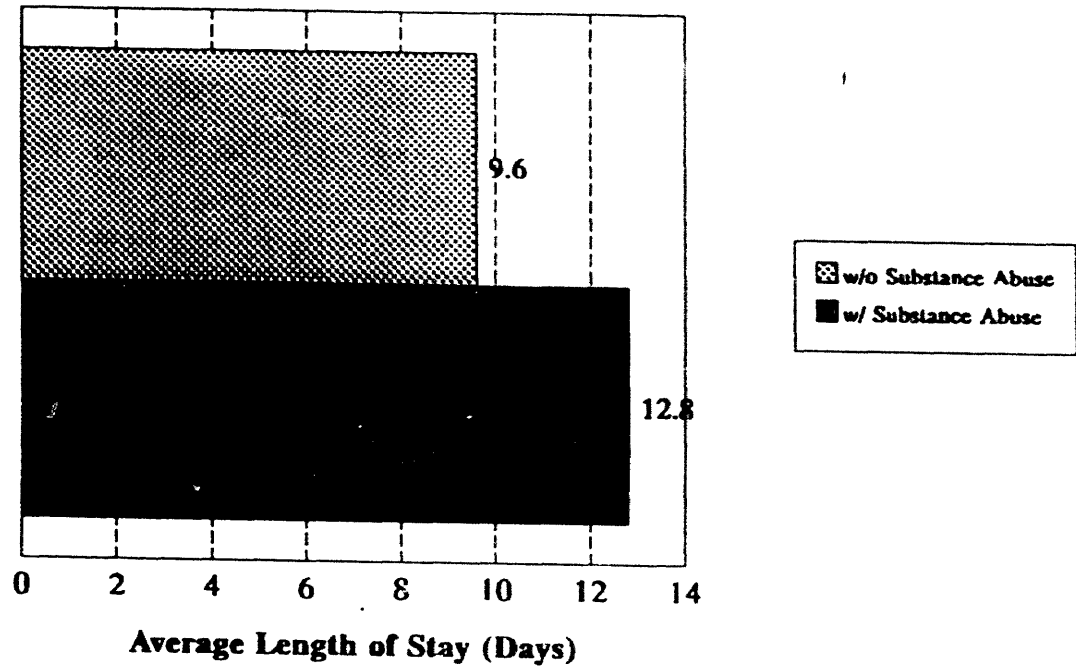


SOURCE: National Hospital Discharge Survey, 1991.

Chart 13: AIDS Patients with Secondary Diagnosis of Substance Abuse Stay Longer

Average Length of Stay for Medicaid AIDS Patients with and without Substance Abuse

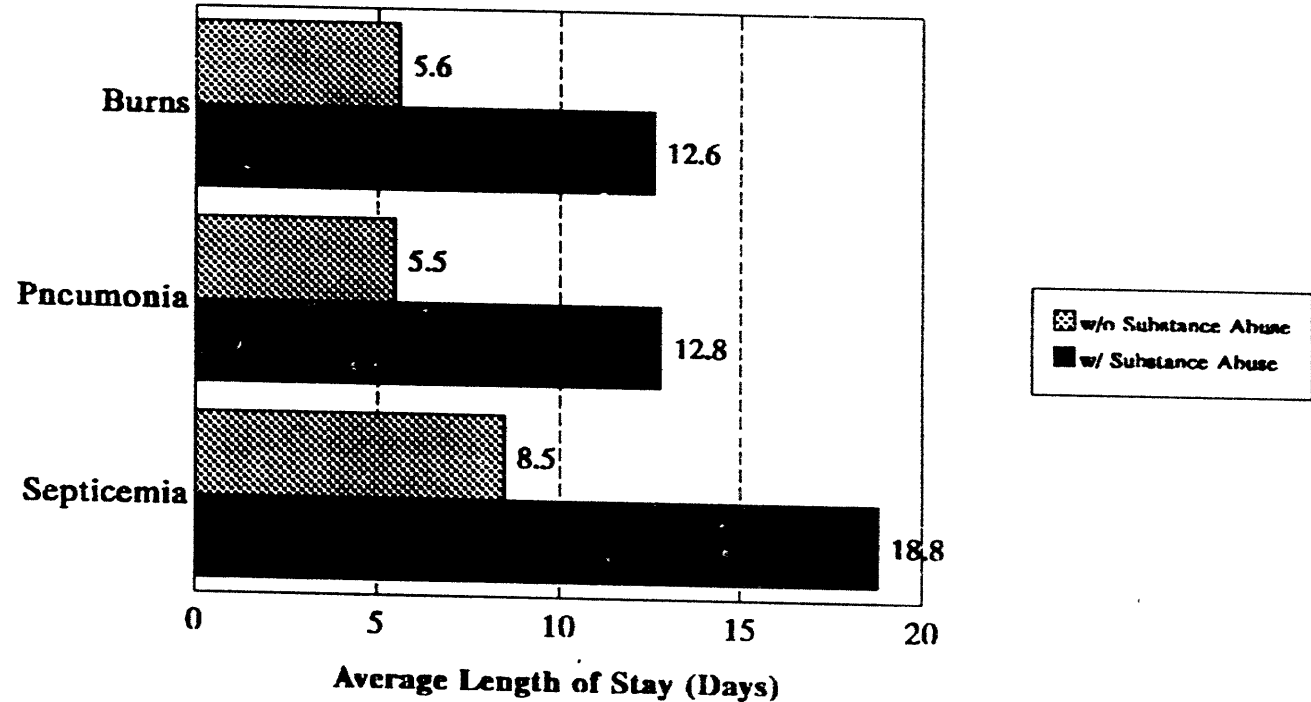
Patients with AIDS



SOURCE: National Hospital Discharge Survey, 1991

Chart 14: Medicaid Patients with Secondary Diagnosis of Substance Abuse Stay Longer

Average Length of Stay for Medicaid Patients with and without Substance Abuse



SOURCE: National Hospital Discharge Survey, 1991.

Chart 15: Consumption Rates for Medicaid and General Population

Substance	User category	<u>Consumption Rate</u>	
		Medicaid	General
Cigarettes	Current Smokers	42.7%	29.6%
	Former Smokers	14.3%	23.3%
Alcohol	Heavy Drinkers	10.4%	8%
Illicit Drugs	Drug Users	6.8%	5%

SOURCES: National Medical Expenditures Survey, 1987; National Health Interview Survey, 1991.

Chart 16: Prevalence of Smoking in Pregnant Women
Medicaid and General Population, 1987

	Medicaid	General
Smoking Status:		
Current	43.7	23.4
Former	15.6	21.2
Never	40.8	55.4

*Source: National Medical Expenditure Survey, 1987; Health, United States, 1991
National Health Interview Survey, 1990*

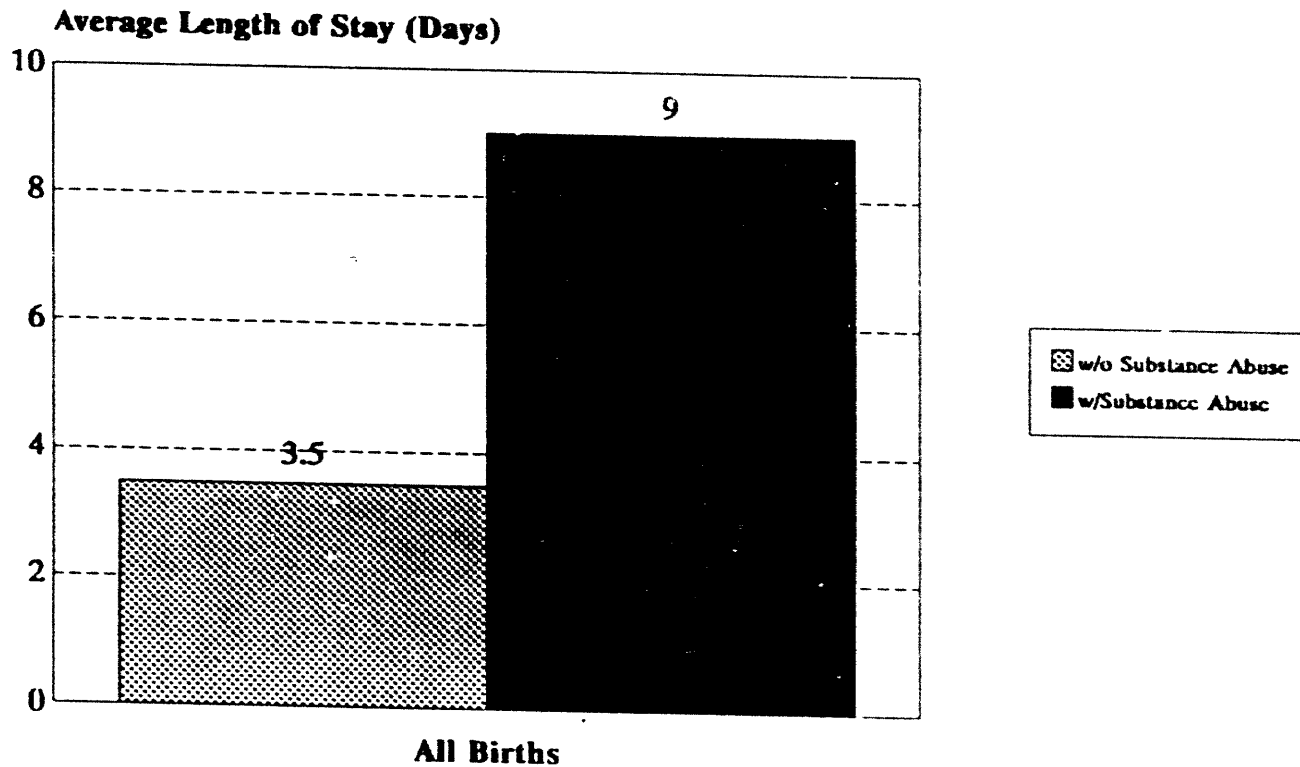
Chart 17: Substance Abusers May Be Unprofitable Patients to Hospitals

	Case Mix	Length of Stay
Patients with a Secondary Dx of Substance Abuse	1.03	8.4
Patients without Substance Abuse	0.73	5.0
% Difference	41%	68%

SOURCE: National Hospital Discharge Survey, 1991.

Chart 12: Babies Exposed to Substances Stay Longer

Average Length of Stay for Babies with and without Exposure to Substance Abuse



SOURCE: National Hospital Discharge Survey, 1991.

PREPARED STATEMENT OF SENATOR DAVE DURENBERGER

Mr. Chairman, I welcome the opportunity to explore the issues related to cost containment today.

