AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

S. HRG. 108–237

HEALTHCARE ACCESS AND AFFORDABILITY: COST CONTAINMENT STRATEGIES

HEARING

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

UNITED STATES SENATE

ONE HUNDRED EIGHTH CONGRESS

FIRST SESSION

SPECIAL HEARING

JUNE 11, 2003—WASHINGTON, DC

Printed for the use of the Committee on Appropriations

Available via the World Wide Web: http://www.access.gpo.gov/congress/senate

U.S. GOVERNMENT PRINTING OFFICE

89–836 PDF WASHINGTON : 2004

For sale by the Superintendent of Documents, U.S. Government Printing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512–1800; DC area (202) 512–1800
Fax: (202) 512–2250 Mail: Stop SSOP, Washington, DC 20402–0001

COMMITTEE ON APPROPRIATIONS

TED STEVENS, Alaska, *Chairman*

THAD COCHRAN, Mississippi
ARLEN SPECTER, Pennsylvania
PETE V. DOMENICI, New Mexico
CHRISTOPHER S. BOND, Missouri
MITCH McCONNELL, Kentucky
CONRAD BURNS, Montana
RICHARD C. SHELBY, Alabama
JUDD GREGG, New Hampshire
ROBERT F. BENNETT, Utah
BEN NIGHTHORSE CAMPBELL, Colorado
LARRY CRAIG, Idaho
KAY BAILEY HUTCHISON, Texas
MIKE DeWINE, Ohio
SAM BROWNBACK, Kansas

ROBERT C. BYRD, West Virginia
DANIEL K. INOUYE, Hawaii
ERNEST F. HOLLINGS, South Carolina
PATRICK J. LEAHY, Vermont
TOM HARKIN, Iowa
BARBARA A. MIKULSKI, Maryland
HARRY REID, Nevada
HERB KOHL, Wisconsin
PATTY MURRAY, Washington
BYRON L. DORGAN, North Dakota
DIANNE FEINSTEIN, California
RICHARD J. DURBIN, Illinois
TIM JOHNSON, South Dakota
MARY L. LANDRIEU, Louisiana

JAMES W. MORHARD, *Staff Director*
LISA SUTHERLAND, *Deputy Staff Director*
TERRENCE E. SAUVAIN, *Minority Staff Director*

SUBCOMMITTEE ON DEPARTMENTS OF LABOR, HEALTH AND HUMAN SERVICES, AND EDUCATION, AND RELATED AGENCIES

ARLEN SPECTER, Pennsylvania, *Chairman*

THAD COCHRAN, Mississippi
JUDD GREGG, New Hampshire
LARRY CRAIG, Idaho
KAY BAILEY HUTCHISON, Texas
TED STEVENS, Alaska
MIKE DeWINE, Ohio
RICHARD C. SHELBY, Alabama

TOM HARKIN, Iowa
ERNEST F. HOLLINGS, South Carolina
DANIEL K. INOUYE, Hawaii
HARRY REID, Nevada
HERB KOHL, Wisconsin
PATTY MURRAY, Washington
MARY L. LANDRIEU, Louisiana

Professional Staff
BETTILOU TAYLOR
JIM SOURWINE
MARK LAISCH
SUDIP SHRIKANT PARIKH
CANDICE ROGERS
ELLEN MURRAY *(Minority)*
ERIK FATEMI *(Minority)*
ADRIENNE HALLETT *(Minority)*

Administrative Support
CAROLE GEAGLEY

CONTENTS

	Page
Opening statement of Senator Arlen Specter	1
Opening statement of Senator Tom Harkin	1
Statement of Karen Davis, Ph.D., president, The Commonwealth Fund	3
Prepared statement	6
Statement of John Mentel, M.D., Chair, Department of Applied Informatics, Mayo Clinic	14
Prepared statement	16
Statement of Dave Hickman, director, Clinical Integration, Mercy Medical Center	18
Prepared statement	20
Statement of Dr. James F. Fries, director, Arthritis, Rheumatism, and Aging Medical Information System, Stanford University	23
Prepared statement	26
Statement of Dr. Donald R. Hoover, professor, Department of Statistics, Rutgers University	30
Prepared statement	33
Statement of David L. Bernd, chief executive officer, Sentara Healthcare	34
Prepared statement	36

HEALTHCARE ACCESS AND AFFORDABILITY: COST CONTAINMENT STRATEGIES

WEDNESDAY, JUNE 11, 2003

U.S. SENATE,
SUBCOMMITTEE ON LABOR, HEALTH AND HUMAN SERVICES, AND EDUCATION, AND RELATED AGENCIES,
COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 9:35 a.m., in room SD–124, Dirksen Senate Office Building, Hon. Arlen Specter (chairman) presiding.

Present: Senators Specter, Craig, and Harkin.

OPENING STATEMENT OF SENATOR ARLEN SPECTER

Senator SPECTER. Good morning, ladies and gentlemen. The Appropriations Subcommittee on Labor, Health and Human Services, and Education will now proceed. Today's hearing will focus on the high cost of health care and cost-containment strategies, with particular emphasis on administrative costs, disease management, automation, and end-of-life care.

A recent article in Health Affairs reported that the median U.S. per capita healthcare spending was $4,631 in the year 2000, compared to $1,983 for 30 industrialized member countries. As we are proceeding in the Senate to focus on Medicare reform and prescription drugs, this is an especially timely subject.

My distinguished ranking member, Senator Harkin, had suggested that the subcommittee focus with particularity on the very important subject of healthcare costs and accesibility, and we have devoted some three hearings to the subject. And in accordance with longstanding practices between Senator Harkin and myself, going back for more than a decade as he has been chairman, I have been chairman, he has been ranking, I have been ranking, in what we call the "seamless change of the gavel," when he has a suggestion of a particular interest and wants to direct the subcommittee's focus to that, there is always an automatic yes.

I have other commitments this morning. I have already shaken hands with the distinguished panel and thanked them for coming, and at this point I am going to turn the hearing over to you, distinguished colleague.

OPENING STATEMENT OF SENATOR TOM HARKIN

Senator HARKIN [presiding]. Well, thank you very much, Mr. Chairman, and thanks for being so accommodating in having these three sets of hearings. This is third and final one in the series, in

terms of what is happening, in terms of coverage, lack of coverage, cost of insurance. And this one, today, winding up talking about what is driving the costs and how we contain them.

Thank you, Mr. Chairman. And I want to thank all the panel members for being here for this important discussion.

Again, today we are going to focus on what drives health costs, how we can achieve some cost savings through creative and innovative efforts.

During the last couple of months, I have held a series of roundtable meetings around the State of Iowa. A lot of people have come to these. And what I am hearing is different than what I have heard in the past 20 years. It is almost like a crescendo now of different things—bankruptcy because of medical bills, businesses forced to scale back their benefits.

I can remember this businessman in Mason City, who told me that 10 years ago he covered all of his employees. I think he had 25 employees, a small business. Ten years ago, he covered them all, with all healthcare benefits for them and their families. Because of the increasing cost of health insurance, he had to scale back; could not cover the family, just covered them. Now he has to cut it back even further for higher premiums, higher deductibles, in order to have some basic coverage at all. And as he said to me, he said, "You know, these aren't just my employees. These are people I go to church with, my kids go to school with. You know, these are my friends, as well as my employees." And he said, "It's just tearing me up that we can't afford to cover them any longer."

School districts. I have heard from school districts, where the cost of their health insurance last year went up 60 percent in 1 year. Sixty percent in 1 year. And so they have either got to take that out of teacher salaries, or something, to pay for that.

Healthcare providers, who are also strained, are providing care to the uninsured, and their reimbursement rates are low.

So everything seems to be coming together right now. Health-insurance premiums seem to be out of control. Premiums doubled for a family of two children just in the last 4 years. Doubled. Last year, they rose 14.7 percent. As I said, many small businesses, 30 percent increases in 1 year.

The healthcare system is being squeezed. The emergency rooms are getting overcrowded. Hospitals are strained from providing uncompensated care. Our public safety net is stretched to the limit. Unfortunately, uninsured individuals are more likely to receive too little care too late, which costs us more in the end.

Again, when we look at it, we spent $1.4 trillion on healthcare in 2001, about 14 percent of GDP. And we are projected to spend over 17 percent of GDP by 2012. We spend nearly double per person than other industrialized nations. But many of them have higher life expectancies and healthier people than we do. So something is wrong when we are spending all this money than other countries and yet they have longer life expectancies and healthier people.

The issue impacts every one of us, even those of us that have good insurance programs. I think that may be part of the problem. Those of us who have good insurance programs, like the Federal Employees Health Benefits program, we say, "Oh, no problem," and

we just keep going on. But then you start seeing how much it costs every year.

I think partisan politics have got in the way of a lot of this, too. I say that quite frankly. But the problem is, we are all in this together, and somehow we have got to address it, as a Nation.

Oh, these are just—this chart here—I am trying to make it—oh, that is just showing the percent of GDP, going from 14 percent up to 17 percent by 2012. And 2012—well, let us see, that is 9 years from now, right? Let us see, 9 years ago would have been 1994. That does not seem that long ago.

So it passes pretty fast.

So I thank you all for coming. I have said enough. I am here to listen to you and to have a discussion with you. All of your statements will be made a part of the record in their entirety. And I would like to just go down the list here and recognize each of you, if you could just give us your best thoughts on what is driving the costs, what we ought to be focused on, maybe, your best suggestions. And then we will get into a discussion afterward on cost containment, what is driving the costs, and what we can do to help control some of those costs.

Believe me, nothing is too far out for us to consider. Some of the best ideas I have heard have sort of been on the edge, you know, of things that people have recommended. For example, I just said earlier, I think, Dave, to you, that I had had breakfast with someone a week or so ago who has devised a new system just for controlling one part of chronic care, which is diabetes. And the initial results were incredible, the amount of savings, just from management. So there are a lot of things like this I think we can really look at.

So, again, I thank you all for taking time and for being here to discuss this. And I will just start here. I have Dr. Davis. I will just start, and then go this way, since that is the way my list is structured.

STATEMENT OF KAREN DAVIS, Ph.D., PRESIDENT, THE COMMONWEALTH FUND

Senator HARKIN. Dr. Davis is president of The Commonwealth Fund. A native of Oklahoma, Dr. Davis received her Ph.D. in economics from Rice University.

Welcome, Dr. Davis, and please proceed.

Dr. DAVIS. Thank you. I would like to thank Chairman Specter and Senator Harkin for this opportunity to testify.

As we know, rising healthcare costs are a major concern, not only to policymakers, but employers, healthcare leaders, and people who are insured and uninsured alike. We have a mixed public-private system of insurance. We have relied on managed care and market competition to shape our healthcare system, and yet we have the highest healthcare spending per capita in the world, as we have heard already. And during the 1990s, health spending in the United States rose faster than in other industrialized nations.

The key to containing costs, in my view, as well as getting better value for what we spend, may well lie in fundamental changes in the supply side of the market. I think we need to shift our attention to reducing errors, eliminating waste and duplication in clin-

ical care, modernizing and streamlining administration, promoting transparency and accountability for performance, and aligning financial incentives for physicians, hospitals, and other healthcare providers to reward high-quality and efficient care.

As you mentioned, health-insurance premiums are going up, on average, about 10 percent to 15 percent a year. There is a new study out today saying it is 15 percent in 2002, 18 percent for the same benefit package.

But companies, insurance companies, are trying to recoup some losses they made the mid-1990s. They are building up reserves and profits. The underlying rate of increase in healthcare costs is somewhat less, but still troubling. As you said, the United States spent $1.4 trillion, 14 percent of GDP, in 2001. That was a jump from 13.3 percent the year before. In fact, we had per capita increases in healthcare costs of 8.7 percent. Now, maybe that does not seem dramatic after we have talked about 60 percent increases of premiums or 15, 18 percent increases in premiums, but it is considerably faster than inflation in the economy, as a whole. There is also some evidence that the rise in healthcare costs are going up, slowing down a little. But even that that, they are projected to go up 7 percent a year per capita for the rest of this decade. So I do think it is an important problem. I am pleased you are having hearings to better understand.

If you break it down by service, prescription drugs are still going up faster than any other service. Now, it seems to have reached its peak at about 15½ percent in 2001, so it is coming down a little bit, but it is still faster than anything else. But I think the wave of the future is reflected in the acceleration in hospital spending. So while it is not the number-one, it is accounting for half of the increase in overall healthcare costs.

Now, use of healthcare services was pretty flat. In fact, it even went down a little bit in the mid-1990s. But it is now going up. Particularly, there is a major growth in hospital outpatient services, there is more emergency room use, and we also know there are more prescription drugs and there are more physician services being provided.

But I would call your attention particularly to the rapid increase in specialized procedures under Medicare. That is consultation, ambulatory surgery, brain MRIs, pacemaker insertions, heart echography, whatever you want to look at. You are seeing major increases. For example, brain MRIs went up over 15 percent in 1 year. And I think it raises the question whether, when we squeeze the fees of physicians—under Medicare, under managed care—and real incomes of physicians declined from 1995 to 1999, they are now recouping some of that lost income by working more hours, seeing more patients, providing more services. Specialists, on average, in 1999 made $219,000—some more, some less, but, on average, about $220,000. Primary care physicians, your first, front line of care, was $138,000. So there, there is a lot squeeze.

But I think we have to be concerned about this growth in procedures. We do not know whether we are now providing some necessary care that people were not getting before, or whether we have moved into unnecessary care. We actually do not have a scientific basis for deciding what is the appropriate amount of care.

I would also mention administrative expenses. Administrative expenses are going up 11 percent a year. That is high. We currently spend $111 billion on administrative costs; and that, too, will double, by 2012, to $223 billion, just on administrative costs, alone.

Now, if you will compare private insurance with public program, private insurance administrative costs, as a percent of outlays, are about two-and-a-half times higher than we run in the public program, so it is particularly a problem in private insurance. Every company is marketing, paying sales commissions, but they also have people moving on and off the coverage, changing plans, changing providers. It is administrative costs. Now, I am just talking about administrative costs to the insurers. I am not really talking about all the administrative costs to the hospitals and the physicians of all of those different rules, all of those different claims forms.

But if we look at overall spending in public programs, versus private programs, you look at Medicare. It has slowed down with all of the changes that the Congress has made. And in fact, Medicare, over the last 30 years, has gone up less quickly than private insurance outlays per enrollee. And if you just——

Senator HARKIN. For what period of time? Over the last——

Dr. DAVIS. 30 years.

Senator HARKIN. 30 years.

Dr. DAVIS. Right.

Senator HARKIN. Well——

Dr. DAVIS. There was a recent study by Marilyn Moon in Health Affairs that just documented that trend. At the back of my testimony, I have got some charts that give you the actual figures and display that.

But if you just take 2003, the Federal Employees Health Benefit premiums are going up 15 percent per participant. Medicare is going up 4 percent. So that difference you see, just between FEHB and Medicare, illustrates kind of what is going on between private insurance and Medicare.

You mentioned that the United States is spending $4,631 a person. That is 69 percent more than Germany, 83 percent more than Canada. It is 134 percent more than the average industrialized Nation. What is troubling to me is it is even going up a little bit faster than other countries. Canada had a 1.8 percent real increase in the 1990s. We had 3.2 percent. We also have people paying more out of pocket, and we have more private insurance. Out of pocket, people paid $700 per person in the United States, and that is twice the average for other industrialized countries. So it is not as if we are not already having patients pay a lot.

The truth of the matter is, Americans get less care than other countries. Now, we think other countries are rationing care. But Americans get fewer days of hospital care per capita, and they have about the same physician visit rates, maybe a little bit less. Why are we higher then? Why do we spend more if we go to the hospital less and go to the doctor about the same? First of all, our administrative costs are higher, but we are also paying higher prices. You know, we may be paying twice, for a given drug, what somebody is paying in Australia. There was one study that said there are cer-

tain physician fees in the United States that are three times as high as they are in Canada.

But the other issue is that we perform more complex specialized procedures. We do four-and-a-half times as many coronary angiographies, we have more MRIs per capita. So it is that specialized care that accounts, in part, for our higher costs.

Now, we, at The Commonwealth Fund, support a survey every year of people in Canada, the U.K., Australia, New Zealand, and the United States And what we are finding, this last survey, in 2002, sicker adults are reporting more medical errors in the United States than these other countries. They go to more doctors, take more medications, and more things go wrong. So this complicated, complex system of care can sometimes be bad for patients.

We are also seeing a lot of inefficiency. People in the United States are more likely to report repeating the same tests because different doctors ordered it. We just do not have the systems of coordinating that care and getting rid of that duplication and inefficiency.

That is why I stress we need to be a high-performance health system. We need high quality, safe, efficient, and accessible care.

PREPARED STATEMENT

My suggestions are, first of all, public reporting of cost and quality data—on physicians, on hospitals, nursing homes, other healthcare providers' health plans. We need broad-scale demonstrations. We need to invest in information technology. We need quality standards. We need to pay for higher quality. And we need to invest in research to learn what works. I think these steps would go a long way toward ensuring that the United States is a high-performing health system worthy of the 21st century.

Thank you.

[The statement follows:]

PREPARED STATEMENT OF DR. KAREN DAVIS

Thank you, Mr. Chairman, for this invitation to testify today on a problem of concern to policymakers, employers, health care leaders, and insured and uninsured Americans alike: rising health care costs. The search for effective cost-containment strategies hinges on understanding recent trends in health care costs. Insight is also provided by contrasting the experience of the United States with that of other countries. The U.S. system, with its part-public, part-private system of insurance, managed care, and market competition, is a departure from the stronger government role favored by other industrialized nations in both financing health care and shaping the health care delivery system. Nevertheless, many of the pressures that increase health care outlays affect all nations—from population aging, to shortages of nurses and other skilled personnel, to advances in modern medicine.

What we all want from our health care system is not necessarily cheaper care, but assurances that resources are being invested wisely to buy higher-quality, more patient-responsive care that achieves better outcomes. We should aspire to a high-performance health system—one that is high-quality, efficient, and accessible to all Americans.

In the past, we have focused primarily on the demand side of the market. The key to containing costs, however—and to obtaining greater value for what we spend—may well lie in fundamental changes in the supply side of the market. In other industries, the path to lower costs lies in greater production efficiency, and financial rewards accrue to those firms that succeed in producing a high-quality product more efficiently. But in health care we rarely reward or insist on either greater efficiency or higher quality. In the future, we should shift our attention to reducing errors, eliminating waste and duplication in clinical care, modernizing and streamlining administration, promoting transparency and accountability for per-

formance, and aligning financial incentives for physicians, hospitals, and other health care providers to reward high-quality and efficient care.

TRENDS IN NATIONAL HEALTH EXPENDITURES

Rising health insurance premiums have drawn the nation's attention to the problem of rising health care costs. After years of relatively modest increases in employer health insurance premiums, Medicare, and Medicaid, double-digits have returned to health care. States are feeling the fiscal squeeze from the economic slowdown and the sudden surge in Medicaid and public employee health benefit expenses. The California CalPERS public employees health benefits program, for example, recently experienced a 26 percent premium increase.[1] In 2003, premiums in the Federal Employee Health Benefits Program are up 15 percent.[2] Some employers are responding to sharp increases in premiums by shifting a portion of the costs to employees; others have stopped paying for health insurance altogether.[3]

Why does the health care system appear to be so costly and why do costs appear to be growing so fast? Like most things in life, the answer is not all that simple. Many factors affect spending and contribute to its growth—insurance underwriting cycles, the price of services, use of services, new technologies, the administrative costs of a fragmented system. Moreover, the relative importance of these factors changes over time.

It is important, though, to distinguish between increases in health insurance premiums and the underlying increase in the cost of providing health care. Premiums are often affected by what is known as the "insurance underwriting cycle." Benefit payments and premiums do not always move at the same rates. If insurers underestimate what will happen to health care costs and price their premiums too low, it can take several years for insurers to catch up and recoup losses. In addition, in times of tight competitive markets, insurers try to retain or gain market share and keep premiums as low as possible, even taking losses in the short run. As insurance companies consolidate and competition weakens or reserves become too low, premiums are raised and grow faster than payments for benefits.

That is what we have been seeing over the past few years. In 2001, insurance companies raised premiums 10.5 percent, which for the third straight year was faster than the growth in benefits.[4] In 2002, large employers reported a rise in premiums of 12.5 percent.[5] Insurance companies have been building reserves and recouping from their losses in the mid 1990s, when stiff competition among plans led to revenue shortfalls.[6] However, they have probably caught up by now, profits have risen, and premiums may again grow more in line with benefit spending.[7]

The more important question is what is happening to expenditures for health care overall. In 2001, the nation spent more than $1.4 trillion for health care, or 14.1 percent of the gross domestic product (GDP). This was a major jump from 13.3 percent of GDP in 2000, due to accelerating health care costs as well as relatively weak nominal GDP growth.[8] By 2012, health spending is projected to more than double.

Recent concern about rising health care costs, however, is partly a reflection of their departure from the relatively low growth we experienced in the mid- to late-1990s. From 1993 to 1999, spending rose an average of just 5.4 percent per year.[9] The 8.7 percent growth in 2001 is still well below average increases in each of the three decades before 1990, and there are some early signs that things are beginning to slow down again somewhat.[10] Nevertheless, with health care representing a

---

[1] CalPERS, *Facts at a Glance: Health.* California Public Employees Retirement System, May 2003.

[2] Mark Merlis, *The Federal Employees Health Benefits Program: Program Design, Recent Performance, and Implications for Medicare Reform.* Henry J. Kaiser Family Foundation, May 30, 2003.

[3] Edwards, et al. *The Erosion of Employer-Based Health Coverage and the Threat to Worker's Health Care.* The Commonwealth Fund, August 2002; Kaiser Family Foundation and Health Research and Educational Trust, *Employer Health Benefits 2002 Annual Survey.* Kaiser Family Foundation, Menlo Park, CA and Health Research and Educational Trust, Chicago, IL 2002.

[4] Stephen Heffler et al., "Health Spending Projections for 2002–2012," *Health Affairs* (Web Exclusive February 7, 2003.)

[5] Bradley C. Strunk et al., "Tracking Health Care Costs: Growth Accelerates Again in 2001," *Health Affairs* (Web Exclusive September 25, 2002.)

[6] Cara S. Lesser and Paul B. Ginsburg, *Health Care Cost and Access Problems Intensify.* Center for Studying Health System Change, Issue Brief, No. 63, May 2003.

[7] Heffler et al.

[8] Katharine Levit et al., "Trends in U.S. Health Care Spending, 2001," *Health Affairs,* (January/February 2003).

[9] Levit et al.

[10] Heffler et al.

growing share of GDP, and with increasing numbers of uninsured Americans, we need to understand better what our money is buying.

One of the most significant contributors to recent spending growth is health care price inflation. At a time when overall inflation is growing at just 2 percent a year, hospital prices have risen 3.2 percent and drug prices have gone up 4.5 percent.[11] When personal health care spending is adjusted for price inflation, the overall picture changes dramatically. Real spending on health care increased by 6.2 percent in 2001, closer to the high rates of 5.5 to 7.7 percent typical of the 1970s and 1980s. What is behind these trends? And how realistic are the projections that costs will moderate to about 4 percent real growth by the turn of this decade?

The first insight is gained by looking at trends in different health care services. Because of increasing prices, new drugs coming on the market, and more prescriptions being written, spending on prescription drugs is growing faster than all other services. Increased spending on prescription drugs accounted for about one-third of overall spending growth in 1999, and about one-fourth of spending growth in 2002.[12] Growth in prescription drugs spending, however, seems to have reached a peak of 15.7 percent in 2001, and every indication is that it is now slowing. Over the next five years, growth is projected to increase at 11.2 percent—still a major expense, but not the powerful cost-driver it was in the past few years.[13]

Perhaps more ominous is that hospital spending, after being virtually flat in the 1994 to 1997 period, increased 8.7 percent in 2001.[14] Hospital care represents one-third of personal health care spending and contributed about half of the total increase in 2001 spending. Most of that increase occurred in the outpatient department.[15] Hospitals are labor-intensive institutions. In tight labor markets, hiring and retaining nurses and other skilled personnel in short supply puts upward pressure on wages. Once the economy recovers, upward pressure on wages could cause an even greater resurgence in hospital costs. Managed care may have succeeded in reducing hospital admissions and shortening lengths of hospital stays in the mid-1990s, but those were one-time savings. Without a new strategy for reducing use of this costly service, the aging population and new technological advances are likely to stimulate greater utilization.

UTILIZATION OF HEALTH SERVICES

After a number of years of stability, growth in the use of health services is on the rise again. We are seeing greater use of the outpatient department, more use of the emergency room, more physician visits, more specialized physician procedures, and more prescriptions written. Use of emergency rooms may be related to the rise in the numbers of uninsured.[16]

Use of hospital services experienced absolute declines from 1994 to 1996, presumably as a result of managed care practices. By 2001, however, the quantity of hospital services increased 8.0 percent and is abating only somewhat to an annual rate of 6.8 percent in the first half of 2002.

Some have suggested that the increasing volume of physician and hospital services is a response to the loosening of managed care.[17] Certainly, the public responded negatively to managed care's constraints on use of specialists and to "drive-through" births, and managed care enrollment has shifted from more tightly managed health maintenance organizations to more loosely managed preferred provider organizations.[18]

The other possible explanation, however, is that physicians and other health care providers are reacting to the reduced prices for their services achieved by managed care, as well as by public programs such as Medicare and Medicaid, by increasing

---

[11] Levit et al.

[12] Bradley Strunk and Paul Ginsburg, "Tracking Health Care Costs: Trends Stabilize but Remain High in 2002." *Health Affairs* (Web Exclusive, June 11, 2003.)

[13] Heffler et al.

[14] Strunk et al.

[15] Strunk et al.

[16] Schur, C., P. Mohr, and L. Zhao, Emergency Department Use in Maryland: A Profile of Use, Visits, and Ambulance Diversion, Report to the Maryland Health Care Commission, Project HOPE: Bethesda, Md., February 2003.

[17] Cara Lesser and Paul B. Ginsburg. *Health Care Cost and Access Problems Intense: Initial Findings from HSC's Recent Site Visits.* Center for Studying Health System Change, May 2003.

[18] Kaiser Family Foundation and Health Research and Educational Trust, *Employer Health Benefits 2002 Annual Survey.* Kaiser Family Foundation, Menlo Park, CA and Health Research and Educational Trust, Chicago, IL 2002.

the volume of services provided.[19] This so-called target-income hypothesis suggests that physicians respond to reduced fees by working longer hours, seeing more patients, having patients come back more frequently, and performing more billable procedures.

Average physician net income in 1999 for primary care physicians was $138,000, down 6.4 percent from 1995 after adjusting for inflation.[20] Specialist physician incomes, on average, were $219,000 in 1999, down 4 percent from 1995. By contrast, professional and technical workers in the economy as a whole experienced a 3.5 percent increase in income over this four-year period. It is reasonable to hypothesize that after taking such a hit as a result of contraction in fees, physicians began to respond in the 1999–2002 period by increasing the volume of services provided.

Some support for physicians' target-income behavior is suggested by recent data on changes in use of physician services by Medicare beneficiaries. These trends are not influenced by managed care, which has achieved only low penetration in this group of insured. Last year, the number of physician visits to Medicare beneficiaries rose 4.3 percent, nearly twice as fast as in the previous year. Some lab tests grew 22 percent; brain MRIs grew 15 percent; heart echography grew 11 percent; and disturbing to see, emergency room visits were up 6.5 percent. Ambulatory surgical procedures also increased significantly from 1997 and 2001.

Why the increase? It is hard to believe that Medicare beneficiaries suddenly demanded 15 percent more brain MRIs in 2001 than in 2000. More plausibly, Medicare payment rates are still sufficiently attractive to induce physicians who provide orthopedic, cardiac, opthamology, and X-ray and laboratory procedures to work longer hours and see more patients—all with a view to offsetting the earlier period of fee contraction.

We do not know if these are unnecessary services or if they are now filling an unmet need, or some of both. Physicians also may be providing more and newer technologies—technologies that may be improving life expectancy or quality of life. The fact is that we do not employ a scientific basis in this country for determining the clinical criteria for reimbursable services. The recent decision by the Centers for Medicare and Medicaid Services (CMS) to institute guidelines for coverage of implantable cardiac defibrillators is a beginning step, but it applies to a newly emerging technology, not to existing benefits.[21]

Utilization in the health care system has often been driven by technological advances. New drugs, for example, make it possible to control high cholesterol and other chronic conditions. New advances in cardiac care reduce mortality and yield health and economic gains for society.[22] Clearly, there are many people who would benefit from better access to life-saving drugs, screening tests, and surgical procedures. An informed response to the renewed surge in health care utilization will require far more sophisticated analysis than has yet been undertaken.

Use of prescription drugs has also been on the increase. From 1997 to 2000, nearly one-third of the increase in per-person prescription drug spending came from an increase in the number of prescriptions. More people are taking cholesterol lowering drugs, an aging population is taking more drugs to combat chronic illness, and more people may be taking drugs that are not indicated, or are even contraindicated, given their array of health problems.[23]

ADMINISTRATIVE COSTS

Finally, more attention needs to be given to the rapid increase in administrative costs, up 11.2 percent in 2001. The fragmentation of the U.S. health insurance system—with people moving in and out of coverage and in and out of plans, and changing their usual source of care frequently—all contribute to high administrative costs for insurers and for health care providers.[24] In 2002, the U.S. health system spent

---

[19] SM Codespote et al., "Estimated Volume and Intensity Response to a Price Change for Physician's Services." Office of the Actuary, Health Care Financing Administration, August 13, 1998.

[20] Marie C. Reed and Paul B. Ginsburg, *Behind the Times: Physician Income, 1995–99.* Center for Studying Health System Change, Data Bulletin 24, March 2003.

[21] Melody Petersen, "U.S. to Back Heart Device in More Cases: Medicare Move is Less Than Industry Wanted," *New York Times,* June 7, 2003, p. C1.

[22] David M. Cutler and Mark McClellan, "Is Technological Change in Medicine Worth It?" *Health Affairs* (September/October 2001): 11–29.

[23] Chunliu Zhan, et al., "Potentially Inappropriate Medication Use in the Community-Dwelling Elderly: Findings From the 1996 Medical Expenditure Panel Survey" *Journal of the American Medical Association,* 2001, 286: 2823–2829.

[24] Karen Davis, "Time For Change: The Hidden Costs of a Fragmented Health Insurance System." Invited Testimony, Senate Special Committee on Aging, March 10, 2003.

$112 billion on administrative expenses, and expenses are expected to hit $223 billion in 2012.

Private insurance is the dominant mode of health coverage for the working-age population, while public programs cover elderly and disabled individuals as well as certain low-income populations, especially children and pregnant women. Administrative costs for private insurance include marketing, sales commissions, profits and reserves, as well as the cost of enrolling individuals and paying claims. Government programs, by contrast, do not incur marketing and sales expenses and do not require premiums high enough to generate profits and reserves. Medicare enrollment is stable, typically beginning at age 65 and ending at death. Not surprisingly, government programs have much lower administrative costs than private insurance. On average, administrative expenses for private insurers are 11.9 percent of their health care expenditures. The costs of administering government programs (including not only Medicare and Medicaid but Veterans Administration, Department of Defense, Indian Health Service, and other direct health services delivery programs) average 4.6 percent of health expenditures—less than half that of private insurance.

PUBLIC VS. PRIVATE SECTOR SPENDING GROWTH

Most health care in the United States is provided in the private sector; only the Defense Department, Veterans Administration, Indian Health Service, and state and local governments provide care directly in public facilities. However, the government is a major purchaser of care, paying about 45 percent of the national health bill. Medicare (18 percent) and Medicaid (16 percent) alone purchase more than one-third of all care and therefore constitute a major influence on the use of services, the quality of care provided, and costs of care. Private health insurers purchase more than another third of care (36 percent) and consumers most of the rest, either directly out-of-pocket (15 percent) or through philanthropic giving. Consumer out-of-pocket spending is actually an even larger share than reported, because the numbers do not reflect the premiums consumers pay for Medicare and private insurance. It reflects only their deductibles, coinsurance, copays, and payments for services not covered by insurance.[25]

The public sector has been growing faster than the private sector in the last few years (9.4 percent vs. 8.2 percent in 2001), but these numbers reflect changes in enrollments as well as use, prices, administrative costs, and other factors. For example, Medicaid rolls grew 8.5 percent in 2001 as a result of the new SCHIP program covering low-income children, Medicaid expansions to some of their parents, and a weakening economy that brought more low-income persons onto the rolls. Without this increase in Medicaid enrollment, the numbers of uninsured would have been even greater than what they were. But it meant also that Medicaid spending overall went up 10.8 percent, placing a squeeze on both federal and state budgets.

Private health insurance experienced a similar growth in 2001 (10.5 percent), but enrollment declined sharply rather than increased. Private insurance expenditures rose because of increased use of services and higher provider payments, insurance profits, and administrative costs. Responding to the weakening economy and double-digit premium increases, employers cut back the share of premiums they paid or dropped coverage altogether. Many employees found they could not pay their increased share. Because they lacked insurance, some consumers may have forgone care.

Despite the higher administrative expenses of private insurance and the higher payment rates to providers, the belief that private insurance is more "efficient" is strongly entrenched. However, a recent study comparing the growth in per-enrollee payments for comparable services in Medicare and private insurance found that Medicare outperformed private insurance over the long term.[26] Following the implementation of the hospital prospective payment system in 1984, Medicare per enrollee spending has moved slower than employer-based insurance. The physician fee schedule, implemented in 1992, also contributed to lower spending. In 2002, Medicare fees were about 77 to 79 percent of private rates; physician program participation, however, reached about 90 percent of physicians in the same year.[27] The implementation of the newer prospective payment systems for nursing homes, home health care, and the hospital outpatient department are expected to continue to have a dampening effect on spending. A newly released study projects that in 2003, Medicare per-enrollee costs will have risen at about one-third the rate of employer

[25] Levit et al.

[26] Christina Boccuti and Marilyn Moon, "Comparing Medicare and Private Insurers: Growth Rates in Spending Over Three Decades," *Health Affairs* (March/April 2003): 230–237.

[27] Medicare Payment Advisory Commission, *Report to the Congress: Medicare Payment Policy.* March 2003.

premiums and less than one-third that of the Federal Employee Health Benefit Program (FEHBP). Administrative costs in FEHBP are estimated at nearly three to six times those in Medicare.[28]

INTERNATIONAL COMPARISONS

The United States has by far the most costly health care system in the world, both per person and as a percent of our nation's total economic resources. In 2000, we spent $4,631 per person on health care, 69 percent more than in Germany, 83 percent more than in Canada, and 134 percent more than in the average of all members of the Organization of Economic Cooperation and Development (OECD).[29] Higher U.S. costs cannot be attributed to aging; in fact, the U.S. population is "younger" than the populations of most European countries.

Nor is the situation improving. Despite a decade of experimenting with managed care in the U.S., health spending rose faster than in other countries. Between 1990 and 2000, U.S. health spending, adjusted for inflation, increased by 3.2 percent a year, compared with the OECD average of 3.1 percent. By contrast, real spending per capita increased by 1.8 percent in Canada and by 2.1 percent in Germany. Moreover, most countries with above-average rates of increase in the 1990s were those that had particularly low spending on health care, such as the U.K. and Japan.

The United States is alone among major industrialized nations in other respects. Over half of health care spending is paid for privately, compared with about one-fourth or less in other countries. Ironically, because the United States is so expensive, the government—while it accounts for only 45 percent of all health care spending—spends as much as a percent of GDP on health care as do other countries with publicly financed health systems. For example, U.S. public spending as a percent of GDP is 5.8 percent, compared with 5.9 percent in the U.K. and 6.5 percent in Canada.[30]

The United States is also alone among major industrialized nations in failing to provide universal health coverage. But even when people are insured by private insurance or Medicare, that coverage is less comprehensive than the coverage typically afforded in other countries. As a result, Americans pay more out-of-pocket for health care than do people in other countries—an average of $707 per person in 2000 versus $405 in Canada, $335 in all industrialized countries, and $171 in the U.K. Yet, some advocate increasing cost-sharing for patients as a way to give patients greater incentives to control utilization of health care services. Clearly, other countries have found effective mechanisms for keeping health care costs to a much lower share of their economic resources without putting financial barriers in the way of patients seeking care.

Our typical assumption is that such countries are rationing effective care, have long waiting lists, and poorer health outcomes. It is true that patients in the United States wait shorter times for surgery than any other country. But our waits for a doctor's appointment when sick are actually longer than in other countries, and more Americans rely on emergency rooms for care.[31]

What is not well appreciated is that Americans receive less hospital care, on average, than people in other countries and see the doctor about as frequently. The annual number of physician visits per capita in the United States is 5.8 visits, about the same as the OECD nations' average of 5.9 visits and less than the 6.4 average number of visits in Canada. Fewer Americans are admitted to the hospital in a given year; when they are admitted, they stay a shorter time than patients in other countries. Consequently, the number of acute care hospital days per capita in the United States is 0.7, compared with the OECD's 1.0-day average, and less than the 0.9-day average in the U.K.—a country where long waiting times for hospital care and surgery are a major issue.

So if we get the same or less care than people in other countries, why do we spend more? It has led some analysts to conclude, "It's the price, stupid." We do pay our physicians more than other countries. Fees for physician procedures are more than

[28] Mark Merlis, *The Federal Employees Health Benefits Program: Program Design, Recent Performance, and Implications for Medicare Reform.* Henry J. Kaiser Family Foundation, May 30, 2003.

[29] Gerard Anderson et al., "It's the Prices, Stupid: Why the United States is So Different from Other Countries," *Health Affairs* (May/June 2003): 89–105.

[30] Anderson et al.

[31] Cathy Schoen et al., *Comparison of Health Care System Views and Experiences in Five Nations, 2001.* The Commonwealth Fund, May 2002.

three times as high as in Canada.[32] We pay more for the same drug than other countries—sometimes twice as much for the same drug—even when it is produced by an American company. The United States spends $556 per person on pharmaceuticals, compared with $385 in Canada and $262 in other industrialized countries.[33]

We also have higher administrative costs than other countries. Canada averages about 1 percent of health care spending on administrative costs.[34] We manage to devote 6 percent overall on administrative costs.[35] And that does not count the administrative personnel who work in hospitals or doctors' offices—a much higher number in the U.S.'s fragmented and complex public-private insurance system than in the simpler, unified payment systems of other nations.[36]

But the story is more complicated than just higher prices and higher administrative costs, both of which are powerful explanations of our higher costs. While we have about the same number of physicians per capita as other countries, and fewer visits, a much higher fraction of our doctors are specialists. Not surprisingly, therefore, we greatly exceed other countries in the numbers of specialized procedures performed. For example, United States doctors perform 4.8 times as many coronary angioplasties per capita as Canadian doctors, and the United States has three times as many MRI units per capita as Canada.[37]

Of course, variations across countries in use of procedures does not tell us whether we do too many procedures or they do too few. The United States has about the same mortality from heart attacks as the average OECD country. But many factors enter into such mortality (France and Japan have rates considerably lower than other countries). On most measures of mortality, the United States performs more poorly than other countries, ranking 37th overall according to the World Health Organization ranking of health system performance.[38]

The question remains whether we get value for the highly specialized, intensive style of care practiced in the United States. The Commonwealth Fund 2002 International Health Policy Survey of Sicker Adults does suggest that we pay a price for our uniquely American approach to health care. Americans are more likely to be seeing multiple physicians and taking multiple medications. More things can and do go wrong when care is provided by multiple parties. Of the five nations surveyed (United States, U.K., Canada, Australia, and New Zealand), the United States had the highest serious medical error rate. Survey respondents in the United States were also more likely to report having tests duplicated and not having their medical records available when they went for care.[39]

Despite our costly health care system, other countries have moved more rapidly to adopt electronic medical records and electronic prescribing. The Commonwealth Fund 2000 International Health Policy Survey of Physicians found that 59 percent of primary care physicians in the U.K. have electronic prescribing, as do 52 percent in New Zealand, compared with 17 percent in the United States.[40]

CONCLUSION

If we have the world's costliest health system yet still fail to provide everyone with access to care—and fall far short of providing the safe, high-quality care that it is possible to provide—the conclusion that there is room for improvement is inescapable.[41] Only by facing this fact squarely and putting into action the best ideas and experiences across the United States and around the world can we achieve a

---

[32] Victor R. Fuchs and J.S. Hahn, "How Does Canada Do It?" *New England Journal of Medicine,* September 27, 1990: 884–890.

[33] Gerard Anderson et al., *Multinational Comparisons of Health Systems Data, 2002.* The Commonwealth Fund, October 2002.

[34] Committee on Ways and Means, U.S. House of Representatives. *Health Care Resource Book.* U.S. Government Printing Office, Washington: 1993.

[35] Levit, et al.