Without effective cost containment, there can be no meaningful health care reform.

I know that each member of this Committee is all too aware of the dizzying upward of health care costs in this country. The percentage of GDP consumed by health care has doubled since 1970, going from 7% to 14%. In 1994, for the first time, health care will be a trillion dollar industry.

What's more, there's no end in sight to these rising costs. The Administration projects that, if the current health care system remains in place, health care will consume 20% of GDP by 2004. Yet, the Administration also concedes that, **EVEN IF ALL ITS PROPOSED REFORMS ARE ADOPTED**, health care will amount to 19% of GDP. That's still over \$2 trillion.

I find that goal unacceptable. We must contain costs more effectively.

I look forward to speaking with our witnesses today concerning how we might meet that goal. In particular, I look forward to exploring the relative merits of cost containment proposals which are founded upon market-oriented principles, and those which rely on the imposition of regulatory controls, such as the Clinton Plan's premium caps.

I have little faith in regulatory price controls. Basic economic principles indicate that price controls do not reduce inflationary pressures. If you try to impose strict price controls on insurance premiums, as the President has proposed, unaddressed inflationary pressures resulting from increased demand and other factors will lead instead to diminished quality and reduced supply.

More troubling is the prospect that the President's premium caps actually will **IMPEDE** rather than foster price competition among plans, thus defeating the very goal they set out to achieve—cost containment. The caps the President has proposed will be set so tightly that the plans will price to the cap rather than to the market. In addition, by perpetuating funding levels based on historic costs, the caps punish areas, such as Minnesota, Oregon, and Western New York, which are relatively efficient.

We know that functioning markets effectively contain health care costs. In view of that fact, I believe that the central task of any cost containment scheme is to enable markets to work well. To do so, we need to change both how we buy and how we sell health care services.

The current market in medical services does not work because consumers do not have the information needed to judge what is of value, nor the incentive to acquire that information.

It does not work because third party reimbursement and state mandates are barriers to market entry by efficient providers and distort prices to consumers.

The President and a large number of Democrats and Republicans favor a system that changes how services are delivered by changing the way consumers buy coverage and the way government subsidizes those purchases. Large employers and cooperative—consumer managed—groups of individuals and small employer purchasers would demand information about the cost and quality of health plans.

In this model, decisions about appropriate use of specialists, hospitals, and other care settings would be made by medical providers. Decisions about satisfaction and value (appropriate price) would be made by consumers. Plans would compete for business by providing consumers each year with better health care services, more information about what "works," and by increasing consumer satisfaction with one plan compared to others.

The most competitive plans would link the financing and administration of services with the medical caregivers. Paid by an annual premium (not fee-for-service), these plans would have the incentive to deliver high-quality, cost-effective care. Physicians would make the most of their diagnostic and treatment decisions. And rewarding good physician behavior is key to higher quality and lower cost.

We know this market-based system contains costs because it has worked in several key markets—without mandates, without premium caps, and without price controls.

The Mayo Clinic and a growing number of multi-specialty clinics in the United States have achieved the size and scale to do excellent medicine at low prices. Mayo's cost increases in the last 10 years are 4.8% a year versus a national average of 11%. In the Twin Cities, insurance premiums have dropped from 10% above to 15% below the national average over the past decade through competition "managed" mainly by employers choosing among accountable health plans.

Mr. Chairman, we all agree that the containment of health care costs is not only essential to health care reform, but to our general economic well-being. I look forward to engaging our witnesses in a substantive discussion of how this key goal may be achieved.

PREPARED STATEMENT OF JOHN C. GOODMAN

INTRODUCTION: DEFINING THE PROBLEM

Health economists generally agree that it does not matter how much a nation spends on health care, so long as the society values the health care it receives more than it values other goods and services that must be sacrificed in order to obtain that health care. Rising health care spending in the United States is currently considered a problem only because many of us suspect that we are not getting a dollar's worth of value for each extra dollar we are spending.

President Clinton has said that the U.S. health care system generates billions of dollars of waste,¹ and that comprehensive health care reform is needed in order to make health care delivery efficient. My colleagues Gary Robbins and Aldona Robbins have used the National Center for Policy Analysis/Fiscal Associates Health Care Model to identify two major sources of inefficiency and estimate the amount of waste caused by each. We conclude that the president is correct in his belief that the current system is inefficient; but we find that the president's plan—and similar reform proposals—may neither reduce waste nor improve efficiency. Indeed, these proposals may only make things worse.

Because of the way we pay for health care, the American health care system is inefficient in two ways. First, because of our reliance on third parties to pay most medical bills, patients are not confronted with the real social cost of the medical care they receive. As a result, both patients and physicians are encouraged to over-use medical resources. Second, because the proportion of medical bills paid by third parties varies substantially among the different medical services, patients and their doctors are encouraged not to choose the combination of services that most efficiently treats the illness. Thus, for any given amount of spending health care dollars are not always spent in the most productive way. Let us take a closer look at each of these two problems.

INCENTIVES TO USE THE WRONG THERAPIES

An efficient health care system is one that treats illnesses in the least costly way. Given a choice between two therapies, an efficient system will use the less costly therapy, other things equal. In the U.S. health care system, however, less costly therapies are not always used because the incentives faced by patients and their doctors are distorted. Table I shows the reason for the distortion: most of the time patients are spending someone else's money, rather than their own, in the medical marketplace:

- On the average, every time patients spend a dollar on medical care, only 21 cents comes out of their own pocket.
- The other 79 cents is paid by employers, insurance companies, government and charitable giving.

Third-party payers do not share in the cost of all health services equally, however. As the table shows:

- On the average, patients pay out-of-pocket only 4.5 cents of every dollar they spend on hospital care and only 16.5 cents of every dollar they spend on physician services.
- By contrast, they pay 68.3 cents out-of-pocket for every dollar they spend on pharmaceuticals.

TABLE I—WHO PAYS FOR HEALTH CARE? ¹

[In percent]

	Out-of-Pocket	Private Insurance	Other Private ²	Government ³	Tax Subsidy ⁴
Hospital Care	4.5	27.1	5.1	55.0	8.3
Physicians' Services	16.5	35.3	0.0	35.0	13.1
Nursing Home Care	42.7	0.9	1.9	52.1	2.4
Drugs & Medical Nondurables	68.3	12.2	0.0	11.1	8.3

TABLE I—WHO PAYS FOR HEALTH CARE? ¹—Continued

(In percent)

	Out-of-Pocket	Private Insurance	Other Private ²	Government ³	Tax Subsidy ⁴
Dentists' Services	47.0	34.1	0.0	2.5	16.5
Other Professional Services	24.7	31.1	10.8	21.1	12.3
Vision Products & Durables	63.0	8.4	0.0	22.3	6.3
Home Health Care	11.4	5.9	7.0	73.6	2.1
All Personal Health	21.0	24.8	3.5	40.4	10.3

¹ Numbers are for 1990² Other private is mainly philanthropic giving³ Includes such direct spending programs as Medicare and Medicaid⁴ The value of the income and payroll tax exclusion for employer-provided insurance and the income tax deduction for medical expenses over 7.5 percent of adjusted gross income

To patients, therefore, hospital therapy often appears cheaper than drug therapy, although for society as a whole the opposite may be true. The current system encourages those treatments with the lowest out-of-pocket costs, even though they may be the most expensive for society as a whole and no more effective than cheaper alternatives.

Drug Therapy vs. Other Therapies. In many other developed countries, health care is free at the point of consumption. Although this distortion creates problems of its own (see the discussion below), when all health care is subsidized to the same degree, people are not encouraged to choose one therapy over another based on out-of-pocket price distortions. This fact may help to explain why other developed countries spend less than the U.S. on health care but use pharmaceuticals more. OECD countries, on the average, devote 37 percent less of their GNP to health care than does the United States. Yet these countries devote almost twice the share of their health care budgets to drugs.²

Other Trade-Offs in Health Care Spending. There also are other opportunities to substitute one type of medical service for another in the treatment of the sick. Physicians and other health professionals can do some procedures in an outpatient setting that would otherwise be done in hospitals. For example, after Medicare limited its hospital payments in the mid-1980s, many procedures were moved from inpatient settings to doctors' offices or other outpatient facilities. The opposite tendency can be observed in the Medicaid program, where low reimbursement rates for physician services have closed off much of the market and encouraged patients to use hospital emergency rooms. In addition, nursing homes and hospitals are often substitutes for each other, and many patients can be cared for equally well in either setting. Similarly, home care is often a substitute both for nursing home care and hospital care.

Services that are *substitutes* for each other in one context may be complements in a different context. For example, although physicians' services may sometimes substitute for hospital services, an increase in hospital care may also increase the demand for (and use of) physicians' services. Whether any two services are substitutes or complements overall is an empirical question that can only be answered through sophisticated econometric techniques.

Estimating the Cost of Private Third Party-Payment Distortions. We used the NCPA/Fiscal Associates Health Care Model to simulate the effects of eliminating the private sector third-party payment distortions described above. Specifically, we assumed that private third parties pay a uniform rate of 70.1 percent of all private payments for hospitals, doctors, drugs and other professionals³ rather than disparate rates under the current system in which the share of private payment borne by third parties ranges from 87.7 percent of hospital bills to 15.1 percent for drugs. The results of this simulation, shown in Table II, make clear that if private insurance reimbursed all medical expenses at the same rate, patients and their doctors would substantially change their behavior reducing their spending on hospitals and increasing their spending on pharmaceuticals, nurses and other nonphysician personnel. Specifically:

- A switch to a uniform rate of payment by all private insurance would cause behavioral changes that would result in a one-third reduction in the amount we currently spend on hospitals.
- By contrast, spending on nurses and other nonphysician personnel would increase by more than one-third and spending on pharmaceuticals would increase by 45 percent.

These results imply that our current health care system is substantially different from a system that delivers care efficiently. Compared to an efficient system, we currently spend way too much on hospitals and way too little on nurses and drugs. The results also imply that there are opportunities for considerable waste reduction in the private-sector provision of medical care.