[36] Steffie Woolhandler and David Himmelstein, "The Deteriorating Administrative Efficiency of the U.S. Health Care System." *New England Journal of Medicine,* May 2, 1991: 1253–1258.

[37] Gerard Anderson, Uwe Reinhardt, Peter Hussey and Varduhi Petrosyan. "It's The Prices, Stupid: Why The United States Is So Different From Other Countries." *Health Affairs* (May/June, 2003):89–105.

[38] World Health Organization, *World Health Report, 2000. Health Systems, Improving Performance.* World Health Organization, Geneva 2000.

[39] Robert Blendon et al., "Common Concerns Amid Diverse Systems: Health Care Experiences In Five Countries" *Health Affairs* (May/June 2003): 106–121.

[40] The Commonwealth Fund 2000 International Health Policy Survey of Physicians. http://www.cmwf.org/programs/international/2000_intl_chartpack.pdf.

[41] Karen Davis, et al., Room for Improvement: *Patients Report on the Quality of Their Health Care.* The Commonwealth Fund, April 2002, and Karen Davis, et al. *Mirror, Mirror on the Wall: The Quality of American Health Care.* The Commonwealth Fund, forthcoming.

vision of American health care that includes: automatic and affordable health insurance for all, accessible care, patient-responsive care, information- and science-based care, and commitment to quality improvement.[42]

Fortunately, there are examples of high performance in health care in both the private and public sectors. The Council on Accountable Physician Practices in the United States, which includes more than 17,000 physicians in 14 large group practices, has demonstrated that it can provide superior quality care, as measured by widely used HEDIS quality indicators, more efficiently than in other settings.[43] The Veterans Administration has markedly improved its performance in the last decade on both quality and efficiency.[44] The United States Bureau of Primary Health Care has improved effective management of diabetic patients in community health centers that participate in learning collaboratives to improve quality of care.[45]

But these success stories are far too isolated. If we are to achieve a truly high performance health system, bold action is required. The following steps would start us on this course:

—*Public reporting of cost and quality data on physicians, hospitals, nursing homes, other health care providers, and health plans*.—CMS has been a leader in posting nursing home quality data on its website, but this is just a modest beginning. If we are serious about doing better, we need to know where we stand.

—*Broad-scale demonstrations of: a new approach to health insurance coverage, science-based benefits; use of modern information technology, and high-quality care*.—I served on the Institute of Medicine committee which issued a report last fall calling for statewide demonstrations of health insurance coverage for all, model chronic care and primary care initiatives, information technology, and medical malpractice.[46] The $50 billion in the budget resolution for improving health insurance coverage would go a long way toward putting these recommendations into action in five or more states.

—*Investment in health information technology*.—Other countries are quickly surpassing the United States in the adoption of electronic medical records and electronic prescribing. They are doing so because the government has been willing to invest in the infrastructure and establish the standards required to make this potential a reality.

—*Development and promulgation of clinical guidelines and quality standards*.—It is long past time to simply pay for services rendered without establishing a scientific-basis for effectiveness—not just for new drugs but for consultations, procedures, and tests. This could be accomplished through an expanded mandate for the CMS Medicare Coverage Advisory Committee or establishment of a new National Institute on Clinical Excellence and Effectiveness.

—*Paying for performance*.—Medicare and private insurers tend not to vary payment rates with quality. They pay for defects, whether those defects are surgeries that need to be repeated; infections that arise from failing to use state-of-the-art technology, such as catheters impregnated with antibiotics for heart valve patients; or medication errors. CMS has embarked on some modest initiatives to begin testing paying-for-performance rewards. Medicare can and should be a leader in promoting quality. These efforts need to be substantially expanded and best practices documented and disseminated. Medicare's leadership can be instrumental in moving private payers as well; to date, very few private insurers have instituted "value-based purchasing" strategies.[47]

—*Investment in research*.—We urgently need to gather evidence on what works to improve care, eliminate waste and ineffective care, and promote greater efficiency, including use of modern information technology, team work, and improved care processes. Any industry that fails to invest in research to improve

---

[42] K. Davis, C. Schoen, and S. Schoenbaum, "A 2020 Vision for American Health Care." *Archives of Internal Medicine,* Vol. 160, No. 22: 3357–62.

[43] Council of Accountable Physician Practices, *Why Accountable Physician Practices Are Essential to the Future of American Medicine.* January 2003.

[44] Kizer KW, Demakis JG, Feussner JR, "Reinventing VA Health Care: Systematizing Quality Improvement and Quality Innovation." *Medical Care,* June 2000: pI7–16.

[45] D. Stevens, *Changing Practice, Changing Lives: Large Scale Improvement in Health Centers Across the Nation.* Presentation at Institute for Healthcare Improvement National Forum, December, 2002.

[46] Institute of Medicine, *Fostering Rapid Advances in Health Care.* The National Academies Press, November 2002.

[47] Vittorio Maio, Neil Goldfarb, Chureen Carter, and David Nash, *Value-Based Purchasing: A Review of the Literature.* The Commonwealth Fund, May 2003 and Neil Goldfarb, Vittorio Mario, Chureen Carter, Laura Pizzi and David Nash, *How Does Quality Enter Into Health Care Purchasing Decisions?* The Commonwealth Fund, May 2003.

quality and efficiency is going to be a backward industry. The federal government pays $455 billion for health care in the United States but devotes only $300 million—.04 percent—to the budget of the Agency for Healthcare Research and Quality for learning effective ways to improve the performance of the United States health system. The quality report on United States health care due to be issued this fall is an important starting point. But it needs to be followed with an investment in research up to the task for ensuring that the United States is a high-performing health system worthy of the 21st century.

Thank you very much for the opportunity to join this panel. I look forward to learning from my fellow panelists and answering any questions.

Senator HARKIN. Well, Dr. Davis, thank you. That was really a great opening, I think, for what we are talking about here today. You have really set the stage for that.

STATEMENT OF JOHN MENTEL, M.D., CHAIR, DEPARTMENT OF APPLIED INFORMATICS, MAYO CLINIC

Senator HARKIN. Next, we turn to—well, let us see—I will go to Dr. Mentel; this is not the way I have it lined up here—Dr. John Mentel.

Dr. Mentel is the Chair of the Department of Applied Informatics and assistant professor at the Mayo School of Medicine at the Mayo Clinic, in Jacksonville, Florida. Dr. Mentel received both his undergraduate and M.D. degrees from the University of Missouri, in Kansas City. Dr. Mentel was instrumental in facilitating the implementation of a paperless system at the Jacksonville Mayo Clinic. I understand Dr. Mentel wants to talk about information technology and how systems improvement can reduce healthcare costs.

Dr. Mentel, welcome.

Dr. MENTEL. Thank you.

Good morning, Senator Harking, members of the subcommittee. It is an honor to be with you today.

I am John Mentel, Chair of the Department of Applied Informatics at Mayo Clinic, and I am also a practicing internist—doing it 50/50, each one—in our facilities in Jacksonville, Florida. I have been invited to participate in this discussion on access and affordability in healthcare to address the subject of electronic medical records, and, to be honest with you, in a little more general terms, automating healthcare.

First, let me start with some demographic information about our facilities, so you can get some understanding of where I come from. Now, we have got 300 physicians. They are delivering primarily through quaternary care, so it is all levels. They are providing both inpatient and outpatient environment services, and it is complemented by activities in education and in research. We have been paperless in the outpatient environment since 1998, so for the last 5 years. We are chartless. We do not move paper. And we are achieving this in the hospital probably in another year.

To begin with, I am going to break this discussion down into three topic areas: one, cost and savings; the second, improvements in quality and efficiency; and the third are the challenges to medical automation.

First, cost and savings. We, evaluated—or internally, rather, evaluated the cost benefit of our outpatient, chartless environment. For a total investment of $16 million over the first 5 years of operation, we realized savings—on average, depending upon how you wanted to account for it—$3 to $7 million. I can give you $3 mil-

lion, of exactly hard reproducible; I can give you $7 million, if you try to look at every nickel and dime that you probably save.

This is annual savings. And those savings go on beyond that initial investment. This includes all software, all hardware, all IT expenses. And interestingly enough, the model was later reproduced at our facility in Scottsdale and was relative reproduced, even though a different medical records vendor was used at that facility.

In the radiology field, we are also filmless. We do not produce X-ray film; it is all digital. And we spent $5.8 million to get there, between 1995 and 1999; and calculated savings were about $8 million on that $6 million expense.

Senator HARKIN. Per year? No.

Dr. MENTEL. Over that 4-year—over that 5-year period of time.

Improvements in quality and efficiency—I could go back to our filmless environment there—it took us about 45 minutes—this is pretty darn efficient—from the point that the patient arrived for a chest X-ray to the point that the ordering physician had the film and the report back. At our facility, it was 45 minutes. We have moved that to 5 minutes because of automating the process. CT and MR scans have gone from 2 hours down to 10 minutes for this same thing. The images are back to the ordering physician, and the report is there, in a 10-minute period of time.

An even more dramatic example is an infectious-disease application we have just recently entered a pilot on—constantly monitors for significant infectious events within the hospital environment, and then it automatically alerts the physician and/or the infection-control team of the event. And in some circumstances, it will even propose what the correct solution will be.

We have extended the healthcare model to the home also, trying to improve quality and reduce costs. The diabetes program we are working with, for example, allows the patient, over the Internet, to customize their education program. They do not have to come in and sit with a group and learn about their diabetes. They can do it online, and it is customized to their own specific illness and needs. Then they can communicate, through this application, securely with their providers. They can conjointly set and manage their treatment.

We are moving on to the next phase of this, which is automating, through the computer, the treatment recommendations. So you could, say, put your sugars in; it will tell you what next to do with your dosing, thereby reducing the need for the diabetic management team's involvement, which will reduce cost further, which increases quality, because we are going to take practice variation out once we automate that process. And it allows the same team, obviously, to care for many more diabetic folks.

The challenges are legion, as well. The first is capital. Institutions have to make sizeable investments. And the return on investment does not start day one. So in these times of crises and hospital closures, finding capital is very difficult.

Dollars are needed not only for the software and hardware, but also you have got to budget for the upgrades, for the maintenance. And I will tell you, a bigger part that we learned in going through this was it also requires a large investment in data center infrastructure. Once you fully depend upon that automation to be there

24 by 7, when Mary hits the ER, Tom is in the operating suite, you need that record available. So the redundancy, the fail-safe nature of that network, it also has an attendant expense.

Then there is the subject of change management. How much can your staff accept change? How quickly can they adapt to the change? And do not be fooled; healthcare automation is still in its infancy, so these products are far from maximally efficient or user friendly.

In conclusion, after going through those challenges, one might ask, "Why change?" We really thought that we had no choice. The savings are measurable. The savings are reproducible. And in these times of an aging population with declining resources, we really felt we had to automate to reduce our cost base.

Complement that fact with a dramatic increase in the complexity of healthcare that medical sciences, such as genomics, are bringing forward, and automation just seems mandatory just to keep up. Add to that the desire for higher quality measures, increasing requirements from licensing and review organizations for these quality and outcome measures, and we could see no alternative but to automate to try to capture that data.

PREPARED STATEMENT

Finally, as Dr. William Mayo stated so many years ago, the needs of the patient come first. Medical practice automation needs to be pursued because it provides higher quality healthcare, which, at the end of the day, is why we all do what we do.

Thank you, Mr. Chairman.

[The statement follows:]

PREPARED STATEMENT OF DR. JOHN MENTEL

Good morning Mr. Chairman, Senator Harkin and members of the subcommittee. It is an honor to be with you today. I am John Mentel, M.D., Chair of the Department of Applied Informatics at Mayo Clinic and a practicing internal medicine physician based at our facilities in Jacksonville, Florida. I've been invited to participate in this discussion on Access and Affordability in Healthcare to address the subject of electronic medical records and in more general terms, automating healthcare.

First let me start with some demographic information about our Mayo Clinic facility to give you some background concerning our challenges and accomplishments in this field. In Jacksonville we have around 300 Physicians delivering primary to quaternary care in both an inpatient and outpatient environment complemented by activities in research and education. We see approximately 400,000 patient visits annually, almost 50 percent of which are primary care visits and have approximately 12,000 hospital admissions per year. We have been paperless in our outpatient clinics since 1998 and are well along the way of achieving this in the hospital as well. In the outpatient clinic, we do not have paper-based patient records. There are approximately 100 million results with approximately 9 million documents online at this time. Around 45,000 patient e-charts are viewed online daily.

To begin, let's break this discussion into three topics:

1. Costs and savings associated with automation,
2. Improvements in quality and efficiency through medical automation, and
3. Challenges to medical automation.

As you may have noticed, I'm referring more to medical practice automation than to electronic medical records. This is a fundamental point to be made because to be successful we need to automate all healthcare processes in an integrated fashion. For without this vision, all we will succeed in doing is layering another complex system onto an already extremely complex field.

1. COSTS AND SAVINGS ASSOCIATED WITH AUTOMATION

We have internally evaluated the cost-benefit of our outpatient chartless environment and have broken it down into two categories. The first category is measured savings which consists of employee savings as well as paper printing and storage savings. The second category is measured plus estimated savings which includes these same elements plus income from improved coding, savings from less lost charges, and improved productivity. Using a rate of inflation of around 4 percent, we calculate the measured category's internal rate of return (IRR) to be 20 percent and the measured plus estimated category's internal rate of return (IRR) at 30 percent. To restate another way, for a total initial investment of $16 million over the first 5 years of operation, we realized additional savings of between $3 to $7 million annually thereafter. This includes all software, hardware, and information technology personnel costs. This model has been later reproduced at our sister facility in Scottsdale using a different commercial electronic medical records vendor and similar results have been found.

Let's move on to the radiology field where we are filmless as well, fully utilizing digital imaging techniques. From 1995 to 1999 the calculated expenses were $5.8 million to achieve this goal while the attendant calculated savings were $8 million.

We can even move down at the application level, where we have recently operationalized an infectious disease program. It cost $500,000 to install and is projected to save $2 to $4 million annually through many benefits including increasing the use of appropriate antibiotics while decreasing complications.

In these days of constrained reimbursement and rapidly escalating costs we require a positive return on investment from our products and we consistently meet this goal.

2. IMPROVEMENTS IN QUALITY AND EFFICIENCY WITH MEDICAL AUTOMATION

Cost savings needs be coupled with quality benefits to better evoke change. Healthcare automation brings about the obvious benefits of shared common data, drug-drug interaction checking, and automated monitoring of health maintenance items such as screening mammography dates and immunization schedules. It also makes possible the ability to operationalize the use of evidence based guidelines into daily practice in concert with the ability to measure the results in real time. Beyond this though, it makes possible advances in quality simply not achievable in the past such as rapid turnaround times, the inclusion of knowledge into the care delivery process, and the expansion of the care delivery model into the home and under the control of the patient-where it belongs.

Examples here include our filmless radiology environment; there we have taken turnaround times from x-ray acquisition to report delivery for chest x-ray from 45 minutes to around 5 minutes and CT or MR exams from around 120 minutes to 10 minutes.

An even more dramatic example is an infectious disease application just piloted. It constantly monitors for significant infectious events and then alerts either the admitting physician or the infection control team of the event, and in some circumstances, the best action to take to resolve the event.

Finally, automation of the healthcare model allows the full extension of delivery to the home, thereby further reducing costs and increasing quality. A diabetes program we're working with allows a patient over the internet to customize a diabetes education program to their specific needs, communicate securely with their providers, and conjointly set and manage treatment goals online. The next phase of this project is automating the computer's treatment recommendations thereby reducing the need for the diabetic management team's involvement which reduces costs further, increases quality while removing practice variation, and allows this same team to care for a much greater number of diabetic patients increasing efficiency.

Efficiency improvements abound in an automated environment. The instant availability of the medical record is a priceless asset to the care providers. Complimenting this with a unitary inpatient and outpatient record increases the value exponentially. This becomes not only an efficient tool for care delivery but an equally facile tool for research activities.

3. CHALLENGES TO AUTOMATION

The first challenge is capital. Institutions have to make sizable investments to hope to realize any of the automation benefits. Return on investment when starting is far from immediate and in these times of hospital closures and malpractice crises, finding capital can be almost impossible. Dollars are needed not only for software and hardware, but also budgets are needed for upgrades and maintenance. The au-

tomation the clinical practice requires large investments in datacenter infrastructure also. When you automate, not only your business, but immeasurably of greater importance, the lives of your patients depend upon that automation being available 24 by 7. This pervasive requirement has its own significant cost attached.

Another challenge is the dramatic complexity of healthcare. No two patients are alike and automating the care process around individual variation adds even more layers of difficulty to an already complex system. Add to this fact the sheer number of electronic medical record vendors and the relative paucity of data standards and complexity becomes an even more capable opponent.

Then there are the challenges of legacy system integration. Almost all healthcare enterprises currently have multiple isolated electronic systems used for such processes as billing or for the lab that must be integrated into the new automated environment. This means building and maintaining complex interfaces between systems or completely starting over with a new integrated solution. Since the enterprise cannot risk the loss of current and historical data, converting systems typically involves complex historical data migration to the new environment. At our facility this alone was originally predicted to takeover one year running 24 by 7.

Then there is the subject of change management. How much can your staff accept change and how quickly can they adapt to the change? These are extremely busy people responsible daily for individual's lives. Healthcare itself undergoes dramatic change daily that providers must assimilate and automation introduces further exponential change to this environment. And finally, don't be fooled, healthcare automation instill in its infancy and these products are far from maximally efficient or user friendly.

CONCLUSION

Then why change—because we have no choice.

The savings are measurable, reproducible, and in these times of an aging population with declining resources medicine must automate. Complement this fact with the dramatic increase in complexity of healthcare that medical sciences such as genomics are introducing, automation will be mandatory just to keep up. Add to this yet the desire for higher quality measures and the increasing requirements from licensing and review organizations for these quality measures and we can see no alternative but to automate. Finally, as Dr. William Mayo stated so many years ago, the needs of the patient come first. Medical practice automation needs to be pursued because it provides significantly higher quality healthcare which, at the end of the day, is why we are here.

Senator HARKIN. Dr. Mentel, thank you. When we get back to you, I want to find out how you convinced them to put the capital in on this.

Dr. MENTEL. Stiff-arm techniques.

Senator HARKIN. Hmm?

Dr. MENTEL. Strong-arm techniques.

Senator HARKIN. That is pretty awesome.

STATEMENT OF DAVE HICKMAN, DIRECTOR, CLINICAL INTEGRATION, MERCY MEDICAL CENTER

Senator HARKIN. Next, we go to David Hickman. Mr. Hickman is the director of Clinical Integration for Mercy Health Network in my State of Iowa. Mr. Hickman holds his B.S. degree for Iowa State University and a master's of public health from the University of Iowa. Mr. Hickman will discuss the Mercy Disease Management Program and how this program saved money and improved health outcomes for patients and how this might be used for Medicare and Medicaid for cost savings.

Mr. Hickman, welcome.

Mr. HICKMAN. Great, thank you.

Senator Harkin and members of the subcommittee, my name is Dave Hickman, and I am serving as director of Clinical Integration for Mercy Health Network, based in Des Moines, Iowa. Mercy Health Network is a joint operating agreement between Catholic

Health Initiatives, in Denver, Colorado, and Trinity Health, Novi, Michigan. I am a registered nurse and a fellow of the American College of Healthcare Executives.

I want to thank you for the opportunity to tell you about a telemanagement program Mercy Health Network is using that is lowering the cost of care and increasing the quality of life for people with congestive heart failure. Nearly 5 million Americans have congestive heart failure today. CHF hospitalizations cost Medicare $5 billion annually. Within a month of discharge from the hospital, 20 percent of CHF patients will be readmitted to the hospital for CHF. And within 6 months of discharge, 50 percent will be readmitted to the hospital.

Half of all these re-admissions to the hospital are caused by patients not following the diet and medication treatment plan prescribed by their physician. Another 20 percent of re-admissions are caused by patients not seeking care when symptoms are beginning to get worse. Clearly, costs can be avoided if patients can learn to be compliant with treatments prescribed by their physicians, and learn to recognize early warning signs of a worsening condition.

Our CHF telemanagement program, which uses the Tel-Assurance system, from Pharos Innovations, is relatively straightforward. Patients are enrolled in the program by their physician, who predetermines an acceptable body weight for the patient, and the case manager enters that into the computer. Every morning, patients use their touchtone phone to call a toll-free number to our telemanagement computer, and, in this phone call, to an automated attendant, the patient answers the same survey of seven questions every day. The first six questions ask patients about their symptoms. For example, "Have you felt more short of breath in the last day?" And the seventh question asks the patient to enter their morning weight on the telephone keypad. The computer software then compares the patient's morning report to the preset parameters set by the physician. If the patient answers yes to any symptom question, or if the morning weight exceeds the acceptable weight, a variance report is sent to the nurse case manager for follow-up. Now, patients in our program only need to have a touchtone phone and a bathroom scale. That is all they need in their own home.