Gains to Society of Eliminating Private Insurance Distortions. By definition, a movement toward a more efficient health care system means that we can have the same general level of health care for less money. Our estimate of the potential savings from moving to a uniform reimbursement rate for all private insurance appears in Table III. As the table shows:

- Eliminating the distortions caused by private third-party payers would allow us to reduce total health care spending by 8.5 percent.
- In terms of current prices, that means *we could reduce health care spending by about \$85 billion without reducing in the quality of care patients receive.*⁴

It might seem that if we can save \$85 billion by eliminating waste in the health care system, society could consume an additional \$85 billion in other goods and services. In fact, the gains to society are much greater than that. We have previously reported for every \$1 increase in health care, society must forgo about \$2 to \$3 in other goods and services. This is because of the difficulty of moving labor and capital from the nonhealth sector to the health sector. Conversely, for every \$1 reduction in health care output, society will have the opportunity to consume about \$2 to \$3 of additional goods and services.⁵

This relationship helps explain the results in Table III, which shows the net gains for the economy as a whole from eliminating \$85 billion worth of waste from the health care sector in the manner described above. As the table shows:

- Eliminating the distortions caused by third-party payment would allow the production of other goods and services to be 2.7 percent higher than otherwise.
- In today's prices, nonhealth care output would increase by about \$135 billion.⁶
- Roughly speaking, the gains to society as a whole would be equal to \$520 for every man, woman and child in the country.⁷

TABLE II—CHANGE IN HEALTH CARE SPENDING RESULTING FROM A UNIFORM PAYMENT RATE BY THIRD-PARTY PAYERS

(Percent change)

Type of Spending	By private insurance only ¹	By public and private insurance ²
Hospitals	-34.7	-47.4
Doctors	+1.2	+5.5
Drugs	+45.5	+31.6
Other professionals	+34.7	+59.4
Dentists	+2.5	+23.2
Vision products	+2.7	+21.2
Nursing home care	+2.5	-13.9
Home care	+2.6	-64.7

¹ The numbers in the column show how much spending on particular health care services would have changed if private insurance had paid a uniform rate of 70 percent of all private spending on doctor and hospital services, drugs and the services of nonphysician personnel in 1990. The reimbursement rate was not made uniform for the remaining services in the simulation because the numbers were too small.

² The numbers in the column show how much spending on particular health services would have changed if private insurance had paid a uniform rate of 70 percent of private spending on medical services in 1990 and government also had paid a uniform rate. The simulation equalizes government subsidies in such direct spending programs as Medicare and Medicaid between 1961 and 1990 by assuming that government programs reimbursed each type of health care at the average subsidy rate for that year.

Source: National Center for Policy Analysis/Fiscal Associates Health Care Model

Distortions Caused by Government Subsidies. Government, through direct spending programs, pays 40 cents out of every \$1.00 spent on personal health care in the United States. The degree of government subsidy varies across medical services, however. As Table I shows, some are heavily subsidized by government while others are not. For example, government pays for 55 cents out of every dollar spent on hospitals and 52 cents of every dollar spent on nursing home care but only 11 cents of every dollar spent on drugs or dentists.

Estimating the Cost of All Third-Party-Payer Distortions. In a manner similar to that we used for private insurance, we simulated the effects of removing the third-party-payment distortions caused by government health care programs. Spe-

cifically, we assumed that government pays 40.4 percent of all expenses for all medical services rather than the subsidy rates shown in Table I and that private health insurance pays 70.1 percent of the remainder for hospitals, doctors, drugs and other professionals. The results of this simulation, depicted in Table II, show that a uniform reimbursement rate for public and private insurance would result in substantially less total spending on hospitals and substantially more spending on drugs and nonphysician personnel. There would also be a decrease in the amount spent on home care and on nursing homes and an increase in spending on dentists and vision products. Specifically:

- A uniform reimbursement rate for both public and private insurance would cause behavioral changes that would reduce total spending on hospitals by almost one-half.
- By contrast, spending on drugs would increase by almost one-third and spending on nonphysician personnel would increase by almost 60 percent.
- Among other changes, nursing home expenditures would go down by almost 14 percent and spending on dentists and vision products would go up by more than one-fifth.

These results imply that the current system is inefficient in the following way: Because of the distortions created by public and private insurance, we substantially overspend on hospitals and substantially under spend on drugs and nurses and other nonphysician personnel. We are also spending too much on nursing home care and too little on dental care and eye care. Interestingly, in the movement from the current system to an efficient health care system, spending on physicians would change very little.

Gains to Society from Eliminating the Distortions Caused by All Third-Party-Payer Subsidies. As in the case of distortions created by private insurance, a move toward a uniform rate of subsidy by government would make the health care system more efficient. As a result, we could in principle reduce our overall spending on health and increase our consumption of other goods and services without any reduction in the quality of health care we are receiving. As Table III shows:

- Eliminating the relative price distortions caused by public and private third-party payers would allow us to reduce total health care spending by 13.9 percent.
- In terms of current spending, that means that *we could reduce health care spending by about \$139 billion without reducing the quality of care patients receive.*

For the reasons given above, this reduction in health care spending would lead to an even greater increase in the output of other goods and services.

- As a result of the reduction in health care spending, the U.S. could increase its production of other output by 3.1 percent.
- In today's prices, society would be able to enjoy an increase of about \$155 billion in nonhealth care goods and services.
- The overall gain to society would be approximately \$600 per year for every man, woman and child in the country.

TABLE III—ECONOMIC EFFECTS OF MOVING TO A UNIFORM PAYMENT RATE BY
THIRD-PARTY PAYERS
(Percent change)

	By private insurance only ¹	By public and private insurance ²
Private GDP	+1.4	+1.1
Non-health output	+2.7	+3.1
Health Output	- 8.5	- 13.9
Capital Stock	+2.0	+1.2
Capital Income	+0.3	- 0.5
Service Price of Capital	- 1.7	- 7.7
Labor ³	+0.7	+0.8
Labor Income	+1.6	+1.7

TABLE III—ECONOMIC EFFECTS OF MOVING TO A UNIFORM PAYMENT RATE BY—Continued
THIRD-PARTY PAYERS
(Percent change)

	By private insurance only ¹	By public and private insurance ²
Wage Rate	+1.2	+1.3

¹ The column shows how much change there would have been in each of the economic variables if private insurance had paid a uniform rate of 70 percent of all private purchases of health care services in 1990.

² The column shows how much change there would have been in each of the economic variables if private insurance had paid a uniform rate of 70 percent of all private purchases of health care services in 1990 and government also had paid a uniform rate. The simulation equalizes government subsidies in such direct spending programs as Medicare and Medicaid between 1961 and 1990 by assuming that government programs reimbursed each type of health care at the average subsidy rate for that year.

³ Full-time employment

Source: National Center for Policy Analysis/Fiscal Associates Health Care Model

SOURCE OF INEFFICIENCY: TOO MUCH HEALTH INSURANCE

The other major source of inefficiency in our health care system is too much third-party payment of medical bills overall. Economic studies—and common sense—confirm that we are less likely to be prudent, careful shoppers if someone else is paying the bill. Consider that:⁸

- Over the past thirty years, the share of our income spent out-of-pocket on health care has actually declined—falling from 4 percent of total consumption expenditures in 1960 to 3.6 percent in 1990.
- Over the same period, the amount spent from all sources has more than tripled—rising from 4.2 percent of consumption in 1960 to 13.3 percent in 1990.

These numbers suggest that when we are spending our own money we are conservative consumers in the medical marketplace.⁹ The converse is true when we have the opportunity to spend someone else's money. The rise in health care spending over the past three decades parallels the rapid expansion of third-party payment of medical bills.¹⁰ Overall, the patient's share of the bill has declined from 48 percent in 1960 to 21 percent today.¹¹

Estimating the Cost of Too Much Health Insurance. I reported above on our use of the NCPA/ Fiscal Associates Health Care Model to simulate the effects of moving to uniform third-party payment rates for all health care services. Let us now build on those results and consider changes in the uniform rate. As Table IV shows, if the percent of health care bills paid out-of-pocket by patients were increased from its current level of about one out of every five health care dollars to one out of every four, overall health care spending would decline by an additional 4.1 percent. In today's prices, that would mean a drop in health care spending of approximately \$41 billion.

Gains to Society from Reducing the Amount of Third-Party Payment. If we eliminated the relative price distortions caused by third-party payment of medical bills by moving to a uniform reimbursement rate and we also reduced the level of that rate, the gains to society would be quite large. As Table IV shows:

- These relatively modest changes in the way we pay for health care would reduce overall health care spending by 18 percent.
- In today's prices, that would mean a drop in health care spending of about \$180 billion.
- As noted above, the move to a uniform rate of third-party reimbursement would allow society to produce about \$155 billion in nonhealth goods and services without any reduction in the quality of health care we receive.
- Increasing out-of-pocket payments from one in five dollars to one in four would produce another \$155 billion gain.
- Whereas the gain from moving to a uniform reimbursement rate would be a one-time gain, the gain from reducing the overall level of third-party payment would be a recurring gain.
- *Enacting the two changes described above would be worth about \$1,200 for every man, woman and child in the country every year, indefinitely into the future.*

TABLE IV—EFFECT OF MOVING TO UNIFORM PAYMENT RATES BY THIRD-PARTY PAYERS AND REDUCING THIRD-PARTY PAYMENT OF MEDICAL BILLS¹

Percent of expenses paid out-of-pocket	Percent decrease in total health care spending	Percent increase in Other Output
21.0 ²	-13.9	+3.1
22.5	-15.3	+4.2
24.0	-16.7	+5.3
25.5	-18.0	+6.3

¹Calculations achieved by making private insurance payments uniform for hospitals, doctors, drugs and other professionals in 1990 and by reducing direct government's share of medical expenses by 10 percent, 20 percent and 30 percent over the period 1981 to 1990.

²Current level.

Source: National Center for Policy Analysis/Fiscal Associates Health Care Model

STRATEGIES FOR ELIMINATING INEFFICIENCIES

The preceding analysis provides important insights into the opportunities created by health care reform. Yet these are insights that have been largely ignored in the debate being waged by the Clinton administration, which appears to believe that waste and inefficiency is caused by such villains as greedy doctors and profit-seeking insurance and pharmaceutical companies.

If our health care system is to be made significantly more efficient, health care reform must accomplish two tasks: (1) It must induce patients and their doctors to change their pattern of consumption, substituting less expensive for more expensive therapies, and (2) it must induce patients to consume less health care overall. How can this be done?

As noted above, there are significant gains from moving toward a uniform reimbursement rate under which private insurance paid, say, 70 percent of all private purchases of medical care. But it is unlikely that an insurance policy that did just that would ever be freely purchased in the marketplace. The reason is that such a policy would create too much exposure for the individual. A person who faces the prospect of paying 30 percent of hospital bills is taking on far more risk than a person who must pay only 30 percent of his pharmaceutical bills. That clearly is one of the reasons why third-party insurance pays more hospital bills than drug bills.

Yet there are other ways in which we could move substantially in the direction of greater efficiency while still protecting people against catastrophic financial losses. In what follows we briefly discuss four of them.