Now, in our first year, case managers at Mercy Medical Center, in Des Moines, decreased re-admissions to the hospital by 84 percent.

Senator HARKIN. Amazing.

Mr. HICKMAN. We replicated the program to our other four medical centers, and re-admissions to the hospital for CHF were decreased by 86 percent.

Now, the estimated total net savings for the 182 patients in our five-hospital study was between $900,000 and $1 million. Costs, including today's newer versions of software and case manager salaries, are estimated at $187,000. So while the return on investment for hospitals is only about breakeven, the total return on investment for health insurance and patients and hospitals, collectively, is about five to one.

But we believe that the program has been successful because early warning signs of an exacerbation of the CHF were identified

and acted upon early by case managers. Over time, patients change their behavior and they follow the treatment plan, and they learn to recognize these early warning signs of an exacerbation of their illness.

Mercy Health Network medical centers utilize CHF telemanagement for two reasons. First, because Iowa's average Medicare reimbursement is so inadequate—lowest in the United States—that costs usually exceed reimbursement for CHF admissions. So out of necessity, we reduce our CHF admissions to avoid further financial losses. Second, and more importantly, our CHF telemanagement program keeps patients healthier and at home, and that is where they want to be. We also believe that our telemanagement program shows promise for other chronic illness, such as diabetes, COPD, and asthma.

Now, if our data continues to show the same return on investment as our previous studies, we would recommend that Congress consider adding case management as a reimbursable service to the Medicare program.

PREPARED STATEMENT

Senator Harkin, thank you, again, for the opportunity to present the information. We appreciate the assistance your Subcommittee provides. And I would be happy to answer any questions at this time.

[The statement follows:]

PREPARED STATEMENT OF DAVID HICKMAN

Mr. Chairman, Senator Harkin, and members of the Subcommittee, my name is Dave Hickman, and I am serving as Director of Clinical Integration for Mercy Health Network based in Des Moines, Iowa. I am a Registered Nurse and a Fellow of the American College of Healthcare Executives.

I want to thank you for this opportunity to bring information to you about a telemanagement program Mercy Health Network has used that is lowering the cost of care and increasing the quality of life for people with congestive heart failure.

Mercy Health Network is comprised of 1,792 staffed inpatient beds in five medical centers and 28 rural hospital affiliates; 104 clinics, numerous home care, hospice, long-term care facilities and senior housing facilities across Iowa. Our 1,637 affiliated physicians provide 1.9 million emergency and outpatient visits per year to a primary and secondary service population of 1.2 million people. Mercy Health Network is a joint operating agreement between Catholic Health Initiatives, Denver, Colorado, and Trinity Health, Novi, Michigan.

THE PROBLEM: PATIENT NON-COMPLIANCE, FREQUENT READMISSIONS

Approximately 4.8 million Americans have congestive heart failure (CHF) today. After age 65, the incidence approaches 10 of every 1000 Americans. From 1979 to 1999, hospital admissions for CHF increased 155 percent. It is one of the most frequent diagnoses in American hospitals today. It is estimated that CHF hospitalizations account for approximately $5 billion in annual cost to the Medicare budget.

Of all hospital admissions for CHF from the Emergency Department (ED), approximately 80 percent are repeat visits to the ED. And, approximately 80 percent of ED visits for CHF result in an inpatient admission. Data indicates that within a month of discharge from the hospital, about 20 percent of CHF patients will be re-admitted to the hospital for CHF. Within six months of discharge, about 50 percent will be re-admitted.

Half of all readmissions to the hospital are caused by patients not following the diet and medication treatment plan prescribed by their physician. Another 20 percent of readmissions are caused by patients not seeking care when symptoms are beginning to get worse. Clearly, the problem can be reduced if patients can learn to be compliant with treatments prescribed by their physicians, and learn to recognize early warning signs of a worsening condition.

Clearly, congestive heart failure is a large, growing and costly problem for the American healthcare system. And, clearly, the problem can be reduced if solutions can be found to improve patient's compliance with treatments prescribed by their physicians, and if patients can learn to recognize early warning signs of a worsening condition.

THE SOLUTION: FREQUENT MONITORING BY CASE MANAGERS USING TELEMANAGEMENT TOOLS

Since 1993, Mercy Health Network medical centers have recognized the need to case manage high-cost, high-risk patients who have experienced frequent ED re-visits and hospital re-admissions for various chronic illnesses, many of whom have CHF. MHN medical centers have implemented community-based and/or inpatient-based case management designed to intervene at key points in a patient's disease progression to improve clinical and financial outcomes. Each of our medical centers has invested in CHF case managers. They closely monitor the clinical conditions of CHF patients after they have left the inpatient setting to prevent an exacerbation of their illness and a readmission to the hospital.

At Mercy Medical Center-Des Moines, clinical and administrative leaders recognized in 1999 that their ability to case manage their large CHF population was limited by the number of patients that a case manager could realistically contact at the frequency necessary to be effective. William Wickemeyer, M.D., medical director for the CHF program for the Iowa Heart Hospital at Mercy, and Deborah Willyard, R.N., CHF case manager, purchased, through a grant from the National Retirement Foundation, the Tel-Assurance™ telemanagement system as a tool to assist case managers become more effective and increase their caseload of CHF patients. Tel-Assurance™ was designed by cardiologist Randall Williams, M.D. from Northwestern University and founder and CEO of Pharos Innovations.

The CHF telemanagement program used by Mercy Health Network medical centers is relatively straightforward in the following steps:

1. Patients with high readmission rates are enrolled in the CHF telemanagement program by their physician. Because body weight is an important indicator of fluid balance and how efficiently the heart is pumping, the physician predetermines an acceptable body weight, and the case manager enters it into the computer.
2. Patients enrolled in the telemanagement program use their touchtone phone to call a toll-free number to our telemanagement computer everyday between 4 a.m. and 12 noon. In this phone call to an automated attendant, the patient answers the same survey of seven questions everyday. The first six questions ask patients about their symptoms, e.g. "Have you felt more short of breath in the last day?", and the seventh question asks the patient to enter their morning weight.
3. Between 12 noon and 1 p.m., the computer calls any patient back that did not call in before noon.
4. At 1 p.m., the computer software compares the patient's morning report to the pre-set parameters. If the patient answered "yes" to any symptom question or if the morning weight exceeds the acceptable weight, a variance report is sent to the case manager for follow-up.

With our current telemanagement system, Tel-Assurance™, patients enrolled in the program need only a touchtone phone and bathroom scale.

THE RESULTS: COST SAVINGS, HEALTHIER AND SATISFIED PATIENTS

In their first year in 2000, case managers at Mercy Medical Center-Des Moines decreased re-admissions to the hospital by 84.4 percent and tripled their caseload (from 30 to 90) without adding additional case managers using telemanagement.

One of the purposes of Mercy Health Network is to identify best practices, and then replicate them throughout the network. In 2001, the CHF telemanagement program was replicated to our other four medical centers. In the first year of the program, case managers decreased re-admissions to the hospital for CHF by 86.2 percent collectively using the telemanagement system. Mercy Medical Center-Sioux City decreased readmissions by 100 percent using an innovative combination of telemanagement and palliative care. Daily patient call-in compliance rate was 93 percent. On a five-point scale, average patient satisfaction was 4.8 (very satisfied). Patients made comments such as "It gives me peace of mind" and "Someone is caring for me everyday."

Estimated cost savings of the telemanagement project are worth noting. Avoided admissions were estimated at 202. Based upon typical reimbursement and payment models, von Ebers & Associates estimated that health insurance (Medicare, Medicaid, Blue Cross, commercial insurance) gross savings was between $627,000 and $668,000. The savings to patients was estimated at $167,000 to $209,000. The esti-

mated hospital savings was $152,485. The estimated total net savings for 182 patients was between $921,485 and $1,004,485. And there may have been additional savings by avoiding posthospitalization office visits. By contrast, the estimated cost of Mercy Health Network's CHF telemanagement program was about $25,000, excluding the cost of case managers. Costs including newer software versions and case manager salaries are estimated at $187,000. While the return on investment for hospitals is about breakeven, the ROI for health insurance, patients and hospitals collectively is about 5 to 1.

THE KEYS: EARLY INTERVENTION AND TEACHING BY CASE MANAGERS

In the first year that all five medical centers used the congestive heart failure telemanagement program, hospital readmissions were reduced by 86.2 percent. We believe that the program was successful because early warning signs of an exacerbation of the CHF were identified and acted upon by case managers. Often, patients are found to be not following their physician's treatment plan for diet restrictions and medications. Case managers respond by re-teaching patients the importance of following the treatment plan. Over time, patients with CHF change their behavior and follow the treatment plan more often, and they learn to recognize these signs and to notify their case manager or physician when necessary.

Case managers intervene to break the cycle of frequently repeating hospital readmissions. Telemanagement is a tool that helps case managers be more effective. Our case management approaches and successes are further outlined in a chapter of a book to be published this summer by Health Administration Press titled *Thinking Forward: Six Strategies for Highly Successful Organizations* by John Griffith and Kenneth White with Patricia Cahill, featuring the work of selected Catholic Health Initiatives' facilities.

Mercy Health Network medical centers utilize CHF telemanagement for two reasons. First, because Iowa's average Medicare reimbursement is so inadequate (lowest in the United States), costs exceed reimbursement for every CHF admission for most of our medical centers. Out of necessity, we reduce our CHF admissions to avoid further financial losses. Hospitals receive no reimbursement to provide case management. We invest in case managers and telemanagement systems at our own expense.

Second, and more importantly, the CHF telemanagement program keeps people healthier and at home where they want to be.

COLLABORATION TO REPLICATE SUCCESS

Earlier this year, Mercy Health Network co-founded the Iowa Chronic Care Consortium along with the Iowa Health System, Des Moines University, the Iowa Farm Bureau Federation, and the Iowa United Auto Workers. The purpose of the Iowa Chronic Care Consortium is to improve the health and productivity of Iowans through the routine practice of innovative, proactive chronic care strategies.

Mercy Health Network is committed to participation in the Iowa Chronic Care Consortium because we believe that our telemanagement program is a breakthrough in decreasing the cost of care and increasing the quality of life for people with CHF, and we are willing to collaborate with other providers in the state to achieve the same results as we have.

Through the Consortium, Mercy Health Network will be expanding our telemanagement program to heart failure patients in more remote rural locations and to diabetes patients in our urban medical centers.

RECOMMENDATIONS

We acknowledge that the causes of rising health care costs are complex, and the solutions are difficult to identify. We believe, however, the data indicates that our CHF telemanagement program could be a model for improving the care of persons with CHF.

We offer the following recommendations: 1. Review Mercy Health Network's telemanagement results this Fall after we complete another year of using the telemanagement system 2. Review the comparative results of the telemanagement demonstration projects conducted by the Iowa Chronic Care Consortium in 2004; and, 3. If the data from these projects shows the same cost savings as our previous studies, we would recommend that Congress consider adding case management as a reimburseable service to the Medicare and Medicaid programs to incent hospitals to provide case management.

Mr. Chairman, I am grateful for the opportunity to present this information to your Subcommittee. We appreciate the assistance that your Subcommittee provides

for the healthcare community, and particularly acknowledge the consistent support provided by our good friend Senator Harkin.

I would be happy to answer any questions from you and your Subcommittee members at this time.

Senator HARKIN. Thank you very much, Mr. Hickman. These are great stories. These are remarkable. I am going to find out why we cannot do this, what you and Dr. Mentel have done, all over the place, all over the country.

STATEMENT OF DR. JAMES F. FRIES, DIRECTOR, ARTHRITIS, RHEUMATISM, AND AGING MEDICAL INFORMATION SYSTEM, STANFORD UNIVERSITY

Senator HARKIN. Next, we turn to Dr. James Fries. I hope I pronounced that right. Dr. Fries is a professor of medicine at Stanford University School of Medicine, received his undergraduate degree at Stanford and his M.D. at Johns Hopkins, nearby. Dr. Fries is an expert in health promotion—prevention, and will discuss how health promotion and disease prevention can reduce healthcare costs through the reduction on the demand side, rather than the traditional effort to control the supply side. So now we will take a look at the demand side.

Dr. Fries.

Dr. FRIES. Thank you, Senator Harkin and subcommittee members.

Healthier persons have lower healthcare costs. And we know how to reduce health risks and to improve health and to, thereby, decrease the costs of healthcare. These amounts can be extremely substantial. I will not go over again the data that Karen presented or that you presented about the crisis in rising healthcare costs, but just suggest that it is, in large part, a result of the demand that we place, and that the demand that we place on healthcare is, itself, related to the disability and the state of health of the population that is receiving that. There are, as I will argue in several discrete ways, emerging evidence, very well-controlled scientific data that we have, that the time for initiatives to be examined and implemented has come.

I will make four points. The underlying theory between health-enhancement initiatives is the compression of morbidity, a term which I coined a number of years ago and I will explain to you.

Second, disability rates in the United States can decline by at least 2 percent a year. They are currently doing that, and they will continue to do that in the future if we are effective at implementing things. It is important that that happens, because the Medicare program becomes solvent, arithmetically, for 70 years or more if the rate of decline in disability is 1.5 percent a year. It is currently declining at 2 percent, and this is some of the best news, in terms of health in the United States, that we have had for some time.

Then the onset age of chronic infirmity may be postponed. We have data that it may be postponed by as much as 12 years, so that people end the period of adult vigor some 12 years later than people with less healthy lifestyles and a less-healthy approach to managing their medical care.

Finally, multiple large randomized controlled scientific trials have proved the effectiveness, cost effectiveness, of these. I will go

through the points quickly, and then I will tell you six things that I think we ought to be doing now in order to get there.

The compression-of-morbidity paradigm says that most illness in this era occurs between the time in which you first get sick for good—that is, the onset of chronic infirmity—and the time in which you die. And during that time, you become increasingly infirm. So that the area under the curve of that infirmity, between when you first get sick—this is 55 or 56 for the average American, lowest levels of disability—until the time in which you die, some 20 years later, is where most of life's morbidity is. So compressing morbidity says, predominantly, let us postpone the onset of the period of disability and, thereby, compress the period of disability against the age of death, which, to be sure, is rising, as well, but perhaps not as rapidly. And that is where some of the data come in.

So this is the life of a vigorous life until reasonably shortly before it is closed, at which time there is a terminal drop, with obvious implications for the health quality of life of the individual, and obvious implications for the financial health of the system that pays for this care.

Disability, I indicated, was going down 2 percent a year since 1982. This is documented in the two major surveys, the National Long Term Care Survey and the National Health Interview Survey, which have been administered serially over that time, and it is consistent with everything else. It is interesting that the improvement in disability, which is very encouraging, is related, in lifestyle matters, only with the decrease in cigarette smoking, because we have actually, as everyone knows, become a more sedentary and a plumper Nation over this same period of time. So part of the impetus and the opportunity for postponing infirmity more comes to attacking those things which we have not successfully—well, we have not even really tried, on a national basis, to improve the health habits and the subsequent illnesses that occur.

Now, recent data from longitudinal studies, in which we follow individuals for life, have really associated factors such as exercise or obesity or cigarette smoking or other health risk factors on the time at which we develop morbidity. Morbidity and disability are relatively interchangeable terms. And the effect is a profound one.

In a University of Pennsylvania alumni study, we found an 8.4-year postponement of disability in those who had moderately good health habits, compared with those who did not. In a longitudinal study we began in 1984, we recently reported a prolongation of 12.4 years in people, mainly, who were lifetime participants in vigorous physical activity. And we are in the process of reporting that those people who begin vigorous physical activity after age 60 can reach very similar goals, so that these benefits can accrue late in life, as well.

So we have an emerging base of longitudinal studies which associate the health habits and health risks and personal self efficacy and other variables of the individual with their long-term health outcomes. This contradicts, directly, an original fear that, in fact, if we had healthy people, we could not afford them, because they would live too long, and they would wear out our social support system. In fact, they live a little longer, but they live a lot less disabled. And the lifetime medical costs of the chronic cigarette smok-

er or the sedentary or obese person are higher, substantially higher, than those of the person who is fit, even though the life is shorter. So the cumulative metric, where we are looking at cumulative disability over a life span, is favorable with regard to these areas. There are many other studies that do this.

Then, finally, randomized control trials are the finest final scientific proof for things. And questions such as, "Is it too little too late to institute programs to change people's behaviors and, thereby, improve their health," have arisen. There now are a number of randomized control trials. I include five in the supporting materials, which total some 70,000 or 80,000 people randomized to different groups, receiving different interventions, and the ability to improve health, both in working populations and in seniors. In working populations, one of the big metrics is productivity, which is improved; in senior populations, it is health and avoidance of disability. And we were able to prove both of those. They have been proven in multiple ways. They have been reviewed by many, many groups, and the conclusions are always the same.

So it is time for us to take advantage of these data and to move forward with programs to build a healthier United States. And at the same time, within that healthier United States, to have an ability to moderate, not eliminate, for all of the reasons we have discussed here, but to moderate the rise, perhaps stabilize the rise in healthcare costs.

Last year, RAND prepared a contracted report for the Centers for Medicaid and Medicare Services recommending a demonstration project of tailored print interventions, which turns out to be the most effective intervention—I can go into that later—with the goal of recommending that proven interventions be made available as a Medicare benefit. We are getting specific here. It is hoped that this demonstration, currently being designed, might be underway by the end of this year.

The Health Promotion FIRST Act will shortly be introduced, by Senators Richard Lugar and Jeff Bingaman, and will provide support for new and existing programs at the CDC and NIH, which will accelerate progress in health promotion, knowledge, and applications. Forty-nine Senators have signed on as co-sponsors for a "Building Health Promotion into the National Agenda" Resolution. Clearly, there is increasing interest and activity—you mentioned this in your introduction—a mandate, an emerging mandate, for approaches to cost containment by improvement of health.

There are six immediate policy imperatives that I would like to enumerate.

First, support the Medicare Senior Risk Reduction Demonstration Project. It is critically important that this demonstration is designed, carried out, and implemented. It, by itself, can have a major factor on the solvency of Medicare.

Second, support proven senior risk-reduction programs as a Medicare benefit. Changes will be required here to sections 1861 and 1862 of the enabling legislation.

Third, support the Health Promotion FIRST Act with increases in training and in application of health risk-reduction principles. Details can be found at the Web site I have provided.

Fourth, encourage reimbursement by federal, State, and private medical insurance for qualified health education and qualified health promotion programs provided as population health initiatives. These will be parallel to much of what we consider the medical-care system of today.

Fifth, encourage work-site health-promotion activities to encourage health and productivity and to reduce costs. Details can be found in another Web site, which I have provided.

Finally, monitor and evaluate these initiatives rigorously. We must only encourage and fund programs that are known to be effective, and that is inherent in the other recommendations which I have done.

PREPARED STATEMENT

Closing, we can improve health and reduce medical care costs substantially with currently proven health-enhancement approaches. These approaches, in turn, can be redefined and improved. Demand-side health-improvement initiatives benefit the individual, the payer, and the society. They do not encourage rationing or adversarial stances. They are entirely bipartisan. They are not inconsistent with other cost-containment initiatives, and, indeed, will make such initiatives more effective. The need for a healthier society has never been more obvious or more important.

[The statement follows:]

PREPARED STATEMENT OF DR. JAMES F. FRIES

Health care costs have resumed double-digit annual increases and are in crisis. Existing "control" mechanisms based principally on forms of rationing on the supply side have failed to be effective. Current costs approximate 16 percent of GDP. These costs threaten budgets in other areas, and put the Medicare program at risk.