Option No. 1: Uniform Catastrophic Insurance. This is the "economist's solution." It has been recommended by Nobel Prize winner Milton Friedman and Martin Feldstein, former Chairman of the Council of Economic Advisors, among others.¹² Implicitly, it also has been endorsed by the health economists in a report published by the American Enterprise Institute.¹³ It works like this. Suppose that every family had a catastrophic insurance policy that paid for all medical expenses above, say 20 percent of family income. Expenses not paid by insurance would be paid directly by the family without any subsidy from government. Once the family's out-of-pocket expenses reached 20 percent of income, private or public insurance would pay for everything else.

This arrangement tends to eliminate both sources of inefficiency. When paying small medical bills, individuals would have to sacrifice a dollar's worth of other goods and services every time they spent a dollar on medical care. Thus they would have incentives not to spend a dollar in the medical marketplace unless they received a dollar's worth of value. Moreover in choosing among therapies, patients would have to pay the market price for each. Since the private cost to the patient would be equal to the social cost of producing the service, every patient would have ideal incentives to choose the lowest-cost therapies.

Of course, once third-party insurance started paying the bills, patients would have an incentive to over consume. But this would happen rarely—only in cases of catastrophic illness. And even after third-parties started paying, artificial distortions would not encourage inefficient choices of therapies.

Option No. 2: Medical Savings Accounts.¹⁴ This is the choice of health economists who favor, or accept, a broader role for government. It encourages people to self-insure for small medical bills, but leaves them with incentives to be prudent consumers. Under the proposal, individuals and their employers would be able to make tax-free deposits to Medical Savings Accounts (MSAs). These accounts would be the private property of the employee and would be personal and portable. Because funds in the accounts would be used to pay medical bills not paid by third-party insurance, MSAs are a natural accompaniment to catastrophic insurance.

Funds not spent would continue to grow tax free and could be rolled over into an IRA or private pension plan at the time of retirement.

Although this proposal appears on the surface to be quite different from the previous proposal, they are in fact similar. When people spent money from a Medical Savings Account, they would be spending their own money—and thus would have incentives not to over consume medical care. And as in the previous proposal, there would be no distorted incentives, encouraging people to choose the wrong therapies.

Option No. 3: Health Maintenance Organizations (HMOs). HMOs are pre-paid medical plans and basically adhere to the idea that the insurance premium should be the only out-of-pocket expense. At the time patients consume medical services in an HMO, they usually pay nothing.

If all medical services have a price of zero, then one important problem is immediately solved. Patients no longer have distorted incentives with respect to the choice of therapies. And because HMO physicians are often rewarded for keeping costs down, they have a positive incentive to choose the least costly therapies, other things equal. Relative to normal indemnity insurance, then, we would expect HMOs to cut costs by substituting less expensive for more expensive therapies and the evidence bears this prediction out. For example, HMOs appear to have succeeded in substantially reducing hospitalization relative to fee-for-service medicine. A RAND Corporation study found that HMOs reduce hospitalization by 40 percent.¹⁵ Other studies conclude that HMOs reduce hospitalization for Medicare patients¹⁶ and for the nonelderly population.¹⁷

What about incentives with respect to the overall use of health care services? It is with respect to this choice that HMOs distort incentives, and they distort them in opposite directions for patients and physicians. Patients have incentives to over consume and the distortions in HMOs are worse than for non-HMO patients. Since the price of medical care is zero at the point of consumption, patients have an incentive to consume medical services until their value is zero. HMO physicians, on the other hand, usually have financial incentives to underprovide.

Given the two opposing forces, which one is likely to give way? On balance, it appears that while HMO patients use fewer hospital services, they use more of other services. Thus over consumption generally tends to offset some of the gains from substituting less costly for more costly therapies.¹⁸

A RAND study concluded that HMOs reduce the total spending by 25 percent relative to fee-for-service, indemnity insurance. However, a recent review of this and other studies by the Congressional Budget Office has questioned the conclusion that HMOs produce significant cost savings.¹⁹ Moreover, even if HMOs eliminate some inefficiency, there is no reason to believe their general adoption would create more efficiency than either of the first two options. Indeed, even the RAND studies show that individuals spending their own money are more effective than HMOs at controlling costs.

Option No. 4: Global Budgets. A natural extension of the idea of a Health Maintenance Organization is a global budget. An HMO cannot allow its members to consume medical services until they have zero value. That practice would lead to bankruptcy. HMOs, therefore, erect nonfinancial barriers to limit the amount of medical care their enrollees can consume. But if we are going to constrain patients, why vest the decision-making power in the hands of physicians? Or of HMO administrators? The idea behind a global budget is that society as a whole (read: government) should decide how much health care is going to be consumed.

As practiced in Britain, Canada and other developed countries, operating on a global budget means limiting the amount of resources available to physicians, hospitals or area health authorities and forcing them to ration health care. Usually the rationing decisions are left up to the providers and local administrators. But the central government limits the total amount to be spent and frequently sets a separate budget for new technology as well.²⁰

If global budgets were a way of forcing the health care system to apply cost-benefit analysis to the delivery of health care, they might have some merit. In practice, however, political considerations tend to override both medicine and economics. All too often the politics of medicine dictate that health care for the small number of people (very few voters) who are really sick and require expensive treatment be sacrificed to health care for the many (many voters), even if that care has little to do with healing. For example, in Britain elderly patients use ambulances as a free taxi service while thousands of kidney, heart and cancer patients die every year because the British government skimps on new and expensive medical technology.²¹

And contrary to the claims of single-payer advocates, there is no evidence that global budgets cause health care to be delivered more efficiently. If anything, the opposite is true. The distortions caused by global budgets give doctors and hospitals incentives to be *inefficient*.²²

CONCLUSION

The health policy debate has so far been dominated by two distinct camps: those who believe that inefficiency in our health care system can be substantially reduced by HMOs practicing managed care, and those who believe it can be reduced by global budgets. The evidence does not support the claims of either group. Both reforms probably would create as much inefficiency as they eliminate.

Our analysis indicates that about \$140 billion of waste in the U.S. health care system—about 14 percent of total health care spending—occurs because patients and doctors fail to choose the most efficient therapies. This is the amount of waste that theoretically could be removed by a managed care program that wherever possible substituted less costly for more costly therapies. Interestingly, the 14 percent figure is very close to the percent reduction in cost that many predict would occur if people moved from current fee-for-service plans to HMOs.

If managed care were practiced in a prepaid plan in which the out-of-pocket cost to patients was zero at the time care is received, a new and countervailing distortion would be introduced. Specifically, if patients faced an out-of-pocket price of zero, they would have an incentive to over consume care until its value at the margin was zero. Some health policy analysts believe that this inefficiency is not as pronounced in the current system because heavy users of medical resources tend to be in fee-for-service plans rather than in HMOs.²³

If all patients were pushed into HMOs—the goal and likely result of most managed competition proposals—our analysis suggests that health care costs would be reduced substantially through the substitution of less costly for more costly therapies. However, this gain likely would be more than wiped out—over time, if not immediately—through the over consumption of medical care or the expenditure of resources by health care managers attempting to prevent over consumption.

A far more promising approach is to remove third-party payment as much as possible and allow patients to purchase their own care. This could be accomplished through a policy of catastrophic insurance only or a policy that encourages high deductibles combined with Medical Savings Accounts. In contrast to HMOs, this approach gives the buyers of care incentives to eliminate waste and consume efficiently.

Some object that patients spending their own money do not have the knowledge to make wise purchasing decisions, or at least they do not have as much knowledge as sophisticated health care managers might have. But there may be a solution to this dilemma in a hybrid approach—one that is conceptually appealing but has received little attention from health policy analysts.

Instead of making health care managers agents of bureaucracies, why not make them agents of patients? This is essentially the situation at the Mayo Clinic—a facility that is well known for its use of managed care techniques and that mainly caters to fee-for-service patients.²⁴ If managed care works, there will be a market for it. If there is a market for it, why not let patients access that market directly? In that way, the doctor-patient relationship could be maintained and the advantages of managed care enjoyed.

As appealing as this idea is on the surface, I do not want to see it codified. The worst mistake Congress could make is to legislate how medical care should be delivered. Wise policy would level the playing field so that many ideas could be tried and tested. Their successes or failures should be determined not by Congress but by the marketplace.

FOOTNOTES

1. According to the president, 10 cents out of every health care dollar goes to fraud and abuse, in addition to unnecessary procedures and burdensome administrative costs. See "Health Care Update: The Need for Health Care Reform," White House White Paper, August 1993, p. 2.

2. George J. Schieber, Jean-Pierre Poullier and Leslie M. Greenwald, "Health Care Systems in Twenty-Four Countries," *Health Affairs*, Fall 1991, Exhibits 1,7, pp. 22-38.

3. These four types comprise 79.2 percent of personal health care spending. The simulation assumes government expenditures and subsidies remain at 50.7 percent of total expenditures.

4. Health spending in 1994 will be about \$1 trillion. The simulations described in this section covered the period 1960 through 1990. Current dollar estimates, therefore, are only indicative because the mix between health and nonhealth output and the mix among various medical services changes over time.