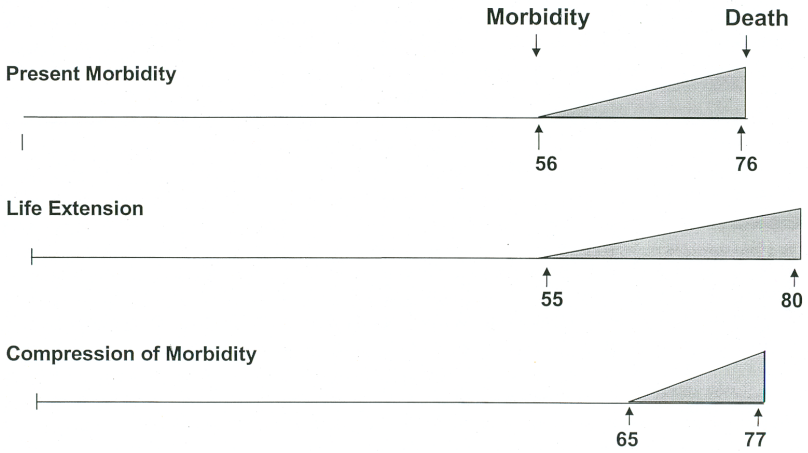
Yet, an effective cost-containment mechanism on the demand side is readily available, based on the established fact that healthier persons have much lower health care costs than do persons with preventable chronic illness. This mechanism holds great promise for reduction in the national burden of illness and for improvement in the quality of life.

FIGURE 1.—OUTLINE

—Healthier Persons Require Fewer Medical Services
—Need and Demand Reduction Approaches are a Proven Approach to Medical Care Cost Containment
—The Compression of Morbidity Paradigm Provides a Theoretical Base
—Disability among Seniors in the United States can Decline by at least 2 percent per year; mortality rates by 1 percent per year
—The Onset of Chronic Infirmity may be postponed by up to 12 Years
—Multiple Randomized Controlled Trials Prove the Effectiveness of these Approaches
—There are Major Policy Implications

I will make four points and explore their policy implications. First, the underlying theory behind health enhancement initiatives is the Compression of Morbidity. Second, disability rates in the United States can decline by at least 2 percent per year, while mortality rates will decline more slowly, at about 1 percent per year. Third, the onset age of chronic infirmity may be postponed by up to 12 years. Fourth, multiple large, randomized, controlled scientific trials have proved the effectiveness and cost-effectiveness of these approaches.

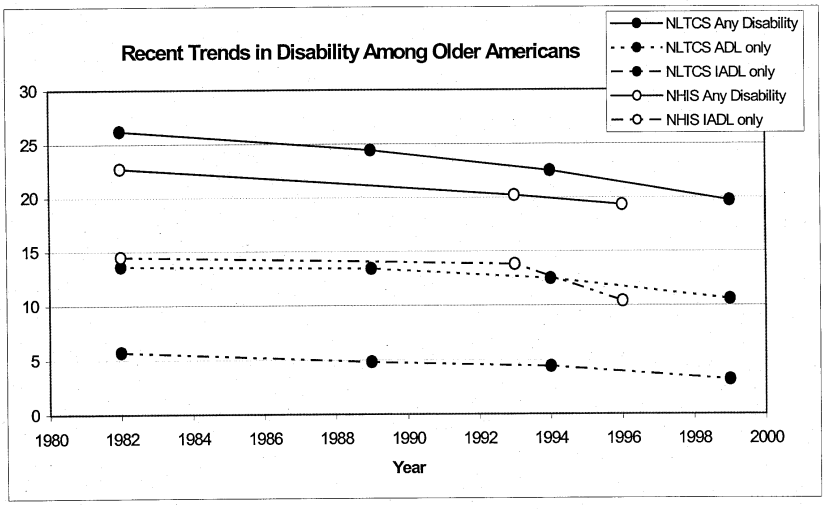
Figure 2
Compression of Morbidity



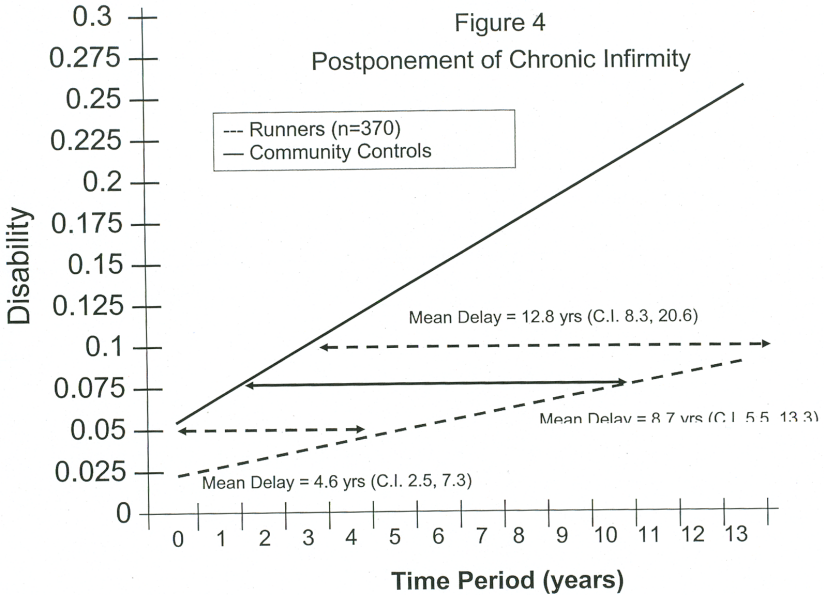
The Compression of Morbidity paradigm envisions reduction of lifetime infirmity, shown on Figure 2 as the shaded area, and of medical care costs, by squeezing the period of morbidity between an increasing age at onset of disability and the age of death. The healthy life is seen as a life vigorous and vital until shortly before its natural close. This is achievable by postponing the onset of disability and high medical costs through reduction of chronic illness and the pursuit of vigorous and healthy lifestyles.

In the Figure, present average disability is represented by the top line and is concentrated between an average onset at age 56 and the average age at death, now 76 years. In future scenarios, extension of morbidity, on the second line, occurs if longevity is increased but disability is not postponed; this is the worst-case scenario. Compression of morbidity, on the third line, occurs when disability is postponed more than longevity is extended, as with reduction in health risks. This scenario reduces costs and improves life quality.

Figure 3
Compression of Morbidity is Occurring Now



Disability, as documented by the National Health Interview Surveys and the National Long Term Care Surveys, has been declining at about 2 percent per year since 1982 and even more rapidly in the most recent five year period, while mortality rates are declining at about 1 percent per year. These data directly document compression of morbidity. These trends have many contributing causes, from declines in cigarette smoking to advances in medical science. It is important to note that these improvements in the national health to date have occurred despite the absence of a systematic approach to reduction of health risks; our increasingly obese and sedentary population offers major opportunities for continued reduction in chronic illness.



Recent data from major longitudinal studies document the association between reduced health risks and postponement of the onset of disability. For eighteen years our research group at Stanford has studied the effects of long-distance running and other vigorous exercise, after age 58, on health outcomes. Results were remarkable. Those exercising regularly postponed disability more than 12 years compared with controls, and health care costs were reduced by nearly one-third. Those who took up vigorous exercise later in life nearly achieved the health benefits of lifetime exercisers. For those who died, the exercisers had far less disability in the year prior to death, as well as in all prior years. In the University of Pennsylvania alumni study we have reported similar results in those exercising, of moderate weight, and not smoking. Daviglus and colleagues showed substantial decreases in Medicare costs for those with few health risk factors in mid-life. Reed and colleagues prospectively determined the effects of health risks, with results similar to ours. These results from major studies are consistent with the broader literature.

FIGURE 5.—RANDOMIZED CONTROLLED TRIALS

	Number	Time (months)	Health risk score (percent)	Cost per person	Savings per person	ROI
Bank of America	4,712	12	−12	$29	$179	6.1
CALPers	57,268	12	−10	59	300	5.1
Arthritis	809	6	−7	50	260	5.2
Parkinson's	290	6	−10	100	570	5.7
Take Care of Yourself	2,833	12	−17	6	20	3.5

Randomized controlled trials represent the highest standard of scientific proof. Such trials prove our ability to achieve healthier and less costly lives, both in midlife and in seniors, through relatively inexpensive health improvement programs costing less than $100 per year per person annually. The most effective approach has been "tailored print interventions", where each set of feedback materials to the participant is exquisitely configured for the precise characteristics and previous behaviors of that individual.

The Bank of America Retiree Study, the very large California Public Employee Retirement System trial, disease-specific trials in arthritis and other chronic illnesses, and trials of selfmanagement materials all have documented our ability to both reduce health risks and to achieve a substantial return on investment, ranging from 3.5:1 to 6.1:1. In terms of Maintaining Medicare solvency, these results indi-

cate that investing about $100 per year per person annually, less than 2 percent of the $5500 paid out to the average beneficiary, would reduce Medicare claims by about $500 per beneficiary per year, even in the first year.

Last year RAND prepared a contracted report for CMS recommending a demonstration project of tailored print interventions in Medicare, with the goal of recommending that proven interventions be made available as a Medicare benefit. It is hoped that this demonstration project, currently being designed, might be underway by the end of this year. The Health Promotion First (Funding Integrated Research Synthesis and Training) Act will shortly be introduced by Senators Richard Lugan and Jeff Bingaman and will provide support for existing and new programs at the CDC and NIH which will accelerate progress in health promotion knowledge and applications. Forty-nine Senators have signed on as co-sponsors for a "Building Health Promotion into the National Agenda" resolution. Clearly there is increasing interest and activity, as well as an increasing mandate, for approaches to cost-containment by improvement in health.

FIGURE 6.—POLICY IMPERATIVES

—Support the Medicare Senior Risk Reduction (SRRP) Demonstration Project
—Support Proven Senior Risk Reduction Programs as a Medicare Benefit (changes will be needed in sections 1861 and 1862 of the enabling legislation)
—Support the Health Promotion FIRST (Funding Integrated Research Synthesis and Training) Act
  —(to be introduced shortly by Richard Lugar and Jeff Bingman) Healthpromotionadvocates.org
—Encourage Reimbursement by Federal, State, and Private Medical Insurance for Qualified Health Education and Health Promotion Programs Provided as Population Health Measures
—Encourage Worksite Health Promotion Activities of High Quality to Increase Productivity and Reduce Costs—healthproject. stanford.edu
—Monitor and Evaluate these Initiatives Rigorously

There are six immediate policy imperatives. First, support the Medicare Senior Risk Reduction (SRRP) Demonstration Project. It is critically important that this demonstration is designed, carried out, and implemented. Second, support proven senior risk reduction programs as a Medicare benefit; changes will be required in Sections 1861 and 1862 of the enabling legislation; these will improve the health of Medicare beneficiaries through population health measures. Third, support the Health Promotion FIRST Act, with increases in training and in application of health risk reduction principles. Details may be found at healthpromotionadvocates.org. Fourth, encourage reimbursement by Federal, State, and private medical insurance for qualified health education and health promotion programs provided as population health initiatives. We must develop a culture of health rather than of disease. Fifth, encourage work-site health promotion activities to encourage health and productivity and to reduce costs. Details may be found at healthproject.stanford.edu. Finally, monitor and evaluate these initiatives rigorously. We must only encourage and fund programs that are known to be effective.

We can improve health and reduce medical care costs substantially with currently proven health enhancement approaches. These approaches, in turn, can be refined and improved. Demand side health improvement initiatives benefit the individual, the payer, and the society. They do not encourage rationing or adversarial stances. They are entirely bipartisan. They are not inconsistent with other cost-containment initiatives and, indeed, will make such initiatives more effective. The need for a healthier society has never been more obvious or more important.

Senator HARKIN. Thank you very much, Dr. Fries. Thank you. I have some questions about some of those.

STATEMENT OF DR. DONALD R. HOOVER, PROFESSOR, DEPARTMENT OF STATISTICS, RUTGERS UNIVERSITY

Senator HARKIN. Next, we turn to Dr. Donald Hoover, who is a professor of statistics and a faculty member of the Institute of

Health, Healthcare Policy, and Aging Research at Rutgers University. Dr. Hoover received his undergraduate degree at the University of California at San Diego, his Ph.D. at Stanford. I understand Dr. Hoover will discuss the expensive end-of-life care, which burdens States and the Medicare program.

Dr. Hoover, welcome.

Dr. HOOVER. Well, Mr. Chairman, the committee, thank you for inviting me. I guess you have heard about me, so—a little bit.

I have been—probably the past 2 years, I have been doing work on end-of-life care, which—in the literature, end of life is, a lot of times, defined as really the very end of life, the very last year of life. So I am going to talk about more—not so much implementation and things like that, but more of the descriptions of the costs in the very last year of life, which is a huge chunk of the medical care expenditures for Americans 65 years and older.

Now, I make three points. First, our Nation spends a substantial amount of money for medical care for people just in the last year of life alone. And even if we do nothing, no changes to the healthcare system, just because of a changing population demographics as the population ages, this amount is going to go up.

Second, much of these end-of-life—and I am talking, again, last year of life—medical care expenditures are for less intensive care, such as nursing home and long-term care facility care, as well as for technologically intensive hospital care.

The third point I am going to make is that while Medicare, right now, is paying most of the end-of-life, last-year-of-life, medical costs, as the numbers of Americans age and the numbers dying at older ages increases—in other words, our population demographics shift and we have got more 75-year-olds, 85-year-olds and people dying at older ages—just that alone is going to cause the States and the elderlies themselves to be required to assume more of these costs.

So let me get to my first point. America spends substantial amounts of money for medical care during the last year of life, and this will grow. And so a few numbers here. A study that we published found that from 1992 to 1996, it was very expensive to die in America. And in fact, an average person over 65 who died created about $40,000 of medical expenditures in his or her last year of life. If you look at what has happened to medical costs since 1996, you know, it is maybe $50,000 to $60,000 maybe now in the last year of life might be what the expenditures are. And if you think about what an average person makes in a year, an average wage-earner, that is quite a bit of money to be spending for care in the last year of life.

Some other ways to look at this, about one fourth of Medicare expenditures and one fifth of all healthcare expenditures for the elderly simply went to that very short time period during the last year of life. Now, there have been several initiatives, such as hospices and advanced directives that have tried to reduce these end-of-life, last-year-of-life medical costs. Despite this, if you look at what has happened with Medicare over the past 25 years, end-of-life costs have continually been about a quarter of Medicare costs. They have not gone down in spite of these initiatives.

So one take-home message from this might be that while directed efforts to limit the last-year-of-life costs may be needed, in fact these costs may be best controlled through the same approaches used to control other general healthcare costs.

Now, my second point is that substantial end-of-life healthcare expenditures go to less technologically intensive and other institutional care, as well as to technologically intensive inpatient healthcare. And the reason I make this point is, you know, expensive hospital-based medical technology is often blamed for higher end-of-life medical costs, which, in fact, is true to a certain degree. But our research suggests that non-intensive care of terminally-ill patients is, in fact, almost as costly, and it is growing. From 1992 to 1996, on average, about $15,000 for a person's last year of life was being spent for care in the hospital, on average. This compares to about almost as much, $12,000, being spent on non-technological nursing-home and institutional care. However, again, even if we do nothing to the medical care system, because of the changing population demographics, end-of-life nursing home and institutional expenditures are going to grow. And the reason for that is, people who die at older ages—say, 75, 85—are more likely to be institutionalized around the time of death during the year prior to death, and have higher institutional nursing home costs, if you will. And again, our population is shifting in age. We are getting more 75- and 85-year-olds. So these costs are going to go up in the future.

Now, the third point. While Medicare now pays most end-of-life medical costs, as the population ages and dies at older ages, the States and the elderly themselves will have to assume larger roles and pay for more of this. From 1992 to 1996, the last year of life, Medicare paid about two thirds of all healthcare costs during this time period. But this varied with age of death and for people who were older who died at 75, 85, most of their costs, or more of their costs, were institutional care, and Medicare paid for less of those, because Medicare does not cover this. So as the elderly American population grows and shifts towards older ages, the States—that is, Medicaid—and, in fact, the elderly, themselves, will have to pay more for end-of-life medical care.

Now, if you think of the current financial difficulties the States are in, they may be hard-pressed to come up with additional resources for Medicaid. If you look at the elderly and what they have to pay—from 1992 to 1996, on average, an elderly person, or their family, had to pay about $5,000 for their medical expenses during their last year of life, which would obviously create a great economic burden in this group.

Now, in terms of supplemental and private insurance, right now that is only paying for about 5 percent of the medical costs in the last year of life, and it is really unclear that this can assume a larger role.

So if end-of-life medical care expenditures, just the last year alone, are not reduced, there may be a need for the Federal Government to expand Medicare or find other ways to support institutional care and relieve elderly from their out-of-pocket expenses just for their last year of life.

PREPARED STATEMENT

Now, summary. End-of-life healthcare costs will rise and may be more and more shouldered by the elderly and the States. While efforts to reduce end-of-life medical costs should continue, the impact of these efforts maybe limited, just due to the changing demographics of a growing and aging elderly population. The Federal Government may need to increase support for Medicaid programs and/or to find other means to fund end-of-life healthcare.

I thank the Chairman and the Committee, once again, for inviting me to testify and will be happy to answer any questions you have.

[The statement follows:]

PREPARED STATEMENT OF DR. DONALD R. HOOVER

Mr. Chairman and Honorable Members of the Subcommittee: Thank you for inviting me. I'm a Professor of Statistics at Rutgers University, and a member of the Rutgers Institute for Health, Health Care Policy and Aging Research. I've been funded by the Agency for Healthcare Quality and Research and National Institute on Aging to study health care costs. Based on this research that I've conducted with colleagues (Drs. Crystal, Sambamoorthi and Cantor) using the Medicare Current Beneficiary Survey, and on a review of other studies done in the past 25 years, my presentation is on medical expenditures during the last year of life for elderly Americans 65 years and older.

I make three points. First, our nation spends substantial amounts on medical care for persons in their last year of life; this will increase as our population ages. Second, much of these end of life medical care expenditures are for less intensive long term care and other institutional care, as well as for technologically intensive hospital care. Third, while Medicare now pays most end of life medical costs, as the numbers of American elderly dying at older ages increases, the States and the elderly themselves may find themselves required to assume more of these costs.

FIRST POINT—AMERICA SPENDS SUBSTANTIAL AMOUNTS OF MONEY FOR MEDICAL CARE DURING THE LAST YEAR OF LIFE, AND THIS WILL GROW

A study we published found dying in America was very expensive. From 1992 to 1996 an average person over 65 who died created $40,000 of medical expenditures in his or her last year of life, more than many people earned in a year. About one-fourth of Medicare expenditures and one-fifth of all health care expenditures for the elderly went to those in their last year of life. Several initiatives such as hospices and advanced directives have tried to reduce end of life medical costs. Despite this, end of life expenditures have not notably decreased as a fraction of Medicare expenditures over the past 25 years. While directed efforts to limit end of life costs may be needed, end of life medical care expenditures may best be controlled through the same approaches used to control other general health care costs.

SECOND POINT—SUBSTANTIAL END OF LIFE HEALTH CARE EXPENDITURES GO TO LESS TECHNOLOGICALLY INTENSIVE LONG-TERM AND OTHER INSTITUTIONAL CARE, AS WELL AS TO INPATIENT HOSPITAL CARE

Expensive hospital based medical technology is often blamed for higher end of life medical costs. But our research suggests that non-intensive care of terminally ill patients 1 is almost as costly and growing. From 1992–96 on average $15,000 was spent for inpatient hospital care for those in their last year of life compared to $12,000 spent on non-technological nursing home /institutional care. However, end of life nursing home /institutional expenditures are higher for those who die at older ages. So as Americans continue to age and die at older ages, end of life nursing home /institutional costs will rise.

THIRD POINT—WHILE MEDICARE NOW PAYS MOST END OF LIFE MEDICAL COSTS, AS THE POPULATION AGES AND DIES AT OLDER AGES, THE STATES AND THE ELDERLY THEMSELVES WILL ASSUME LARGER ROLES

From 1992–1996 Medicare paid about two-thirds of end of life costs for American elderly. But this varied with age at death and Medicare paid less for those who died at older ages. As the elderly American population grows and shifts towards older

ages, the States (Medicaid) and elderly themselves will pay more for end of life medical care. Given current financial difficulties, States may be hard pressed to provide additional resources for Medicaid. From 1992–1996 an average elderly person directly paid $5,200 for health care during his or her last year of life, a great burden for this economically pressed group and their survivors. It is unclear whether supplemental /private insurance which currently pays only 5 percent of end of life medical costs can assume a larger role. If end of life medical expenditures are not reduced, there may be a need for the federal government to address gaps in Medicare causing high end-of-life out-of-pocket costs or to find other ways to support institutional care and relieve elderly from out of pocket expenses incurred for end of life healthcare.

SUMMARY

Funding medical care in the United Sates is a growing problem. End of life healthcare costs will rise and may be more and more shouldered by the elderly and the States. While efforts to reduce end of life medical costs should continue, the impact of these efforts may be limited due to a growing and aging elderly population. The Federal government may need to increase support of Medicaid programs and/or to find other means to fund end of life healthcare.