5. See the discussion in Aldona Robbins, Gary Robbins and John Goodman, "How Our Health Care System Works," National Center for Policy Analysis, NCPA Policy Report No. 177, February 1993.
6. Private GDP in 1994 will amount to about \$6 trillion. Subtracting \$1 trillion for health care leaves the value of nonhealth goods and services at \$5 trillion. The simulations described in this section cover the period 1960 through 1990. Current dollar estimates, therefore, are very tenuous because the mix between health and nonhealth output and the mix among various medical services changes over time.
7. The U.S. Census Bureau projects a resident U.S. population of 260.2 million in 1994.
8. Robbins, Robbins and Goodman, "How Our Health Care System Works."
9. The Rand Corporation, in a study conducted from 1974 to 1982, found that people who had access to free care spent about 50 percent more than those who had to pay 95 percent of the bills out-of-pocket up to a maximum of \$1,000. A \$1,000 deductible over that period would be equivalent to a deductible between \$1,380 and \$2,482 today. See Robert Brook et al., *The Effect of Coinsurance on the Health of Adults* (Santa Monica, CA: Rand, 1984); and Willard Manning et al., "Health Insurance and the Demand for Health Care: Evidence from a Randomized Experiment," *American Economic Review*, June 1987. The Rand study found no significant differences in the health status of people who had high and low deductibles. The one exception was vision care. See Joseph Newhouse et al., "Some Interim Results from a Controlled Trial of Cost Sharing in Health Insurance," *New England Journal of Medicine*, vol. 305, no. 25, December 17, 1981, pp. 1501-07; and Robert Brook et al., "Does Free Care Improve Adults' Health?" *New England Journal of Medicine*, vol. 309, no. 23, December 8, 1983, pp. 1426-34.
10. This problem is often described as the problem of rising costs. However, it is not clear that costs in the sense of average cost of treatment are rising. More importantly, the term costs encourages people to focus solely on the supply side of the market, when the initial source of the problem is on the demand side. See John C. Goodman and Gerald L. Musgrave, *Patient Power: Solving America's Health Care Crisis* (Washington, DC: Cato Institute, 1992), p. 76.
11. Robbins, Robbins and Goodman, "How Our Health Care System Works."
12. Friedman would require every U.S. family to own a high-deductible major medical policy. Although he prefers private insurance, he argues that even government's catastrophic insurance would be an improvement over the existing system. See Milton Friedman, "Gammon's Law Points to Health-Care Solution," *Wall Street Journal*, November 12, 1991. See also Martin Feldstein, "The Health Plan's Financing Gap," *Wall Street Journal*, September 29, 1993.
13. Mark V. Pauly, Patricia Danzon, Paul J. Feldstein and John Hoff, *Responsible National Health Insurance* (Washington, DC: AEI Press, 1992).
14. See John C. Goodman and Gerald L. Musgrave, "Controlling Health Care Costs with Medical Savings Accounts," National Center for Policy Analysis, NCPA Policy Report No. 168, January 1992. See John C. Goodman and Gerald L. Musgrave, "Personal Medical Savings Accounts (Medical IRAs): An Idea Whose Time Has Come," National Center for Policy Analysis, NCPA Policy Background No. 128, July 22, 1993. For a more lengthy discussion of the issues surrounding Medical Savings Accounts, see Goodman and Musgrave, *Patient Power*.
15. William Manning et al., "A Controlled Trial of the Effect of a Prepaid Group Practice on Use of Services," *New England Journal of Medicine*, vol. 310, no. 3 (June 7, 1984), pp. 1501-10.
16. Randall Brown, *Biased Selection in the Medicare Competition Demonstrations* (Washington, DC: Mathematica Policy Research, April 1987).
17. Sheldon Greenfield et al., "Variations in Resource Utilization Among Medical Specialties and Systems of Care," *Journal of the American Medical Association*, vol. 267, no. 12 (March 25, 1992), pp. 1624-30.
18. See Congressional Budget Office, "The Effects of Managed Care on Use and Costs of Health Services," CBO Staff Memorandum, June 1992. Based on the available evidence, the CBO concluded that "Staff model HMOs and group model HMOs reduce hospital use significantly. The impact on total health spending for the group that is associated with such a reduction in hospital use is less, however, because use of other services increases." (p. 17)
19. *Ibid.*
20. See John C. Goodman and Gerald L. Musgrave, "Twenty Myths About National Health Insurance," National Center for Policy Analysis, NCPA Policy Report No. 166, December 1991.
21. English patients take more than 19.5 million ambulance rides each year, with about 91 percent of the rides being for nonemergency purposes (such as taking an elderly person to a local pharmacy). See Department of Health and Social Security,

Health and Personal Social Services for England, 1985 and 1991 editions (London: Her Majesty's Stationery Office, 1985 and 1991). By contrast, about 9,000 British patients each year fail to receive renal dialysis, a failure that results in death, while another 15,000 cancer patients and 17,000 heart patients fail to receive the best treatment. See Henry J. Aaron and William B. Schwartz, *The Painful Prescription: Rationing Health Care* (Washington, DC: Brookings Institution, 1984).

22. See Goodman and Musgrave, "Twenty Myths about National Health Insurance."

23. See CBO, "The Effects of Managed Care on Use and Costs of Health Services," p. 7.

24. See Robert Waller's commentary on managed competition in *Health Policy Reform: Competition and Controls*, Robert Helms, ed. (Washington, DC: AEI Press, 1993), pp. 235-37.

PREPARED STATEMENT OF SENATOR ORRIN G. HATCH

Thank you Mr. Chairman. I just want to commend you for scheduling this hearing today because, without question, the issue over health care cost containment is at the core of the national debate on health care reform.

If we have learned anything over the past few months since these hearings began, it is the need for addressing the rising costs of health care. And I believe all of us on this committee are united on the need for corrective action by Congress. The problem, of course, will be what type of medicine do we prescribe for this sick patient.

Nevertheless, the numbers speak for themselves. When you see that health care costs have increased from 5 percent of Gross Domestic Product in 1960 to 14 percent in 1993, then it becomes clear we need to act, and we need to act now.

Even for those of us in Congress who deal with Billion Dollar programs and budgets, it is still staggering to think that our nation's health care costs are approaching the One Trillion Dollar mark.

I am sure that no one on this committee wants this trend to continue.

Nevertheless, we must also not lose sight of some very fundamental aspects of health care in the 1990s. We need to recognize that quality health care *does* have a price—it is not free.

We must also recognize that health care costs have risen because of malpractice costs, antitrust constraints, paperwork burdens, fraud and abuse, and similar problems that have created an inefficient environment for health care delivery.

I look forward to the comments from our distinguished witnesses today and, once again, thank you Mr. Chairman for scheduling this important hearing.

PREPARED STATEMENT OF ROBERT J. SHAPIRO

PRINCIPLES AND STRATEGIES FOR HEALTH CARE COST CONTAINMENT

Mr. Chairman, thank you for the privilege of testifying here today. Your subject—how best to control rising health-care costs so that genuine universal coverage can be established and maintained—is a truly vital one.

In my judgment, the President and Congress can achieve this goal only if the economic logic of the plan is as sound as its social goals. To ensure universal coverage while reducing medical-care inflation, all without damaging the economy, the reforms should extend coverage gradually while strengthening economic competition among providers and demanding more economic responsibility from patients.

At the heart of the issue lie two questions. First, what should government do when people demand more of some good than the economy will produce at prices they're willing or able to pay? Second, in such circumstances how should government distinguish between the goods people want and the goods they truly need? Stated directly, should government guarantee that all Americans have genuine access not only to vital health care but to virtually all forms of medical treatment?

Let us begin with the areas of general agreement. There is no serious debate about the need for reforms of the American health care industry. In no other advanced country does one of every seven persons have to manage without routine care—one of the reasons why Americans' life expectancy ranks 15th in the world. Moreover, the system producing these dismal results injures the economy. Rising health-care costs have been a principal factor driving up federal spending and borrowing, and in the private sector health-care costs have cut sharply into the wage gains of most U.S. workers. And by permitting the share of the economy claimed

for medical services to double in 20 years, from 7 percent of GNP in 1970 to 14 percent today, we have dampened investment and growth elsewhere in the economy, directly by reducing the profits of most firms and indirectly by bidding-up the price of capital and skilled labor. So long as health care grows faster than the rest of the economy, its increasing costs will reduce investment, productivity and income growth elsewhere in the economy.

Reforms to slow the growth of health-care costs and universalise access are imperative. But no government, however well-intentioned, and no group of experts, however well-educated, have the knowledge or the means to sensibly manage one-seventh of the largest economy in the world. In an industry with many billions of annual transactions involving goods and services subject to relatively little standardization, sound reform should proceed step-by-step, in ways that are consistent with the normal operations of the economy, and taking account of differences among regions and states.

Health-care reforms, especially those intended to address rising health-care costs, should always respect two basic laws of economics. The first is that the price for a good or service will rise when demand for it increases and its supply doesn't expand as quickly. Simply extending or mandating insurance coverage for the 37 million people who lack it today will spark faster-rising medical prices and costs. If this coverage also extends benefits not generally provided for those already covered, medical inflation will rise even faster.

The necessary economic conclusion is that reforms to expand coverage should not precede reforms to slow fast-rising medical costs. Otherwise, health-care inflation will accelerate and the economy will weaken, ultimately reducing the resources and contracting the opportunity to maintain genuine universal coverage.

The second law of economics at issue is that economic demand generally responds to prices. So long as conventional insurance and the health-care system enable most Americans to use medical services with little practical recognition of the costs, demand for health care will not be disciplined and prices for medical care will continue to rise faster than for goods where prices discipline demand. This cost-unconscious medical marketplace not only promotes demand for routine medical treatments; it also underwrites a broad market for virtually any new medical technology. Once developed, most new technologies quickly become generally available and broadly applied, greatly intensifying cost pressures.

The economic conclusion is that the health-care marketplace should be reformed in ways that intensify the cost-sensitivity and consciousness of both consumers and providers. Consumers need to bear the cost of their health-care decisions more directly, and providers cannot be allowed to side-step costs by denying basic coverage to those who most need it.

Politics provide many ways of addressing these issues; the choices that are consistent with economics are more limited. In particular, principles of economic competition can resolve much of these difficulties by creating economic incentives to discipline the demand for medical treatment and increase the supply of efficiently-delivered care. Managed competition—particularly in the form embodied in the proposal offered by Senator Breaux, Senator Durenberger and Congressman Cooper and, to a lesser degree, in President Clinton's plan—attempts to restructure health-care markets by creating new incentives that (1) compel insurers to compete more on the basis of value and price; (2) require everyone to assume more personal economic responsibility for their health-care choices; and (3) constrain providers to meet people's basic needs more efficiently, principally through organizations that integrate financing and delivery of health care similar to HMOs, PPO, and point-of-service plans.

Over several years, Senator Breaux's strategy can create the necessary economic environment for universal coverage—medical-care marketplace that can more nearly balance supply and demand. This will require extending coverage gradually, recognizing that even so the additional demand will raise health-care prices for everyone. It also will require that Congress resist the temptation to add additional benefits to basic insurance. And it will mean reforming some of the ground rules of health-care markets so that there, as everywhere else in the economy, consumers bear more of the costs of their own choices, and businesses must learn to be more efficient to survive.

These reforms will, in certain respects, reorganize the practice of medicine. Most of us will be treated less often from doctors and more often by nurses and other non-physicians; and all but the truly poor will pay more for insurance and many medical services. More physicians will practice through organized delivery systems; but if high-quality medicine remains part of the equation, they will retain control over their own professional decisions.

Reform will demand a great deal from the majority of Americans who already are insured. Yet it is their interests as well as those of the uninsured that drive the demand for reform. Everyone may reasonably ask that they and their families always will have the services they need, now and when they are older, regardless of their medical condition or job status.

By whatever means coverage becomes more universal, the central question for health-care reform will remain whether to address the economic forces driving up health-care prices primarily by regulatory means or market-based mechanisms. Should this Committee reform the arrangements that today insulate consumers and providers from price discipline, or legislate a spending ceiling enforced by regulated premium prices? With regard to the economic consequences, this issue presents the most important difference between Senator Breaux's proposals and the President's.

In my judgment, economic theory and evidence clearly support Senator Breaux's approach to managed competition.

The economic case for the alternative, regulated prices, is very weak. William Baumol writes that "every market sector affected by price controls for any substantial period has eventually been harmed by them," and this judgment is not controversial in economics. The reasons are straight-forward. Except in cases of monopoly or oligopoly, price controls do not address the economic forces driving up the prices. As a result, controls convert price pressures to other forms rather than reducing them. The price may remain constant while the quality declines, or long queues may arise to purchase the good as its supply at the controlled price contracts. Stated differently, this means that shortages will arise at the controlled price. When this occurs, black and gray markets are likely to form, where the goods are available at uncontrolled prices. Or suppliers may make up the difference between the controlled price and the market price by tying the purchase of the controlled product to another whose price is not controlled. That's essentially what happened when physicians responded to the freeze on Medicare Part B doctors' charges in the mid-1980s by visiting patients more frequently, by shifting to more highly-reimbursed treatments, and by ordering more tests that required little of their time.

If you try to impose a strict price control on insurance premiums and thereby create a legislated global spending ceiling for health care, as does the President's plan, you should expect to confront these kinds of consequences. The quality of the care provided under insurance will decline, queues will form for receiving care, black and gray markets will arise, or care will be tied to other services whose prices are not controlled.

Advocates of a controlled insurance prices theorize that by requiring businesses and workers to pay government-set charges, and allowing these charges to rise year-by-year according to a set measure such as payroll costs or the Consumer Price Index, medical providers will have to become more productive in order to deliver all the services required with the resources allowed them by the government. Everyone involved—doctors and nurses, group practices and hospitals, insurers and suppliers—would negotiate or contend for their shares.

But the essential point is that a price control on insurance premiums will not affect demand, and when resources run out in the eleventh or twelfth month of the global budget—when the government guesses wrong about the revenues required to cover quality treatment at a particular hospital or health plan in a particular year, for a particular city—something has to give. In all likelihood, providers will cut costs—but the schedule of reductions will start with those activities generating the lowest rates of return for providers, such as preventive medicine, not what a dispassionate expert might consider inefficient or unnecessary.

It is inescapable that government cannot know in advance what markets can determine only in practice—namely, the cost over the coming year for the most efficient insurers and providers to deliver their basic services. Moreover, health-care reform itself will make any such government estimate even less reliable, because reform will bring about countless changes in insurance and provider company operations, medical practices and treatment protocols.

When this strategy fails to produce the promised result, the President's plan also requires more extensive price controls for fee-for-service medicine. I cannot find any economic theory or evidence to support the view that such controls would work well in health care. To begin, they would be virtually impossible to enforce in a industry like medical care, with billions of annual transactions carried out at tens of thousands of separate facilities, providing thousands of different services using tens of thousands of goods.

Health-care businesses already have demonstrated a protean capacity to preserve their revenues and profits in the face of such controls—as the experience with Medicare Part B in the mid-1980s illustrated. Current cost controls for Medicare Part A—the Prospective Payment System which reimburses hospitals at set rates for

each illness rather than each procedure—have modestly slowed the growth in Medicare costs. But there is little evidence that total medical costs have been restrained, as hospitals routinely offset revenues foregone from the controls by raising charges on other patients and private insurers. According to researchers, hospitals on average recover about 90 percent of the costs of treating Medicare patients and charge privately-insured persons 128 percent for the same treatment. If the government tries to control the entire system in this way, total costs will still depend on diagnosis, over which hospitals, doctors and health plans must retain control.

Price controls also would likely impair the potential effectiveness of managed competition to expand supplies of cost-effective care. The conflict arises from the squeeze that controls would impose on a health plan's operating margins. As managed-competition reforms drive health plans to provide more, efficiently-delivered health-care, controls would prevent the most efficient ones from negotiating with their suppliers and doctors for favorable terms. This would reduce their savings and undercut their competitive advantage, and so could inhibit their growth just when the system requires their expansion. More generally, by targeting controls to the health-care sector, labor and other resources will tend to flow to industries paying higher, uncontrolled prices and wages, raising the prospect of shortages of medical services.

In any event, in order to work, price controls need fixed targets to regulate. Yet health-care reform, if it is to work, will drive continuous changes in medical services and the practices of medical personnel.

Given this evidence, it is reasonable to ask what basis exists for price controls in health-care reform. There is an implicit economic argument at work here; namely, that price controls are appropriate, because insurance companies, hospitals and doctors exercise monopoly or oligopoly power over prices which is reflected in inordinately high medical prices. The economic evidence for this position, however, is weak. To begin, by itself oligopoly pricing could explain high prices but not persistently high rates of price increases. In order to explain that, the hold of the oligopoly would have to be growing consistently stronger. Most data, however, suggest the opposite; namely, that the medical sector is becoming more competitive. For example, the numbers of physicians have been rising and their real incomes falling, and the numbers of providers have been increasing and their profits falling.

The medical market is gravely imperfect in various ways which tend to produce higher prices and relatively high inflation. First, there are barriers to entry that contribute to high prices, including the limited numbers of places at medical schools, the high cost of schooling and medical practice, licensing requirements, and the large investment required to establish medical facilities. To strengthen competition by reducing barriers to entry, market-based health-care reform should support the nation's medical teaching institutions. In this regard, it also should include significant malpractice reform, and it should not arbitrarily limit the return on medical investment. This returns us to the defects of price controls: By limiting the return on medical investment, we should expect to get less of it—which will mean less competition, smaller supplies of care—and thus, paradoxically, stronger upward pressures on health-care prices.

Under the current system, competitive pressures on prices also are reduced by most Americans' limited ability to evaluate the cost-effectiveness of their health care alternatives. Both Senator Breaux's proposal and the President's plan address this problem, markedly increasing the availability of the information that consumers need to make informed choices, principally through the information-collecting functions of the Health Alliances. The Alliances would collect and publish simple, standard information about the cost and outcomes of every plan. It is vital that consumers be able to genuinely evaluate the cost and performance of every plan, since competition in a reformed health-care marketplace will encourage some insurers and providers to try to compete by cutting-back on basic benefits and reducing quality.

Conservative critics of alliances should explain by what other means they will ensure that Americans will be able to make more informed choices among available health-care plans. The prospect of such informed decisions will provide a critical incentive for health-care providers to compete on the basis of value and price.

The Alliances also would facilitate the use of new rules of trade for insurance that would end the price discrimination that today denies people coverage or sets their premiums on the basis of pre-existing conditions, age or other physical qualities. As a result, insurers will have to become more efficient and productive—or face the market consequences of competing with rivals offering a comparable product at less cost or with better outcomes.

The role of Health Alliances in maintaining a transparent and non-discriminatory marketplace for insurance, as proposed by Senator Breaux, does not entail broader regulatory powers that could stifle competition. Like the New York Stock Exchange,

the Alliances should be chartered not to regulate insurance prices or micro-manage the operations of medical providers, but only to oversee the terms of trade for the health-insurance market.

These reforms will quickly bring major change to the insurance industry. To compete and survive, insurers will have to contract with providers that find ways of delivering basic services more efficiently. And there is no mystery about where these cost-saving efficiencies would be found. Managed competition will produce a substantial rush to organized delivery plans which offer blanket coverage for a per-person price by staffs of doctors, nurses and other assistants paid by salary or on a per-patient basis, instead of fee-for-service medicine by physicians and specialists of patients' own choosing.

In theory, this strategy packs real economic power; by one estimate, a doctor in a managed-care plan can cover two-to-three times the patient-load of private, fee-for-service physicians. Yet to date, these plans have not spread as quickly as might be expected. Most Americans prefer choosing all of their own doctors, and most doctors prefer conducting their own practices—and for most people, the incentive to change has been modest since most organized delivery plans still price their services only slightly less than under fee-for-service. The principal reason is the stunted state of competition through the industry.

There is evidence, however, from recent experience with health coverage for state employees in California, Minnesota and Florida, that organized delivery plans can provide care more efficiently and cheaply—when they are part of a managed-competition system. More intense competition will help. In addition, economics can help identify incentives not only for these health plans to contain costs, but also for their doctors and nurses to recommend fewer and less costly services.

To achieve this, reform has to confront the high level of uncertainty characteristic of the practice of modern medicine. Doctors and nurses often cannot be certain how much testing and treatment a patient needs or, more precisely, what services a patient positively *doesn't* need. Many physicians over-prescribe expensive procedures whether or not they practice in organized delivery systems, in order to avoid being sued for *not* ordering more services that *might* prove helpful. They also bear no cost for ordering services that prove unnecessary. To drive-up the plan's cost-effectiveness, health-care reform has to include broad malpractice protection for physicians practicing standard but not extraordinary medicine—another area in which Senator Breaux's proposal is more sound economically than the alternatives.

While there is little reason to expect that price regulation will reduce medical-care inflation without also reducing medical-care quality and availability, markets alone—even non-discriminatory, transparent markets—also cannot allocate health care in an acceptable way. Under a pure market-based system, we would have to accept grave mismatches between some people's need for care and their ability to pay for it. The essential point is that medical care is different from other goods and services, because it is more often truly non-discretionary. We cannot rationally choose to delay cancer treatment as we might delay purchasing a new car; we cannot rationally even choose less expensive treatment as we might choose a cheaper model car or a smaller apartment.

Insurance is designed to resolve this problem by guaranteeing that we can get expensive treatment when we need it, without foregoing all other forms of consumption—that is, without selling our homes or going hungry. We accept, therefore, that market price constraints will have relatively little effect once a patient enters a serious medical process; most of us do what the doctor recommends and the costs are socialized in some manner. We go even further, because we embrace a social model of insurance in which those earning income subsidize others with greater risks and fewer resources, principally through Medicare and Medicaid.

In this respect, the essential question for health-care reform is whether to limit this concept of insurance to those treatments which civilized people would not want to deny anyone because he or she could not pay—principally, catastrophic illnesses and injuries, conditions affecting people's basic capacities, pre-natal care and, for lower-income people, routine medical care for children.

Permit me to restate this issue more vividly. Virtually everyone believes in genuine equal access to *certain* areas of care, especially care in life-threatening circumstances. Do we wish to ensure genuine equal access to essentially *all* areas of care? If so, then the role for market forces will be very limited, because these forces limit access to goods and services according to people's ability to pay.

Should there be a distinction between care that everyone deserves as a right, and care which people can have only if they are willing to forego some other good—that is, to pay for it? For example, professionally-cleaned teeth are not a matter of life and death or basic capacity, nor are the conditions which account for a substantial share of doctors' visits, such as the untreatable common cold.