I thank you once again Mr. Chairman and Members for the opportunity to testify and will be happy to answer any questions you may have.

Senator HARKIN. Well, Dr. Hoover, thank you very much. You can anticipate one question from me, and that is, have you looked at hospice care and how that figures into all this?

Dr. HOOVER. Yup, okay.

Senator HARKIN. So we will get back to you on that.

STATEMENT OF DAVID L. BERND, CHIEF EXECUTIVE OFFICER, SENTARA HEALTHCARE

Senator HARKIN. Last, we go with David Bernd. Mr. Bernd is the CEO of Sentara Healthcare, in Norfolk, Virginia, as well as the chair-elect of the American Hospital Association's Board of Trustees. Mr. Bernd holds a master's degree in hospital and health administration from the Medical College of Virginia. He got his B.S. degree from the College of William and Mary, and representing the American Hospital Association, and will discuss how health costs are impacted by excessive and complex regulation and administration in healthcare and will talk about the burden of paperwork on health providers.

Welcome, Mr. Bernd.

Mr. BERND. Thank you.

I am here today on behalf of the AHA's nearly 5,000 hospitals, health systems, and healthcare provider members. Thank you for this opportunity to discuss regulatory relief for healthcare providers.

Sentara owns and operates six acute care hospitals in Virginia, ranging in size from 100 to 600 beds. We are committed to serving the unique needs of our communities, but often these commitments are challenged by the host of regulations and statutes which govern each caregiver's interactions with their patients. More than 30 agencies oversee some aspect of healthcare delivery, and not just at the federal level. State and local Governments add yet another layer or two. For hospitals like Sentara, this means a constant juggling act of complying with regulations while providing quality healthcare to our communities.

In order to determine what impact regulations have on the time caregivers spend with patients, the AHA, in 2001, commissioned PricewaterhouseCoopers to ask a group of 21 hospitals about their

paperwork experience. The results? Physicians, nurses, and other hospital staff spend at least 30 minutes on paperwork for every hour of care provided to a Medicare patient. In the emergency department, it is worse. Every hour of patient care generates an hour of paperwork. These numbers are mirrored even when dealing with private sector insurance groups, payers, and regulators. Now, we brought a copy of this study for the Committee Members, and it will be available for you afterwards.

Another part of this study is very interesting—is this flow chart, which is three pages in length and shows the major regulatory changes in Medicare regulations over the last 5 years. Now, this does not include the literally hundreds per month of smaller regulatory changes that we get briefed on, but these are the major policy changes on Medicare, alone.

We are pleased, Senator Harkin, that you and your colleagues recognize this dilemma and are examining the regulatory maze that providers face every day. And thanks to the efforts of concerned legislators and HHS Secretary Tommy Thompson, we are making progress in relieving some of these burdens.

The Secretary's Advisory Committee on Regulatory Reform, fully supported by the AHA, provided opportunities for a firsthand look at the impact that regulatory burden has on patient care. The committee's report included 255 recommendations, some of which are currently being implemented. A number of these were heartily endorsed by the AHA's Regulatory Reform and Relief Advisory Committee, which I chaired.

These provisions include adopting recommendations on EMTALA, such as creating an advisory committee ensuring that local medical review policies for outpatient services are not applied to emergency department services. As I am sure you are aware, hospitals, under EMTALA, must provide emergency services to patients that are presented in the emergency departments, which is obviously supportive of our community, no matter what their insurance status. But on the back side, some of the local review commissions come in later and deny payment, Medicare payment, because they say these services are not necessary or medically needed. So it is a real problem.

The other thing is to reduce the size and complexity of the antiquated pre-PPS Medicare Cost Report and modify or eliminate its Medicare cost-specific accounting principles. And I brought the Committee a summary of one of our hospital's cost reports. This 350-report, which I am sure that the Senator would love to read in his spare time, in fact, is a summary of our cost report. And in fact, I could only bring one box of additional papers that support this one report. On US Air, because of the increase of the average weight of our passengers on our airlines, they would not allow me to bring all eight boxes. So, Senator, it is hard to believe, but the summary report is 250 pages. We have, behind each one of these summary reports, eight boxes filled with paper that we have to put in for Medicare Cost Reports on an annual basis. So that is 60 boxes of paper, with 350 pages summary of each cost report, for each hospital we have in Home Healthcare Agency.

Senator HARKIN. That is bizarre.

Mr. BERND. It is rather mind-boggling.

These revised policies are helping to alleviate the burden on caregivers, and we appreciate the work that you all are doing. But hospitals, working together with you and the Secretary, can do more. In fact, I would urge you to work with CMS and HHS to fully implement the Secretary's recommendations. Too much work has gone into this report to simply allow it to lay dormant.

We would also urge you to consider additional areas for reform. Amend the HIPAA medical privacy rule and allow hospitals to give patients, upon admission, a list of the types of disclosures that may be made using their information. Such actions makes more sense and strike an appropriate balance between patient confidentiality and caregiver burden. They also require less resources from caregivers, such as attempting to build an expensive new disclosure tracking database.

Again, in a study AHA financed, one hospital in Boston, 150-bed hospital, relatively small size, on average has 300,000 disclosures required by law per year for its patients. And under current HIPAA regulations, we would have to get, for each one of those disclosures, an independent approval from patients to disclose this information. It is mind-boggling.

We need to recognize that EMTALA should not apply to inpatients. Once a person is admitted as an inpatient, the hospital actually has taken responsibility for more than is required under EMTALA.

Allow providers direct access to court to challenge decisions made by CMS. Currently, the only way to appeal decisions made by CMS is to fail to follow the rules, get kicked out of the Medicare program, and then appeal to the courts for relief. No other Federal agency operates in this way.

Simplify the data-collection process that uses OASIS and MDS forms. Establish common sense guidelines for regulations. Regulations should be clear, unambiguous and well documented. They should also enable better communication between all parties involved—regulators, healthcare providers, and patients—as well as be cost effective. And they should encourage the pursuit of excellence through best practices.

PREPARED STATEMENT

Our first priority is our patients, to provide high-quality medical care in the appropriate setting. While some regulations contribute to this goal, I think you can see that others drain away much-needed resources, placing a strain on our hospitals and the men and women who work there and take care of our patients. AHA believes healthcare should be regulated, but in a common sense manner that allows healthcare providers to do what they have been trained to do best, take care of the ill and injured in our communities.

Thank you for your time today. We look forward to working with you and your colleagues further to provide needed relief from overburdensome regulations.

[The statement follows:]

PREPARED STATEMENT OF DAVID L. BERND

Good morning, Mr. Chairman. I am David Bernd, chief executive officer of Sentara Healthcare in Norfolk, Va., and incoming chairman of the American Hos-

pital Association (AHA). I am here today on behalf of the AHA's nearly 5,000 hospital, health system, network and other health care provider members. We're pleased to be able to testify on regulatory relief and reform efforts for the health care field.

Sentara Healthcare owns and operates six acute-care hospitals in Virginia, ranging in size from 100 beds to nearly 500. At Sentara, we are committed to developing hospitals and health care systems that serve the unique needs of our communities.

Patients are our priority—no matter the time, no matter the condition and no matter the hospital. Our facilities are open 24 hours a day to provide health care services to our friends and neighbors in the communities where we work and live.

But every time the nurses, physicians and other health care workers care for a patient, a host of regulations and statutes govern their very actions, especially if the patient is a Medicare or Medicaid recipient. More than 30 agencies oversee some aspect of that health care delivery process—and that's just at the federal level. State agencies add yet another layer—or two. More than 130,000 pages govern the Medicare system—a sheaf of paper three times larger than the IRS Code and its federal tax regulations.

PAPERWORK VERSUS PATIENT CARE

In order to estimate the amount of time caregivers spend on paperwork, the AHA commissioned PricewaterhouseCoopers (PwC) in 2001 to conduct a study of a group of America's hospitals about their paperwork experience. Amazingly, PwC found that physicians, nurses and other hospital staff spend on average at least 30 minutes on paperwork for every hour of patient care provided to a typical Medicare patient. In the emergency department, every hour of patient care generates an hour of paperwork including paperwork to comply with the vast array of federal, state and local health regulations. The study examined a typical episode of care for a Medicare patient suffering from a broken hip. We have provided a copy of the study for the record.

While the PwC report did not evaluate the paperwork requirements placed on hospitals by the private sector, such as private health insurance plans, outside regulators, etc., we do know that these requirements mirror the paperwork burdens imposed by the Centers for Medicare & Medicaid Services (CMS). These numerous private sector payors and regulators add to the paperwork morass, since each typically has unique requirements with which hospitals must comply.

Complete records and documentation, and compliance with important safety standards, are essential to making sure our patients receive safe, high quality care. But complying with the numerous regulations issued by CMS and other federal, state and local regulatory agencies should not dominate a caregiver's day. These regulations and statutes do not always enhance the patient care experience—in fact, quite the opposite. They absorb valuable time and resources—time that could be spent caring for the next patient to come through the emergency department doors, and valuable resources that could be used to purchase new, life-saving technologies.

We are pleased, Mr. Chairman and Ranking Member Harkin, that you and your colleagues recognize this dilemma and are examining the regulatory maze that health care providers face. During the 107th Congress, the House unanimously passed H.R. 3391, the Medicare Regulatory and Contracting Improvement Act, which included a number of regulatory relief initiatives proposed by the AHA's own Regulatory Reform and Relief Advisory Committee, which I chaired. The bi-partisan legislation was reintroduced this year in the House (H.R. 810) and awaits action on the House floor. Though key members of the Senate advanced a regulatory relief package in the 107th Congress, similar legislation has not been introduced in the Senate to date.

HHS Advisory Committee on Regulatory Reform

We're still a long way ahead of where we started, though, thanks in part to the interest legislators have taken in an issue that directly impacts our patients, and thanks in part to Health and Human Services (HHS) Secretary Tommy Thompson and his Advisory Committee on Regulatory Reform.

Secretary Thompson's committee consisted of health care professionals, academics, beneficiaries and others committed to ensuring quality patient care with less burdensome regulations. The AHA fully supported the work of this committee, and, with our member hospitals, provided opportunities for the Advisory Committee and HHS to see first-hand the consequences that the regulatory burden has on patient care. The Advisory Committee's report to Secretary Thompson included 255 recommendations—some of which have been implemented, some of which are currently being implemented, and a number of which were heartily endorsed by the AHA, such as:

—Adopting recommendations on the Emergency Medical Treatment and Labor Act (EMTALA), including establishing an advisory committee and ensuring that local medical review policies for outpatient services are not applied to emergency department services.

—*The Medicare Cost Report*.—This relic of a previous cost-based payment system, used prior to the current prospective payment system, should be evaluated and overhauled to reduce its size and complexity, and its arcane Medicare-specific cost accounting principles should be modified or eliminated.

—Streamlining the Minimum Data Set (MDS) for most nursing homes by convincing the CMS to reduce the size of the MDS, and thereby reducing by half the staff time spent on completing it.

—Convincing CMS to streamline the OASIS form by eliminating 27 percent of the information items currently reported by home health agencies and two of the 10 assessments currently required, reducing by 25 percent the time spent by nurses on OASIS data reporting.

—Urging CMS to revise its policy for collecting Medicare Secondary Payer information from every 30 days to every 90 days for recurring outpatient services in hospitals, and from every 60 days to every 90 days for hospitals serving as reference labs.

—Changing the Health Information Portability and Accessibility Act (HIPAA) privacy rule so that patients no longer have to wait until a consent form is signed to receive care, and so that providers will have ready access to needed patient information in order to continue to provide timely, quality care.

—Addressing key concerns of rural providers. The committee recommended consolidating the definition of rural to one definition. In the past, the definition of "rural" was different for hospitals versus health clinics. The committee also recommended focusing on investing in best practices, as well as providing more information to rural providers about the more than 200 HHS programs that affect rural communities and their health care entities.

What Needs to Be Done

We've made great strides in addressing the regulatory burdens hospitals and caregivers deal with every day. But by continuing the collaborative working partnership between hospitals, HHS and Congress, we can make even bigger strides to reduce the red-tape burden on caregivers and strengthen our ability to continue providing the world class medical care that is the hallmark of our health care system. I would encourage you and your colleagues to keep the pressure on HHS and CMS to fully implement the Secretary's recommendations. Too much work has gone into this report to simply allow it to lay dormant.

In addition, we would urge you and your colleagues to examine additional areas for reform.

—*HIPAA Medical Privacy Rule*.—Hospitals have a long history of protecting the privacy of patient information and this rule goes a long way toward furthering this protection. However, hospitals are facing an enormous administrative burden in trying to comply with the rule's accounting for disclosures requirement under the rule—a provision which states that hospitals must track all disclosures made outside of providing treatment, payment, and health care operations in case patients request an accounting of those disclosures. Everyday, hospitals are required by law to disclose patient information for purposes of public health reporting, oversight activities, disease registries, etc. While all of these are important reporting laws, building information technology systems capable of tracking these disclosures is, at best, enormously expensive, and, in some cases, unobtainable depending on the availability of vendors to provide the services. For example, a 150-bed hospital in Boston estimates that they make 300,000 legally required disclosures a year. Because each disclosure takes 30–60 seconds to document and enter into a database, the hospital would need to hire two full-time employees just for data entry. Imagine the cost to a 500-bed—or larger—hospital. These are resources that could and should be used to provide patient care, not spent on paperwork. A common sense solution exists, however: at admission, patients could be given a list of the types of disclosures that may be made using their information. The important goal of informing patients about disclosures would be met without adding to the hospital's paperwork requirement.

—*EMTALA*.—We believe that EMTALA provisions should not apply to inpatients. Congress enacted EMTALA to ensure that people have access to emergency services regardless of their ability to pay. Once a person is admitted as an inpatient, the hospital has taken responsibility for more than is required under EMTALA. At that point, the usual hospital-patient and physician-patient rela-

tionships exist, creating duties of care for the hospital and physicians, and giving patients legal recourse if those duties are not met. In addition, keeping all hospital staff current on EMTALA regulations—not just the statute and formal requirements, but the continually evolving informal guidance—takes additional time away from providing direct patient care.

—*Allow providers direct access to courts to challenge decisions*.—Unlike other federal agencies, Medicare program policy decisions made by the Secretary are insulated from judicial review. Health care providers are required to exhaust all administrative processes and remedies before they can file suit against HHS. However, there is effectively no such process to exhaust on questions about whether the Secretary has exceeded his authority or failed in his duty.

Under *Shalala* v. *Illinois Council on Long-Term Care,* 120 S. Ct. 1084 (2000), the Supreme Court held that all matters arising under the Medicare Act must be channeled through the Secretary and that court review was available only following the administrative process. The only time an administrative process is available to hospitals to challenge a policy of general applicability is if they are terminated from the program. Consequently, as currently interpreted, the only means for hospitals to challenge an unlawful action by the Secretary is to fail to follow or "violate" the rules in order to be terminated from the program. This means that the Secretary can act outside the scope of his authority, without following required procedures and be insulated from judicial review—unlike other federal agencies.

—*Simplify data collection process*.—Currently OASIS and MDS use very similar data collection tools, but they are unable to communicate with one another and share data. Interoperability between the two systems would greatly reduce the burden to providers.

Establish Guiding Principles for Regulation

Regulation is essential to protecting patients and building public trust and confidence in the system. But unnecessary, poorly targeted or poorly implemented regulations may be of little benefit to the public, frustrate health care providers and the patients they serve, and interfere with appropriate care delivery. We would suggest that the following be used as guiding principles for the promulgation of health care regulations:

—The need to regulate behavior and the underlying objective of a regulation must be clear, unambiguous and well-documented. For hospitals, regulations should be used to protect patients from harm, ensure that quality and other care and safety standards are met, inform the public about their care, prevent fraud and abuse, control expenditures under government programs, and ensure fair functioning of the market for competing providers.

—Regulations should facilitate channels of communication between regulators and providers, and accountability of providers to their patients and communities.

—Regulations should be cost effective; linked to specific objectives and regularly assessed as to whether it achieves its objectives; based on sound scientific, technical, economic and other relevant information; minimize the cost of compliance assessment for both the regulated and regulators; and embody the greatest degree of simplicity and understandability possible.

—Regulations should establish a safe haven for innovation and encourage the pursuit of excellence through best practices.

—Regulations should be applied prospectively and their implementation appropriately staged to avoid disrupting patient care activities, unnecessary costs, and overwhelming administrative functions and information systems.

—Interpretive guidance and CMS manuals should be kept up to date and harmonized with underlying regulations. All too often, the guidance and manuals are out of date and thus present conflicting rules for providers and patients.

CONCLUSION

Our first priority is to provide high quality care to our patients. While some regulations contribute to this goal, others drain much needed resources, placing a strain on our hospitals and the men and women who work there. We believe the health care field should be regulated—but in a common sense fashion that allows health care providers to do what they've been trained to do—care for the ill and injured in our communities.

Thank you for your time today. On behalf of the American Hospital Association and its members, we look forward to working with you and your colleagues further to provide needed relief from overly burdensome regulations.

Senator HARKIN. Thank you very much, Mr. Bernd.

Boy, where do you begin on this? Well, where we ended up. What about what Dr. Mentel has done down in Jacksonville, in terms of getting rid of some of this paperwork and doing a paperless system? Does that answer some of this, or does it not? I am a little confused here, because his regulations there are the same that you have got. He has a hospital there, and he—I am trying to figure out whether his approach is one that really works for your hospital. Could this apply to all hospitals?

Mr. BERND. It certainly could. I think a paperless system is something that is a goal of probably every healthcare organization in the United States. And as the Doctor mentioned, though, it is extremely expensive. And with——

Senator HARKIN. Yeah.

Mr. BERND [continuing]. 30 to 40 percent of our hospitals running in the red, they do not have the capital available to invest in these systems. So it is one thing, we hope, that Medicare and Medicaid may be able to help us do in the future.

But the information system he is talking about would not take care of the problem with having to produce these Medicare Cost Reports. That is done at the end of the fiscal year, and it is an accounting matter. It does not have anything to do with patient records, and he has automated patient records. But I think it is really excellent work they have done at Mayo.

Senator HARKIN. But I do not understand these reports. There are 350 pages.

Mr. BERND. Right.

Senator HARKIN. And that goes to CMS?

Mr. BERND. Yes. This is mandated, that each hospital produce this type of report on each institution, on an annual basis. It is the basis that Medicare can come in and audit your Medicare financing for hospitals. And so, literally, we probably have 3,000 pages per year per hospital, with these eight boxes of attachments and the summary of the Medicare report.

A lot of the information is outdated. It has not been modernized. It still predates back when we had cost-based reimbursement, where the Government had to track all the costs in the hospital because we got paid on a cost basis.

Now, of course, we are paid on DRG basis, which we have a flat set of money, and lot of this information is not needed anymore. We just have not had the effort or the reform to do away with a lot of these needless regulations. We really do need your help in that area.

Senator HARKIN. And does AHA have recommendations for us of what needs to be done?

Mr. BERND. Absolutely. Yes, sir, Senator. And we have provided those to you and your staff.

Senator HARKIN. And we have those, right? Okay. All right.

I just wonder if, in some of the debate that is coming up on Medicare and stuff, I know it is all focused mostly on prescription drugs, but I am wondering if we should not—when the horse is leaving the barn to try to get on some of this, too, to see if we can streamline some of this.

Mr. BERND. Absolutely. If you think about it, with 1 hour of paperwork for every patient hour of care in an emergency department, you can see why the system is so expensive.

Senator HARKIN. I thought you——

Mr. BERND. It is part of the reason——

Senator HARKIN. I thought you said it was 30 minutes per hour.

Mr. BERND. That is on a medical/surgical unit, 30 minutes per hour. In the emergency department, it is worse.

Senator HARKIN. Oh. It is one for one.

Mr. BERND. One for one, yes, sir.

Senator HARKIN. Oh. Hmm. But what Dr. Mentel did down in Jacksonville—I will get to the capital issue of it here soon—but would not that then replace all this paperwork? Because at the end of the year, could you not just send in the CMS data that would be paperless? Just electronic data?

Mr. BERND. Well, in fact, what we are dealing with here are the business systems, and he is talking about a clinical system. And in fact, the business systems already are automated, but we still have to produce this paper.

Senator HARKIN. I see.

My staff just informed me that what you are dealing with is patient care, and what you are dealing with is administration.

Mr. BERND. Yes, sir.

Senator HARKIN. Patient care—I mean, I do not know where one ends and one begins.

Mr. BERND. Well, they are all part of the same system, but they are different——

Senator HARKIN. Yeah.