The Breaux-Durenberger-Cooper legislation is willing to make this distinction: In an effort to discipline demand for treatment for less serious conditions, it would limit the deductibility of health-care insurance to the lowest-cost basic benefit package. If people want more they have to pay for it, at least through their insurance. Employers would be able to deduct only the cost of providing the least-expensive package of basic benefits on the market, creating a direct incentive for firms to select the most lean and competitive health plans. If this incentive proves insufficient, we may consider heightening the pressure by also counting as part of people's taxable income premiums exceeding the basic level paid in an employee's name by an employer.

The point of this approach is not to increase anyone's financial burdens. The object is to use tax policy to promote an insurance marketplace where consumers weigh the purchase of economical coverage, and where insurers have stronger incentives to compete for their business on the basis of price and value.

The President's bill does not have comparable incentives for less-comprehensive coverage. In fact, the administration proposal would expand existing coverage for many people. In essence, this is why the President's plan also relies on price controls on insurance premiums and on more extensive price controls for fee-for-service plans.

These are certainly difficult decisions, for they involve the prospect of informing some practitioners that their practices will not be covered by basic insurance, and millions of Americans that others will have access to non-essential treatments that they cannot afford. Everything we know about economics tells us that the alternative—covering everyone for virtually everything and trying to restrain costs by controls—will ultimately produce *less* high-quality coverage for nearly everyone, plus a weaker economy. It should be enough to ensure everyone genuine access to the care they truly need, under reforms that ultimately will produce a stronger economy.

Thank you.

PREPARED STATEMENT OF STEPHEN ZUCKERMAN AND JACK HADLEY¹

We appreciate the opportunity to appear before the Committee to discuss health care cost containment policies. We are both economists and have jointly and individually conducted several national studies of hospital and physician payment, of the determinants of hospitals' costs, and of providers' responses to changes in payment. We will address four basic questions in this testimony.

Is there a need to use or be ready to use regulation in conjunction with managed competition to successfully contain costs?

Is regulation likely to be antithetical to the incentives of managed competition?

Is it reasonable to assume that our health care system can attain the containment goals of the Health Security Act?

How quickly can these goals be attained?

Given the uncertainties surrounding how health care markets organized around managed competition will play out, the simple answer to the first question must be "Yes." Strong consumer incentives to choose low cost plans *could* produce the desired efficiencies; however, no one can be certain about how consumers, insurers, or providers will behave. In addition, to varying degrees, there appears to be an unwillingness in all plans to strengthen consumers incentives to the point where managed competition might be expected to succeed.

To answer the second question, we need to consider both the level at which spending is controlled and how the Alliances deal with plans. If the spending controls are extremely tight, plans may have no choice but to price at the Alliance-wide premium target, weakening the managed competition incentives. However, as long as the targets do not threaten the financial feasibility of plans, it seems that the incentives to provide value for money will be maintained. After all, if plans can undercut the Alliance-wide target to attract subscribers but do not, why is there reason to believe that they would under managed competition in the absence of controls. As outlined in the Health Security Act, the spending limits should leave health plans with room to compete with one another. If they do not, costs may only be controlled by direct actions on the Alliance.

¹The view expressed in this statement are those of the authors and do not necessarily represent those of the Urban Institute, Georgetown University School of Medicine, or their sponsors.

The cost containment goals proposed by the Administration are relatively modest, not draconian. Given that the Health Security Act does not try to reduce the level of spending initially, our answer to the third question is that the goals are attainable. At this point, supporters of all approaches to health care reform accept that (1) there is a substantial amount of pure waste and care of questionable value that can be pared back without causing any meaningful, or possibly noticeable, harm to the Nation's health; and (2) there is evidence that we simply pay higher prices than we need to for good quality health care.

Finally, research has shown that when institutions are faced with constrained revenues, they adjust, they adjust quickly, and they try to adjust in ways that do not harm their patients' health. We recognize that the speed with which the system responds depends, in part, on how quickly specific policies could be implemented. Implementation issues will arise at many points in health care reform and should not deter otherwise sound policy directions.

I. REGULATION SHOULD BE KEPT AS A COST CONTAINMENT MECHANISM EVEN IF MANAGED COMPETITION IS VIEWED AS THE PRIMARY POLICY APPROACH

For health care reform based on managed competition to have a chance to result in cost containment, consumers must have a strong incentive to choose low-cost plans. Under the current system, these incentives are weakened because of the tax exemption provided to employer contributions toward the cost of health insurance. Removing or reducing this tax exemption would correctly be seen as a tax increase imposed on workers, particularly those in the middle and upper income brackets who presently benefit most from the tax policy. But, this is necessary to give managed competition a chance. The administration has chosen not to confront this politically-difficult issue and, as a result, has conceded an important element of consumer choice. Other plans also retain substantial parts of the current tax subsidies, although they are limited somewhat.

Keeping consumer choice incentives weak by maintaining the tax exemption for employer contributions makes the inclusion of alternative cost containment policies all the more critical. The alternative that the Health Security Act puts forward is the Alliance-wide premium cap—a control on the rate of growth in health plan revenues. The proposal relies on competition among plans, but limits the amount of tax-subsidized dollars that can flow into the system and requires the development of a potentially regulatory framework for limiting total spending. If there is a consensus that stronger incentives for consumer choice are not achievable, then there is little choice but to impose some type of spending cap as a way of encouraging providers and health plans to seek efficiencies.

However, even with stronger consumer choice incentives—and no plan has yet considered eliminating tax subsidies completely—policymakers should not lose sight of the fact that health care markets will not necessarily function like markets for other goods and services. They are fundamentally different. Uncertainty about when services will be consumed gives rise to demand for insurance that, in turn, leads to over-utilization from a social perspective. Other market imperfections include inadequate information on the part of patients, large variations in diagnostic and treatment regimes, and providers with some degree of monopoly power. Even in the face of dramatic cost increases over the past two decades, consumers have shown reluctance to move away from traditional forms of insurance. As an alternative, regulation can be used to emulate the outcomes, in terms of both price and quantity, that might be expected from a competitive market. Even if this is not done perfectly, regulation offers greater certainty to achieve one of policymakers' desired outcomes—control over the rate of growth in costs.

Regulation may take many forms. It is often described as "micro-management" of the physician/patient relationship. However, this type of intervention is much more characteristic of managed care plans than of public policies aimed at controlling spending. The regulatory approaches that we have the most experience with generally adjust prices in order to meet some implicit or explicit spending target. Even less intrusive, although admittedly untested, is the idea of controlling spending by limiting the growth in the average premium available to health plans within a geographic area. Whatever form the regulation takes, it is important that it impose the market discipline that currently appears to be missing.

There is little doubt that if faced with constrained revenues, insurance plans will limit their expenses. Each plan will decide the best way to do this, including constraining the overuse of services and limiting what they pay doctors, hospitals, and other health care providers. However, they will have every incentive to do it in a way that doesn't drive away subscribers. This is exactly what should happen under managed competition if plans aggressively compete for new subscribers. Many view

having insurance companies, which are responsible to their subscribers, make these decisions as preferable to having the Federal government involved in detailed price negotiations and utilization review procedures with individual hospitals and physicians. However, one question that policymakers will have to face is "will patients be better off if private health plans make these decisions or if the process is open and subject to public, and potentially political, debate?"

In our view, the Alliance-wide premium target is the major policy tool for slowing the growth in health spending in the Health Security Act. It is designed to force health plans and providers to keep spending growth at or below rates deemed desirable by the political process. If the political process is unwilling to rely on the principles of consumer choice to achieve savings or if consumer choice does not constrain spending growth, then the Alliance-wide premium target is both a necessary and reasonable stand-in.

II. SPENDING LIMITS SHOULD NOT BE ANTI-THETICAL TO THE INCENTIVES OF MANAGED COMPETITION

This issue is difficult to address because we have had no real experience with managed competition. The answer depends on one's view of both how the Health Alliances will deal with health plans and on whether the targets will be tight or loose. If the controls are very tight, then plans that wish to qualify will have little choice but to set their premiums at the target. In effect, a tight target means that it may not be feasible for plans to provide quality care at any premium lower than the target. By definition, however, a tight target would mean that the cost containment goals were being met and, consequently, that managed competition could not really do any better relative to the public's objectives.

If the targets are not very tight, which, as we argue below, we believe will be the case for the first few years at least, then it seems that plans will still have the same incentives to provide value for money. If they believe that they can attract subscribers by offering a plan which provides the same quality and level of care as their competitors, but at a lower premium, then the presence of a target should not alter that behavior. Furthermore, as long as the target is not binding on most plans, the Health Alliance will not be in the role of "dictating" premiums. The Alliance has little interest in the premium set by each plan, apart from its impact of the area-wide average premium and the ability of the Alliance to stay within the National Health Board's target. Of course, if all plans try to exceed the growth targets, then the Alliance would have no choice but to enforce the Board's policy and, in that sense, "dictate" the premium.

It is possible, of course, that plans may feel that the best way to attract subscribers is by emphasizing high quality, immediate access, and as little cost sharing as possible. If this is the case, then we would expect all plans to price themselves essentially at the Alliance-wide premium target. If this assumption about behavior is correct, however, it suggests that the absence of a target would lead plans to behave as they have in the past—with little regard for the cost of the services they are selling. This behavior also suggests that the theory of managed competition is simply wrong, and that only meaningful budget constraint at an aggregate level will succeed in limiting cost growth.

In this regard, a recent assessment of the experience of the California Public Employees Retirement System (CalPERS) is quite instructive (Findlay, 1993). The gist of this assessment is that it was only the implicit budget constraint imposed on CalPERS by the state's budget crisis that led it to take a very hard stand on premium increases in 1991 and 1992. Moreover, CalPERS used some of the same strong-arm tactics critics say are antithetical to the theory of managed competition to keep recent premium increases as low as they were.

If this assessment is accurate, then it implies that managed competition, which requires some type of an administrative superstructure—whether it be a Health Alliance or a HIPCS—will work only if that administrative structure has some binding constraint to give it muscle. Thus, the relevant question for this Committee to consider may not be whether premium targets defeat the incentives of managed competition. Rather, can managed competition work in the absence of some type of externally imposed financial pressure or budget constraint?

III. THE COST CONTAINMENT TARGET IS RELATIVELY MODEST

According to the recent Congressional Budget Office (CBO) analysis, the Administration's plan would reduce National Health Expenditures by \$30 billion in the year 2000, the first year the plan produces any net savings, and \$413 billion between 2000 and 2004. These savings follow a four-year start-up period during which sys-

tem costs would be increased by a total of \$76 billion. Clearly, this is a lot of money to anyone, but it is critical to put these amounts into perspective.