Mr. BERND [continuing]. Different regulations. This is the business aspects of healthcare to meet the regulations of Medicare.

Dr. MENTEL. They blur. It does become confusing. I charge whenever I perform a function. I order, and it ends up being a billable event.

Senator HARKIN. Right.

Dr. MENTEL. But I think—I end up spending a ton of money on programmers programming to get the data that he needs—even if I automated the darn thing, I would still be spending buckets of money on programmers to get the data out he needs to report, which he believes does not really need to be reported anyway in the current day and time.

Senator HARKIN. Hmm. Yeah, I—well, I do not know. I have to think about this some more, in terms of the necessity of having some way of having just sufficient data on which we can make public policy decisions.

Mr. BERND. Absolutely.

Senator HARKIN. You have got to have that. And then—but going overboard on some of this stuff—I mean, I have got to believe that that 350 pages really—no one really looks at that.

Mr. BERND. No. And again, it is 350 pages of summary. It is actually thousands of pages, because there are eight boxes behind this.

Senator HARKIN. You told me, yeah. Yeah.

Mr. BERND. It needs to be streamlined. It needs to be brought up to date. It needs to be less burdensome, because it is just eating

up too many of our resources. This is just one example. There are hundreds of other examples of over-regulation and paperwork that—it is costing us a lot of money and forcing—it is part of the—why we wanted to testify on this is it is part of the reason healthcare costs continue to accelerate.

Senator HARKIN. Uh-huh.

Mr. BERND. You know, it is not the whole reason, but——

Senator HARKIN. Right.

Mr. BERND [continuing]. It is a significant part. And we have had good cooperation from the administration and this committee to try to work on this. We just want to make sure everybody realizes how important it is and that we can hopefully reduce the increase of inflation in healthcare. This is one of the ways to do it.

Senator HARKIN. Just one last question for you Dr. Mentel. How did you convince Mayo to come up with the capital for this? Obviously, hospitals are strapped. I know that. Obviously, this took some up-front investment to do this. I know you show the payback is pretty good.

Dr. MENTEL. Yeah, it was a bit of a gamble.

Senator HARKIN. Yeah.

Dr. MENTEL. But with healthcare the way it has been going, we needed to take that gamble, basically, to try to reduce cost in a method that would not impact quality. And so the goal was basically to see if we could maintain the quality while attempting to reduce the cost, so it was an investment. It was just like any other investment you might make. "We're going to spend *x*. We hope to have *x*-plus come back by the time it's all done."

Senator HARKIN. And your data shows that you are getting——

Dr. MENTEL. Yeah.

Senator HARKIN [continuing]. A great return on that.

Dr. MENTEL. Yeah.

Senator HARKIN. I am just wondering what we should do nationally, maybe through Medicare or something else, to try to encourage other hospitals to go that route.

Mr. BERND. It might be good to fund some demonstration projects. I know that we cannot fund everybody, but, you know, to get some examples out there at different types of institutions that could have some research money from Medicare that would help set up precedents to show—I think we need to build the case, as Mayo has, through all of our hospitals that these kind of systems can pay for themselves in the long run.

Senator HARKIN. I like that idea.

Mr. BERND. And that is a possibility.

Senator HARKIN. I like that idea a lot.

Mr. Hickman, if chronic care costs so much, and you have shown that disease management is effective in reducing these health costs, my question is, why is everyone not doing it? It would seem to me to be in the best interests of every hospital to be doing this. So why are we not?

Mr. HICKMAN. We invest in disease management at our own expense. There is no reimbursement for paying for investing in nurse case managers or in the computer systems. That is at our own expense. And we get a payback, but it is about breakeven. Our payback is just in avoiding further financial losses. In heart failure, in

some of our previous studies, we lose about $1,000 for every heart failure admission. So if we can care for our patients in other settings, at home, we avoid those financial losses.

So, for us, for hospitals, there is not that much of an incentive to get into it. The big incentive comes—or the big payback is in from insurers. When we avoid a readmission to the hospital, you know, we may avoid some financial losses, but Medicare or Medicaid or the commercial insurer, that is who really reaps the big benefits. There is about a three-to-one payback there.

Patients, they get some benefit because they do not have any out-of-pocket costs related to the hospitalization. The hospitals get a little bit of a break there. So, overall, it is about a five-to-one payback, but the big payback is to insurers—Medicare, Medicaid. So there is just not that much of an incentive for hospitals to do it. We do it because it is the right thing to do and we are values based.

Senator HARKIN. Are there any provisions in Medicare that would allow for the up-front payment or establishing chronic-care management programs?

Mr. HICKMAN. Well, there are some demonstrations going on at our hospital, Mercy Medical Center, in North Iowa. They are in a 5-year Medicare demonstration of—for case management to try to improve the case management. That is more of a community-based case management approach. The approach we are using now is more of a telemanagement approach.

Senator HARKIN. Uh-huh.

Mr. HICKMAN. But otherwise, there is no reimbursement for the kind of disease management that we do.

Senator HARKIN. Yes, Dr. Davis?

Dr. DAVIS. Commonwealth funded Don Burwick, at the Institute for Healthcare Improvement, to do a business case studies for quality, using the Harvard case-study method. And they looked at seven—mostly hospitals around the country. And what happened in Mr. Hickman's case happened in all of these places. The hospital spent money to implement a cholesterol control program, a diabetes management program. The patient benefitted by living longer. There might be reduced hospitalization, which normally loses the hospital money because they have fewer patients coming in. But the insurance company, or Medicare, saves. Medicare certainly saves when a diabetic patient is controlled at age 50 and then does not go into end-stage renal disease and cost Medicare money. But it is the problem of the payoff going to a different party or at a different time.

What Medicare would need to do to deal with this is either to cover case management, as in the example Mr. Hickman's given, or pharmaceutical management—at Henry Ford used a pharmacy team—to really make sure that cholesterol was being controlled. But they had to pay the cost of those pharmacists to monitor that control, themselves.

So adding case management to Medicare as a reimbursable service, pharmaceutical monitoring, as a reimbursable service would help, but I also think Medicare needs to be concerned about this pre-Medicare—older adults, who are—when the diabetes is starting and, as Dr. Fries says, put off really getting those—and that means

finding a way to provide some direct support for these—chronic disease management and what I think of as the 50- to 64-year-old pre-Medicare age range.

Senator HARKIN. Okay. I am just going to—anybody who has got any thoughts on this, just—I am sort of just going down—following from one statement to the other. Because, if what you just said, Dr. Fries, if we can get control of this—I mean, it is—if we had control, and if we can get this kind of case management system going, then it would seem to me then that you do buy that extra period of time in there that you are—that is my phrase. You push the onset back a little ways, right?

Dr. FRIES. That is correct, and I——

Senator HARKIN. You save a lot of money. You told me—I wrote this down; I thought it was interesting—if you decrease the rate of disability by 1.5 percent per month——

Dr. FRIES. Per year.

Senator HARKIN [continuing]. 1.5 percent per year.

Dr. FRIES. Yeah.

Senator HARKIN. I am sorry. Per year—that's—Medicare is solvent.

Dr. FRIES. That is correct.

Senator HARKIN. But you say it is already going down by 2 percent a year.

Dr. FRIES. That is correct.

Senator HARKIN. So Medicare is solvent.

Dr. FRIES. If one plugs in those particular numbers, it is. But of course that is dependent upon a projection which says it will continue to go down by 1.5 percent or more per year for the next 50, 70 years. So it is a continued effect. And the question is whether you have achieved a one-time effect. And I am sort of emphasizing a long-term strategy in which we work on the biggest cost problems and drivers on the side of making sick people who require services—as we are moving along, so that we can keep that line going. I believe we could actually accelerate it.

It is interesting, because Uwe Reinhardt, who is a well-known economist, talked about what would happen when the care of the gross national product for medical care got to be 100 percent. And he projected it was going to happen, I guess, late this century. And he saw the world as one in which everybody was a doctor, and they were in two-bed rooms, and they were feeding each other intravenously.

That was the society which was envisioned. And I would like to, you know, counter-mark that by saying if we had a society in which nobody got sick or hurt, we would not need any system at all. Costs would go to zero.

So let us just say that we can move a little bit toward there. And if we do it in a responsible, careful way—the arithmetic for Medicare goes something like this with regard to existing retiree randomized control trial data. A program which costs about $100 per person per year, and it is administered on a population basis through the mail and telephone, with tailored print interventions, will save about five times that amount, or $500 per year, in the first year, and that amount will grow slightly in succeeding years.

So you can get an ROI of about five to one. The return can be very quick, with regard to providing some slack in the Medicare system.

That is what the plan is now. The plan was the RAND review of whether this was a feasible approach, which said yes, it was; the design of a demonstration project, which is a very elegant randomized controlled trial which Medstat is currently in the process of completing; the implementation, hopefully, at the end of this year, and then going for the next couple or 3 years, of the demonstration project itself, with yearly evaluation; and then the case made for a Medicare benefit which incorporates the proven arms that come out of the demonstration project.

So there is a plan. It could get to a Medicare benefit stage where we are asking for large appropriations by 2008. It will not happen tomorrow, even if we are very quick about it. But it is very important that we get started. At the same time, we can encourage the private sector, and there are a variety of other folks, as to the same argument for work sites, for the 50- to 64-year olds that Karen's considered about there. There are productivity issues. There are ways to return, by having healthier populations. There are ways to return money to the same people that are paying the money out, which is the argument that we are sort of having here. There is a mismatch, that you put in something visionary, and it works, and somebody else saves money. And that is not very much of an incentive for the hospital to put in the information systems or the chronic-disease management systems to evaluate them, and so forth, because they are saving money for another pocket. Somehow or other we have to get that set so that the same pocket that saves the money pays for the program, and then it becomes self-sustaining and can actually build.

Senator HARKIN. Well, if you have got some suggestions on how we do that, I would like to know.

Mr. BERND. Well, Senator, I think one thing we could do and look at—and AHA is thinking about this, too, along with AMA—and that is to start paying providers, particularly Medicare, for clinical outcomes; paying for quality outcomes. Right now, we just pay across the board. Everybody gets paid the same amount of money. If we incent our institutions to do a better job, to maybe have a little larger reimbursement for institutions who do a better job and have better outcomes, lower length of stay, less complications, it probably could help greatly reform the Medicare program. It could really lead a reform of healthcare delivery in the United States.

Senator HARKIN. So you pay on the basis of outcomes.

Mr. BERND. Right. And it is not easy to do. And I know CMS is looking at it. But if you could start paying on quality outcomes, then it would encourage providers to start doing disease management, to——

Senator HARKIN. Right.

Mr. BERND [continuing]. Start taking care of the chronically ill——

Senator HARKIN. That is right.

Mr. BERND [continuing]. Because they are being paid on quality outcomes, rather than just providing a straight service.

Senator HARKIN. Do you think that that is possible to do that, to set up a system like that?

Mr. BERND. I think it is. Possibly one of the ways to do it is, in the future, with updates, inflationary updates, of Medicare, if we could get a decent inflationary update, to start using part of that update to provide a better payment for clinical outcomes. And I think what you would see is an overnight change of the way providers work. It is very hard to take the pie now and split it up. But out of future increases of Medicare, it is possible.

Dr. FRIES. I would just like to amplify that a little bit. There are a lot of us that have been—a lot of us here—that have been interested, a long time, in outcomes improvement, and say that that is really the job of a service profession, is to improve health outcomes. And everything we do should be focused on this. And one problem, of course, in terms of measuring and monitoring how much progress we are making toward improving outcomes, is, some part of a rubric, probably in future information systems or in future—hesitate to say—accounting mechanisms, but you are going to need to know individual disability, for example, and a couple of other quality-of-life measures, on a yearly basis, because you are going to have to measure this group of 50,000 people that are insured and being provided—are in a particular hospital system, and you are going to have to know that they actually have better outcomes. So you are going to have to measure those outcomes, or there is no way that you can do that.

But if you did have that system in place—and I think it could be anything but onerous, compared with what we are talking about, be very, very simple—and then you were to pay people for keeping better outcomes than the competing healthcare system, you would have a real horse race.

Senator HARKIN. Do we have anything out there anywhere that can show us the way on that?

Dr. FRIES. We do——

Dr. DAVIS. Senator?

Dr. FRIES [continuing]. We do it experimentally, so we know it can be done. I mean, I have 17,000 people that are under such monitoring. You would not do it as ambitiously as we do if you were to do it on a larger scale, but it is a feasible thing to do.

Dr. DAVIS. Senator, if I——

Senator HARKIN. Yes.

Dr. DAVIS [continuing]. Could add to that?

Senator HARKIN. Yes.

Dr. DAVIS. We have done a study of what is called "value-based purchasing" in the private sector. I have got a reference to it at the end of my testimony. But you take a company like PacifiCare. They are starting to give bonuses to group practices whose HEDIS quality scores for diabetes management, for example, are up in the top range, so they are giving bonuses. They are actually spending $15 million a year on bonuses to group practices that——

Senator HARKIN. But what is the bonus based on?

Dr. DAVIS. It is having good diabetes controls. So, in that case, it is getting your hemoglobin A1C level down below, say, a nine level. So having a high percent of your patients whose diabetes is getting controlled.

Let me give you another example. Johns Hopkins Hospital has recently started using—and I may need Dr. Mentel's help here—

catheter impregnated with antibiotics for heart-valve patients, and they reduce their infection rate to zero over the first nine months that they have tried this new technique. Now, under Medicare's normal payment system, that patient with a hospital infection would probably be an outlier, and they would pay more. If we were willing to say, "You'll get a bonus on your DRG if you have a low infection rate," then more places would adopt the technologies that would actually get the infection rate down. It is most costly for the hospital to do it, but it is better care. In the long run, it is better—it is more efficient for Medicare. So that is one concrete example.

Mr. HICKMAN. Senator, I have another example. I believe it is BlueCross of Michigan that pays a bonus now, as Karen was talking about, for achieving certain outcomes. Now, fortunately, right now, across the country, you are starting to see some consistency in measures that are being agreed upon, clinical quality outcome measures, from American Hospital Association, CMS, Joint Commission. You are beginning to see a set of clinical quality measures that everyone is agreeing on—would-be good measures. BlueCross of Michigan, I believe, is doing to this already. They are paying—and I believe it is a 5 percent bonus if you achieve certain higher levels of quality.

So you might want to ask your staff to look into that one particular area.

Senator HARKIN. Right.

Mr. HICKMAN. But the quality initiatives, especially American Hospital Association, now, through their voluntary reporting project, you are getting some agreement across the country on what could be measured and what are good measures in cardiovascular care—pneumonia, for example.

Senator HARKIN. See, it seems to me this is—it has been a kind of a—how do you—you can measure on an illness, if someone gets ill, and what—the reimbursement rate and stuff—but how do you get a measurement of wellness so that you build in incentives? I supposed you could look at the data right now and say, well, if you fall below—or if you do certain things and your rate of increase is not so much, I suppose you can get a bonus. Is that——

Mr. BERND. I think you have to start—you probably have to start with a certain disease process, such as we talked about this morning—diabetes or congestive heart failure, a set population of Medicare beneficiaries—and incent the right type of care, the use of these case managers, and monitor that, and then pay on the results. And what you will see is, the total Medicare cost will go down. There is no doubt about it.

We run a health plan with 300,000 members, on the private side, and we have seen significant decreases in our cost in treating those types of patients. But we are doing it within our own system. It is similar to these other demonstration projects. We need to change the entire Medicare program on this basis, and I think you will see we will get better care, better outcomes, happier consumers, and I think we can decrease the increased costs of Medicare over the long run. But somebody has got to step forward and take the bold step to change the system.

Senator HARKIN. Yeah. It sounds like the kind of thing that you cannot do in one fell swoop. But you can do some incremental

things. Like you say, at least focus on a couple of disease groups, like diabetes, congestive heart failure. Is there anything else that leaps to your mind, other than those two, that might be really good examples? Are there a couple others that you might think of?

Mr. HICKMAN. COPD and asthma, chronic obstructive pulmonary disease and asthma, are also two areas that need focus. Depression is another.

Senator HARKIN. Let us see. Asthma—what was that? Chronic obstructive——

Dr. FRIES. Emphysema.

Senator HARKIN. Yeah.

Dr. DAVIS. If I could just elaborate on the asthma, the Children's Hospital in San Diego cut their length of stay for pediatric asthma in half through better management. But the California Medicaid program pays per day. So they actually get penalized financially by cutting the length of stay in half. So I think there are also some issues in the Medicaid program about the need to restructure the incentives to reward, not punish, better quality.

Dr. FRIES. Senator, the research in the area has tried to separate out process measures of care—that is, hemoglobin A1C sorts of things—and the outcomes of care. And there are elaborate guideline systems which have attempted to codify clinical reasoning so that the process measures are better linked to the outcome. So we now know, for example, in diabetes, because that has been the subject we have been having here, that improving the hemoglobin A1C does improve outcomes in diabetic people. We know that having the diabetic see an ophthalmologist yearly, after the first 5 years, to look for early proliferative retinopathy is important. We know that certain anti-hypertensives in diabetics are effective at prolonging the period of good renal function and delaying any onset of complications in those areas.

So those are, sort of, a perfect area where we can take a process measure, which, by itself, does not mean anything to the patient, but we can, with some confidence, say this should be done because it will improve outcomes.

Now, my viewpoint is a little different than the disease-specific one, although I do not disagree with the disease-specific one at all. It is that we do have interactions between diseases and between drugs for those diseases. And so unless we start looking at outcome measures which are truly outcome measures—like the level of disability in a population, or the level of mortality rates in a population, number of hospital days per year in that population, compared with something else, really global things—then we miss the fact that the anti-hypertensive drug does this, the anti-arthritis drug causes heart attacks. And so you would have translations across. And you can have areas—and, in fact, the medical literature is pretty full of them—in which you have improvement in a disease-specific thing, but no effect on, let us say, total mortality.

Senator HARKIN. Yeah.

Dr. FRIES. So that you have some intervention which makes sense at the local disease level, but, somehow or other, in the system, they are compensatory losses, so that you really did not get the gain out.

So we clearly need to work this on several fronts. And I would say the process area, in hooking it to outcome, looking at the major disease categories which people have been gravitating to just because of their magnitude, the ones we have been listing, and then look at overall health outcomes, and see if we cannot beat some of these other countries.

Dr. HOOVER. The one cautionary note is, this reminds me of something similar I was involved with, where they were trying to come up with an improvement measure, or improving an outcome, but the concern was that the institutions—in this case, Long Term Care Facilities—would select the patients, so that they would be able to get the outcomes, and that there was a fear that there might be some discrimination against patients they thought were not going to comply or who medically were not going to meet the outcome. And so——

Dr. FRIES. There are adjustments for that, though. I mean, it is——

Dr. HOOVER. Yeah, but——

Dr. FRIES [continuing]. From your field.

Dr. HOOVER. Well, no, but I mean, in terms of the implementation of the——

Dr. FRIES. Oh.

Dr. HOOVER [continuing]. Program, too. Once things are up and running, the hospitals then, themselves, might try to—and that was the concern.

Dr. FRIES. It is clear there needs to be case-mix adjustment, and people have tended to do that. For example, the academic medical centers tend to see more complex, more difficult kinds of patients. And you have to have some way of adjusting for that.

Dr. HOOVER. Yeah, but even beyond that. For example, you think a certain ethnic group is not going to comply with the procedures or things like that. I mean, there could be other problems.

Mr. BERND. We do a random sample, a blind sample, of the cases that you put in place.

Another good example is of schizophrenia patients under our health plan in Norfolk, Virginia. We put case managers in place that communicate with these people on a daily basis to make sure they are taking their medications and to make sure they are eating right. And it is very simple, but it is expensive. But it is simple, and we have been able to reduce admission rates by 50 percent, both the emergency departments and in-patient admissions, of these patients. It can be done.

So you can see, if we could incent—we are doing this through a grant from our own internal foundation and from a grant from a pharmaceutical company.

Senator HARKIN. Thank you, Doctor.

We have been joined by our distinguished colleague, Senator Craig, from Idaho, and I would yield to him for statements, questions, observations, or whatever you like.

Senator CRAIG. Thank you very much.

Senator HARKIN. We have had a great discussion here, by the way.

Senator CRAIG. I know, and I missed it, and I apologize. I am going to read your testimony, lady and gentlemen, because I am—

we are all very interested in this issue, and I think we are all very concerned at this moment, as we reform Medicare and add prescription drugs to it and try to project its cost, that we just open the door to the U.S. Treasury and step back, all in the name of humanity and all in the name of older Americans who need. And I hope we have not done that. I am obviously going to vote for the legislation. At the same time, I know our ability to project. Also, I know our inability to micromanage effectively at this level. So I hope we can create some diversity in that new program that will allow the marketplace opportunity to help us micromanage.

Now, having said that, Dr. Hoover, in another iteration I am chairman of the Select Committee on Aging, and I have spent the last good number of years looking at the demographics of our aging population and, of course, the impact they have now on the healthcare system and on all of our social systems, if you will, or public policy systems where we are involved. Marvelous things are happening out there to our aging population. They are also darned expensive, and I tell my folks that, who are aging. And I am about to become a—I am in that boomer class, so I am going to be part of the problem here in the near future.

I say that all in good humor, but, in reality, we have some very real concerns that both aging Americans and mainstream workforce Americans are going to have to face collectively together. And I have read bits and pieces of your testimony. But my frustration is, and your studies apparently have shown, that it is darned expensive to die in this country. Nobody wants to get sick, and nobody wants to die, but dying is more expensive than getting sick in some instances.

So visit with me about that for a few moments. We have got to figure out a cheaper way to die in this country.

Dr. HOOVER. Well, it is also the getting sick before you die——

Senator CRAIG. Yes, of course.

Dr. HOOVER [continuing]. That costs, as well, too. You cannot——

Senator CRAIG. No, I understand all of those problems——

Dr. HOOVER [continuing]. Completely separate——

Senator CRAIG [continuing]. But, you know, the reality is, we need to figure this out. We are all going to die, and it should not have to be the most expensive episode in our lives and in the taxpayer of America's lives.

Dr. HOOVER. Yeah, well, I think, as a lot of the speakers also said, there were maybe two or three components, in terms of where the costs are coming from. Some people, they have very, very expensive medical procedures at any time, but usually it is more likely to be closer to death, in terms of in hospital care, and a few of these were talked about. Others, it is just the general disability and things like that, and, you know, there needs to be supportive care, in terms of, you know, nursing home and long-term care.

Now, in terms of where the population is and where it is shifting, you know, you were talking about the baby-boomers, and we are all getting older, and we are going to start aging into older ages where there is actually going to start being a lot more, in terms of long-term care and disability care, as opposed to, necessarily, the intensive hospital care. This other part will not go away.

So I guess, to try to close, is, it is the long-term care of people who have disabilities, I see as becoming a bigger——

Senator CRAIG. Disabilities and chronic illnesses——

Dr. HOOVER. Yes.

Senator CRAIG [continuing]. I would assume.

Dr. HOOVER. Right. And where you need to have nursing-home and that type of care, supportive care.

Dr. FRIES. Senator Craig, if——

Senator CRAIG. Let me just do a follow-up, and all of you can respond to this, if you wish. I am asking it specifically, but I ask it also generally.

I am assuming—and we have looked at that, and I think one of your, or one of your testimonies, or maybe all of you, spoke about the cost of managing chronic illnesses and the value of the savings that comes from that, instead of letting sick people really get sick. But can we assume that if we get into the business of better management of folks with chronic illnesses, that we spread those costs backward instead of see them kind of accumulate in that last year of life?

Dr. HOOVER. I am going to let everybody else jump in——

Senator CRAIG. Okay.

Dr. HOOVER [continuing]. Because I think they have been talking about that. And my suspicion is, there is going to always be some cost at the very end, at the end of life. As people get ill and they pass on, they are going to go through a stage where it is going to generate some costs. I think the discussion has been that there is a way to do what you are saying.

Dr. FRIES. Let me just follow on——

Senator CRAIG. Sure.

Dr. FRIES [continuing]. From that. I think that most people who have studied the area have felt that it might be possible to reduce these costs by as much as one half, but that—because you never know, going into the last year of life, that it is the last year of life. It is really very——

Senator CRAIG. That is true.

Dr. FRIES [continuing]. Very difficult, when you have defined these numbers looking backward. But just a couple of things.

Bill Foege and Mike McGinnis——

Senator CRAIG. We could legislate it. But then again——

Dr. FRIES. It is a hard thing to——

Senator CRAIG. I told the folks in Idaho, when we failed to eliminate the death tax, and we spread it over a 10-year period, I told the people in Idaho that they could not die for 10 years.

But that did not work, either.

Dr. FRIES. That is right. Well, Foege and McGinnis emphasized that chronic diseases are not causes of death or disability. Chronic diseases have causes. And that until we get set for the causes of the chronic diseases, which is lack of exercise and cigarette smoking and everything, we are not anywhere near the root system. We published, last year, in the American Journal of Epidemiology, a paper looking at the last-year-of-life costs by fitness level, essentially, by health risks; and those people with good health risks, who had good health habits, had less than one half of the last-year-of-life of costs of those who did not. So, clearly, the compression of

morbidity that we were speaking of earlier operates on last-year-of-life costs.

Then a final point, because you correctly made, Dr. Hoover, the point that advanced directives, which have been many of our hopes as a helpful interaction here—that is, living wills and durable power of attorney—have not been proven, in the main, as helpful as we would like.

But there is a real anomaly here with an initiative to be seized. 85 percent of people say that they would like dignified and humane care at the end of their life. And the absence of this is a major driver. Only 15 percent of people have executed such documents. Now, it is a tremendous area, where people say they want to execute the documents, but they have not done it. We, clearly, get these people to execute these documents. Then, having executed the documents, you have to get the documents in the right place. Your doctor has to have it, your caregiver—remember, you are not going to walk in and say, "Here's my thing." You are going to be rolled in for this. So you need to have the copies of your wishes as to what is done to you in the chart, with your doctor, with the caregiver or an alternate caregiver who might be involved in that. And those things which have tried to take advanced directive seriously and not just say—you know, have actually tried to implement them, are showing some signs that this may be an important way to deal with this issue.

Mr. BERND. I think the other way is to continue the encouragement of the use of hospice programs. Outpatient hospice programs have been very effective to have a higher quality in the end-of-life experience and also to keep the costs within control. And utilization is increasing, but it really needs to be encouraged.

Dr. HOOVER. Yeah, if I could comment a little—and, Senator Harkin, you had a question on the impact of hospices. They do work. And I think Hogan, et al., says about 19 percent or 20 percent of the patients that are dying are using hospices. Now, not every patient who dies needs to use a hospice. And a hospice reduces, on average, the cost, of about $3,000 per patient end-of-life-cost, through use of a hospice.

But the problem, though, is that end-of-life costs, in that last year are so high that this $3,000—it is helpful, but it is maybe, you know, 1 to 2 percent of the total end-of-life cost. So it is not, in and of itself, an answer, but it is part of something that is needed.

Senator CRAIG. Well, thank you all. I have no other questions. But you mentioned a fitness and less—healthy people dying at older ages costs less. My family, my wife's father passed away summer before last, at 89. He had completed a golf game, came in, sat down, was resting to go down—they lived in a retirement community—for dinner, and fell asleep and never woke up. His cost impact on that unit, that family, his wife, and it was really that, except for burial. And I think backwards to that, he was a physically fit man all of his life, took care of himself, exercised, and really was very seldom ill, and only minor. And I had not thought of in that context until you mentioned it, that here was a very healthy man who was fit, whose impact, from the standpoint of cost to die, was just very minimal, in reality. Point well made, thank you.

Senator HARKIN. Thank you, Senator Craig.

Let me ask you a question. Let me ask how this happens. How would it happen that a 95-year-old woman in a hospital in a State had a quadruple bypass performed on her, and she died two weeks later? Why would that happen? I mean, how could something like that—and this is a case that is actual. Now, this same person—again, this is information—just performed a fourth bypass on a severely obese woman in her 40s. Fourth bypass. But no one has been working with her on her obesity and to get it under control. She just comes in, and they do another bypass. How do these things happen?

Mr. BERND. It is the way the system is set up. If you have a beneficiary or someone under insurance comes in and demands a procedure—and, in a lot of cases, it has got to be done. The other thing is the incentives are—as we talked earlier, the incentives are that we are paid on piecework. We are not paid to keep people well; we are paid to take care of and intervene in diseases processes. And those are two examples, obviously, that are of not good care. And I certainly would not condone them.

Senator HARKIN. I just do not know how that happened. You know, you would think a 95-year-old woman, quadruple bypass, I mean, it just does not make sense. I do not know how that happens.

Yes?

Dr. MENTEL. And you know, we always might assume the more puerile inside of the story. But I have got to tell you, when you suggested that we could limit or legislate end-of-life care——

Senator CRAIG. I trust you recognize the context in which I said that.

Senator HARKIN. I am sure he was——

Senator CRAIG. I do not think we would get many votes on the floor of the Senate, so I doubt that I would offer it.

Dr. MENTEL. Well, I actually thought, it is done. It is done around the world. We legislate on dialysis. We legislate—I mean, not "we"—but other countries and other people do that. And if we legislated on transplant and dialysis—I mean, there is a lot of high-cost care out there that is legislated around the world, but you do not, because you really do think it would not go over very well with the American populace. Well, guys, change roles with us. Sit in the room with the 91-year-old lady who has got a breast lump. And you say, "Well, you're 91, and maybe that mammogram's probably going to not show anything, but it just might," and am I going to make the decision on whether you can or cannot have your mammogram, am I going to tell you no? Or if you are 95, and you are sitting there with angina, severe chest pain, and you cannot even get out of your darn wheelchair because of the angina; actually you were out in the garden, and you were having a pretty good time. Are you going to tell that lady, "No, you're 95. I'm not going to have you undergo bypass surgery"? This is not as easy as the rule would be to write.

Senator HARKIN. I understand that. These are difficult questions, you are right.

Senator CRAIG. Senator, I have an 87-year-old father, who is physically very active and fit, but he has prostate cancer. He detected it—it was detected at 78 years of age. And he called me to

intervene with the doctor, because the doctor refused to take him through surgery. And the reason he refused to, he says, "You're too old for that. There are other ways." In other words, what he was saying is, "There are other ways to treat you that will allow you to live out your life, because you're not going to"—what he did not say was, "because you're not going to live that much longer. And so, therefore, we won't do as radical a treatment." My father was very angry, because somebody was all of a sudden putting a timeline out there for him, and he had not planned yet to die.

Now, a substantial number of years later, the surgery was not done, other treatments have been used, and he is very much alive and healthy. But I had to walk him through it. And what I had to do—because I walked my mother through it to understand it, and then I actually called the doctor—we went back to the doctor, and I had the doctor walk through with him, in a much more detailed way, why these things were being done and what was the likely outcome. When it was over with, my father was satisfied. But he grew up in a time—when you had a cancer, you cut it out. And then he had not factored in age. And the moment age was factored in, he was a very angry person.

I would suggest, afterwards, that the doctor and I had several conversations, at the doctor's initiative, saying, "I misjudged that one. I have learned something here." And I said, "Well, I did, too." Because I was suggesting to my father, in some context, what the doctor was saying, and my father was then angry with me. All of a sudden, "Well, you're going to out—this is going to outlive you, Dad, or you're going to"—"No, it's not." You know, he had not planned yet—and, right now, my guess is he is good for a good number of years left.

Mr. BERND. You know, Senator Harkin, earlier we talked about how much less GNP is being spent in Great Britain and Canada and some other areas, and one of the major reasons for that is rationing of healthcare and not doing procedures on the very elderly and having waiting lists for elective surgeries, and that does drive the cost of healthcare down. Is that the kind of system the American public wants? I do not know the answer to that, but that is a large part of the cost equation.

Senator HARKIN. I do not know, either. And I do not know those systems real well, but, I mean, I—Canada is not that much different than we are, people-wise, how people live and what they do. I am a little bit familiar with some of the systems in Germany, having had my wife's family members to die—and live under that health system. And so we got a kind of a firsthand look at that.

I mean, it is hard to detect rationing. I mean, it is hard to—I could not detect it in the German system. I thought they got very good care and everything, but somehow they do not spend as much.

Mr. BERND. Well, I will give you a concrete example. In Great Britain, we had an exchange program with one of the regional governmental systems that provide all the care for part of a suburban area in London, and we went over there and visited their system. And I went to the regional cancer center there and talked to the physician in charge, and I asked him what the cancer incident rate was per thousand in his community, and he gave me the number. And then I asked about his treatment slots per year, and they

came out to be about 60 percent of the incidents of cancer. And I said, "What do you do?"—being an American businessman, I said, "Do you go to other regions in the healthcare system and bid these out to get the best price to stay within your budgets?" And he looked at me like I was crazy. He said, "No, we've got these kind of treatment slots, and it's all we use." And I said, "What do you mean?" He said, "Well, somebody comes in with terminal cancer, we give him pain medication, and we send him home." I said, "If you did that in the United States, you'd have, you know, three Congressman, five lawyers, and the Washington Times on you."

So it is a different system. It really is.

Senator HARKIN. That is true.

Mr. BERND. The one other thing—I am going on, but—the other thing is, when they visited our organization, one of the doctors said, "Do you know the difference between America and the United Kingdom?" I said, "No." He said, "Americans feel that death is an option."

Dr. DAVIS. You know, Senator, if I——

Senator HARKIN. Yes.

Dr. DAVIS [continuing]. If I could speak to this point.

Senator HARKIN. Let us wrap this up, please.

Dr. DAVIS. We support a U.K./U.S. quality improvement conference annually, and we feature best practices. The U.K. cancer learning collaborative, the regional network, to improve cancer care, has developed new, kind of, management and scheduling techniques, that even without an expansion of capacity, they have reduced the waiting time for definitive treatment for cancer from 260 days down to 60 days. Now, we would think that is still unacceptable, but I think they are recognizing that they have under-invested, particularly in oncology care and in cardiac care, and are doing some very interesting things to that kind of improvement.

But one of the things they have in the U.K. that I think is interesting is something called the National Institute of Clinical Excellence. And I think there is something for the United States to look at in this. Certainly, there are examples of people not getting needed care, but we also have examples of excess care. You know, examples are surfacing of chemotherapy being provided in the last days of life. And these are patients with extensive spread for whom it is really not indicated. And it is not as if even the patient or the family is demanding it. It is that the financial incentives in our system reward it.

So the truth in the matter is, we do not know whether we do too much or the U.K. does too little, because we do not have a scientific way of really looking at the effectiveness and the cost of providing these services. And until we are really willing to talk about quality standards, clinical guidelines, and building the evidence base for what is appropriate, and then let patient and family preferences modify that—but being fully informed that going through this chemotherapy regimen is really not going to extend your life, and it is really going to make the quality of your life much reduced. And so I think we need to move to a science-based standards of care and get beyond this rhetoric of "They're rationing care in other countries; we need all the care that we're providing."

We really need to look at cost and quality, what is effective, what is scientifically sound, and have a mechanism for doing that.

Senator HARKIN. Thank you. I am going to look at that. National Institute of Clinical Excellence. I want to take a look at that and see what—I have not heard of that before.

Well, thank you all very much. Did anybody have something else you wanted to add? I have to wrap up here shortly.

Dr. FRIES. Well, I was just going to make a short comment that when we are talking about healthcare costs and the technology drivers and so forth—I am kind of echoing Karen's point—we are a country that loves technology——

Senator HARKIN. Yeah.

Dr. FRIES [continuing]. So that the demand-side view would say that—why do we have the same ratio of televisions per capita to healthcare costs per capita, versus U.K. and the United States? Why do we have the same amount of automobiles, the ratio of automobiles per person, ratio of computers per person? They are much higher than they are in these other countries. So there is—and Victor Fuchs and others have said this technological imperative, which is driving part, a good-sized part, of the costs that are going up. And in part, that is a national pastime, and we are very easily sold on the latest and the most expensive and the highest tech, particularly if somebody else will pay for it.

So what I think Karen is saying, in terms of establishing the quality guidelines, is that—and something that perhaps the Senate can get involved with at some level—is it is a rational use of these kinds of things, recognizing that there is clearly such a thing as overuse, even if we cannot define it exactly the way we would like to, and that it is fairly prevalent in this country, by any international comparison.

Senator HARKIN. Well, thank you all, again, very much. This has been a very intellectually stimulating morning for me, I am sure for our staff.

It seems—you know, again, in terms of what is driving costs and cost containment, you have got two sides. You have got demand side and supply side. And so you have got to—as I have heard you this morning, there are ways of addressing it on both sides. And the problem, on the demand side, seems to be that how we build in incentives for wellness, how we build in incentives for being healthy and——

I just remembered a trip I took to China. One of my trips to China, we were out looking at a medical clinic in a fairly rural area, and it was very rudimentary, obviously, but—it was very rudimentary, but the doctor and the healthcare people there had this system where this doctor and his healthcare personnel in this clinic were responsible for so many people—they had so many people in a certain area that they were responsible for. And of course, they worked for the Government. And they were reimbursed—and he had—they kept track of these people—they had their names in little card files. It was not very high-tech. And at the end of the year, someone came around and checked on them, and based upon how few had to go to the hospital, how few had to go on, they got more money, this doctor and the healthcare—they got more money for that. And so they were out trying to keep people healthy all the

time, because that gave them an incentive to do so. I thought—obviously, that is not our system, but——

How do we build in incentives for keeping people healthy? How do we start changing some of our habits in this country, in terms of obesity, which is now a big problem, and exercise, and—it is starting at an early age and getting the kids—we have got to start with the younger generation to get people to start getting a lifestyle that is different that will keep people healthy later on in life. It is pretty hard, when you are 55 and you have never exercised, and, you know, you have led a sedentary life and you are sitting there watching TV all the time, it is very hard to change. But if you have done that all your life, well, then it becomes a part of your lifestyle. So how do you provoke the demand side to have a healthier lifestyle, to utilize services less?

Then, on the supply side, how do you we encourage and give, again, incentives for the supply side to go to paperless systems? How do we get incentives to cut down on this kind of stuff? I mean, what do we have to do to stop this? Because this is just nonsense. This is nonsense. How do we build those in, on the supply side, to make a more efficient system?

Then there is this last issue of end of life. In your situation—I forget——

Dr. FRIES. Compressing morbidity.

Senator HARKIN. Collapsing mobility?

Dr. FRIES. Compressing morbidity.

Senator HARKIN. Yeah, collapsing morbidity. And how, again, in that—again, how do we do that? How do we, again, provide the incentives and the encouragement to do that in this system? And how do we figure the end of life? Because, you are right, I mean, what did you say—how much money do we spend in the total system? It was——

Dr. HOOVER. One fourth of Medicare.

Senator HARKIN [continuing]. One fourth.

Dr. HOOVER. And one fifth of all healthcare——

Senator HARKIN. Yeah.

Dr. HOOVER [continuing]. Expenditures.

Senator HARKIN. That is big.

Dr. HOOVER. That is last year. Yeah. Only 5 percent of people are—you know, die every year, so it is that much money for a very small portion.

Senator HARKIN. That may be the touchiest part of all with how we handle that, just in terms of—I do not know. Some of these others, I think we might be able to work on, but I do not know how we would work on that one.

Dr. HOOVER. Yeah, well, as someone was alluding to before—I think it was Dr. Fries—to a certain degree, it is impossible that you do not know who is going to die in advance, and so you even if you wanted to say, you know, you are going to die, you know, next month, or whatever, you do not know that. But the fact is, even if you could do that, in our paper that we did, even if you could predict in advance—1 month, 3 months in advance—some person was going to die, you actually do not end up saving all that money, at least for intensive technology-based inpatient care. You know, if you say, "We're not going to do these expensive things on

you, because, you know, we know you are going to die," the costs there would not be all that much, because so much of the costs are, you know——

Senator HARKIN. Exactly.

Dr. HOOVER [continuing]. Other things.

Senator HARKIN. Yeah.

Well, these are all very stimulating, and I think there are some suggestions I got this morning that I just asked my staff to work on that we might look at in terms of this Medicare bill. And if any of you have any other further suggestions that we might want to try to do in this Medicare bill coming up, I mean, we are open for suggestions, written suggestions, that you might have on some little fixes we might do. Maybe it is on the margins, but sometimes on the margins, it helps. Or demonstrate some programs. We might demonstrate different things. I have got some ideas for those here this morning, too.

So, again, I thank you all very much, some of you coming a great distance. Thanks for all the great work you are doing out in the field. And I can say, about each one of you, you are sort of on the cutting edge of what we have got to be doing to get this healthcare cost a little bit contained, to slow the growth in terms of the GDP that we are spending on healthcare.

CONCLUSION OF HEARING

Thank you all very much for being here. That concludes our hearing.

[Whereupon, at 11:29 a.m., Wednesday, June 11, the hearing was concluded, and the subcommittee was recessed, to reconvene subject to the call of the Chair.]

○