- A savings of \$30 billion in 2000 represents a reduction of only 1.8% **below what spending would be in the absence of any policy changes**, as projected by CBO. Over the five years 2000–2004, total savings are less than 5% of projected total spending. These projected savings may seem small, but they would be occurring at a time when large numbers of people are expanding their utilization as a result of universal coverage. **However, the constrained level of spending in 2004 will still represent an increase in total spending of about 75% over 1996 spending.**
- Even with the reduction in the rate of growth in spending the Administration proposes to achieve, health spending will still represent 16.9% of GDP, a modest 0.5 percentage points lower than projected by CBO, but still a substantial increase above the nearly 14% of GDP we are currently spending on health care. As the Committee undoubtedly has heard many times, only one other industrialized country spends as much as 10% of their GDP on health care, in spite of the fact that other countries have universal coverage with very little patient cost sharing.
- The initial limit on the average premium in an area will be set by trending forward current spending for the services included in the comprehensive, basic benefits package at the historical rate of growth. **In other words, the proposed targets do not initially attempt to squeeze anything out of the base.**
- The annual premium targets that the Health Security Act establishes are based on lowering spending growth to inflation plus population growth by 1999. There is no way to say that this, or any of the specific intermediate targets contained in the legislation, are correct. What is critical to keep in mind is the principle that, if premium targets are to be used to lower the level of spending by a significant amount within any five-year period, average annual targets several percentage points below historical growth rates will be needed. There is, however, a great deal of discretion in how quickly spending growth is reduced. Setting premium targets at close to historical levels in the early years will imply that very low rates will be needed later. A longer transition would allow for similar reductions in the level of spending with smaller reductions in the rate of growth in spending.

IV. PRODUCTION INEFFICIENCY, THE PROVISION OF SERVICES OF QUESTIONABLE VALUE, AND UNNECESSARILY HIGH PAYMENT RATES LEAVE PLENTY OF ROOM TO TRIM COSTS WITHOUT HARMING HEALTH

There are numerous studies that document either inefficiency in the way services are provided or that a substantial proportion of services are clinically inappropriate or of questionable value.

- **Using different methodologies and different data sets, studies have estimated that 10–15% of hospital costs represent production inefficiency, i.e., using more inputs or more costly inputs than are needed to produce the volume and mix of care provided.** One study estimated that 25% of urban hospitals are “highly inefficient.” These estimates suggest that in 1991, inefficiency in hospital production was roughly \$30–45 billion; extrapolating to 2000, hospital inefficiency would be in the range of \$50–70 billion. (Zuckerman, Hadley, and Iezzoni, 1994; Ozcan, Luke, and Haksever, 1992; Hofler and Folland, 1991; Willke and Custer, 1990)
- **These estimates of production inefficiency in hospitals are based on the services currently provided, and do not question the value or appropriateness of these services.** However, there is ample evidence that many hospital services may be unnecessary. One study estimated that between 17% and 32% of hospital cases for coronary angiography, carotid endarterectomy, and upper GI endoscopy represented inappropriate admissions (Chassin et al., 1987). Another study concluded that 23% of hospital admissions were inappropriate and an additional 17% could have been avoided with the use of ambulatory surgery (Siu et al., 1986). A third study found that 21.4% of pediatric hospital days were inappropriate (Kemper, 1988).
- Compared to Germany and Canada, the United States has 2.6 to 4.4 as many open-heart surgery units per capita and 1.9 to 3.4 as many cardiac catheterization units per capita (Ruble, 1989). Yet life expectancy at ages 40 and 60 are virtually identical in the three countries. (At these ages, deaths from violence

and substance abuse, which heavily influence life expectancy at younger ages, are not a major factor.)

With regard to unnecessarily high payment rates, numerous studies show that the Medicare program pays hospitals and physicians at rates 20-30% lower than what private insurers pay. Yet, there is little evidence of poor or eroding access to care by Medicare beneficiaries. Moreover, research also suggests that as long as private insurance payment rates do not increase faster than Medicare's, access to care will remain good.

The Administration's proposal seeks to constrain payment rates for both Medicare and private insurers through a variety of market and regulatory mechanisms. Providers who currently serve high proportions of uninsured and Medicaid patients generally treat relatively few privately insured patients (Hadley and Feder, 1984). These providers will benefit from the Administration's plan. All people will be insured and payments made for Medicaid beneficiaries will increase since they will become part of the general insurance pool served by the Health Alliances. Additional evidence supporting these arguments is as follows.

- Shortly after the implementation of PPS, the hospital industry and many critics of hospital rate regulation argued that lower Medicare payments would result in 25% of the Nation's hospitals closing by 1990. The reality has been very different, however. Between 1982 and 1991, the total number of hospitals in the U.S. fell by only 4.2% (CBO, 1993). Since 1986, hospitals' average total margin has stabilized at between 4-5% and in 1992, the number of hospitals closing fell for the fourth consecutive year, reaching a ten-year low of 39 hospitals, out of more than 6,000 institutions across the U.S. (Burda, 1993a and 1993b).
- Hospital admissions per 1,000 people has fallen by more than 30% since 1982 (CBO, 1993), but Medicare's share of total admissions has been increasing since 1987, in spite of increasingly tighter PPS payment rates (ProPAC, 1993).
- Physicians' willingness to accept assignment of benefits for Medicare patients is at an all-time high, with almost 70% of physicians indicating in 1992 that they had signed a Medicare participation agreement, up from 62% in 1990 (Lee and Gillis, 1993).

V. PROVIDERS CAN RESPOND QUICKLY TO CHANGES IN THEIR ENVIRONMENTS

Every manager knows that it is difficult to say "No." Holding the line on salary increases, letting unfilled positions go vacant, laying off employees, and postponing or eliminating desired capital projects represent unpleasant, but essential, parts of health care administration. It is obviously much more pleasant to solve institutional problems by bringing in more revenues and saying "Yes." However, when the market does not permit revenue-enhancing strategies, institutions do not willingly go belly up.

- Two large studies of hospital costs over several years estimated that the average amount of time for hospitals to adjust their costs to a new set of circumstances was about 2 years (Sloan and Steinwald, 1980; Hadley and Zuckerman, 1991).
- During the PPS phase-in between 1982 and 1984, hospitals facing the greatest threat of financial loss held their cost growth to 3.2%, compared to 10.2% for hospitals facing financial gains (Feder, Hadley, and Zuckerman, 1987).
- California hospitals that faced both strong competitive pressures and the threat of losses from PPS actually cut their costs by 4.3% between 1983 and 1985, compared to cost increases of 2.7% for hospitals in non-competitive markets with little threat of losses from PPS (Melnick, Zwanziger, and Bradley, 1989).
- The annual increase in the volume of so-called "overpriced procedures" provided to Medicare beneficiaries fell from 9.3% to 2.4% per year between 1986/87 and 1988/89 in response to a fee reduction of 2.4% (Escarce, 1993).
- In a national study of hospitals' responses to financial pressure in 1987, the 25% of hospitals with the lowest profit margins held their total cost growth to 13.3% between 1987 and 1989, compared to 27.6% for the 25% of hospitals with the highest profit margins (Hadley, Zuckerman, and Iezzoni, 1993). This study also found no evidence of "cost shifting" or of adverse changes in patient care.

REFERENCES

- Burda, D., 1993a, "Hospitals Net Same Profitability in 1992," *Modern Healthcare*, (May 10, 1993), 3.
- Burda, D., 1993b, "AHA's Tally of Hospital Closings Drops Again," *Modern Healthcare*, (May 10, 1993), 3.

- Chassin, M.R., et al., "Does Inappropriate Use Explain Geographic Variations in the Use of Health Care Services? A Study of Three Procedures," *JAMA*, (November 1987), 258(18):2533-7.
- Congressional Budget Office, *Trends in Health Spending: An Update*, (June 1993).
- Escarce, J.J., "Medicare Patients' Use of Overpriced Procedures Before and After the Omnibus Budget Reconciliation Act of 1987," *American Journal of Public Health*, (March 1993), 83(3) 349-355.
- Feder, J., J. Hadley, and S. Zuckerman, "How Did Medicare's Prospective Payment System Affect Hospitals?" *The New England Journal of Medicine*, (October 1987), 317(14):867-873.
- Findlay, S., "CalPERS: A Model For Health Care Reform?" *Business and Health*, (June 1993), 45-54.
- Hadley, J., S. Zuckerman, and L. Iezzoni, "Hospitals' Responses to Financial Pressure," presented at the American Public Health Association Annual Meeting, October 26, 1993.
- Hadley, J. and S. Zuckerman, *Determinants of Hospital Costs: Outputs, Inputs, and Regulation in the 1980s*. The Urban Institute Press, (1991).
- Hadley, J. and J. Feder, "Troubled Hospitals: Poor Patients or Management?" *Business and Health* (September 1984), 15-19.
- Hofler, R.A. and S.T. Folland, "Technical and Allocative Inefficiencies of United States Hospitals Under a Stochastic Frontier Approach," for presentation at the Midwest Economics Association Fifth-Fifth Annual Meeting, St. Louis, Missouri, (April 4-6, 1991).
- Kemper, K.J., "Medically Inappropriate Hospital Use in a Pediatric Population," *New England Journal of Medicine* (October 6, 1988), 318(16): 1033-7.
- Lee, D.W. and K.D. Gillis, "Physician Responses to Medicare Physician Payment Reform: Preliminary Results on Access to Care," *Inquiry*, (Winter 1993).
- Melnick, G.A., J. Zwanziger, and T. Bradley, "Competition and Cost Containment in California," *Health Affairs*, (Summer 1989), 8(2):129-136.
- Ozcan, Y.A., Luke, R.D., and C. Haksever, "Ownership and Organizational Performance: A Comparison of Technical Efficiency Across Hospital Types," *Medical Care*, (September 1992), 781-794.
- Prospective Payment Assessment Commission, *Medicare and the American Health Care System*, (June 1993).
- Ruble, D.A., "Medical Technology in Canada, Germany, and the United States," *Health Affairs*, (Fall 1989), 178-181.
- Siu, A.L., et al., "Inappropriate Use of Hospitals in a Randomized Trial of Health Insurance Plans," *New England Journal of Medicine*, (November 13, 1986), 316(20):1259-66.
- Sloan, F. and B. Steinwald, *Insurance Regulation, and Hospital Costs*, Lexington Books (1980).
- Zuckerman, S., J. Hadley and L. Iezzoni, "Measuring Hospital Efficiency With Frontier Cost Functions," *Journal of Health Economics*, forthcoming, 1994.

