Fulfilling the Potential of Cancer Prevention and Early Detection
An American Cancer Society and Institute of Medicine Symposium

Roger Herdman and Leonard Lichtenfeld, Editors

National Cancer Policy Board

INSTITUTE OF MEDICINE

and

NATIONAL RESEARCH COUNCIL

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Abstract

In this report, the American Cancer Society (ACS) and the Institute of Medicine (IOM) present a one-day symposium that was held at the Institute to further disseminate the conclusions and recommendations of the Institute's National Cancer Policy Board report, *Fulfilling the Potential of Cancer Prevention and Early Detection*. The symposium was led by the Director of the National Cancer Institute (NCI), the Chief Executive Officer of the American Cancer Society, and the President of the IOM. In the morning plenary session of the symposium, they and five other senior representatives from academia, insurers, managed care, and government gave prepared presentations and participated in question and answer sessions with those attending this event. The presentations covered the potential of cancer prevention and early detection, the activities of the NCI and ACS, the perspectives and suggestions of private sector healthcare providers and payers, academics, and those addressing disparities in delivering services to disadvantaged populations. In the afternoon, group discussions with attendees and panels of 14 invited speakers from academia, IOM, ACS, CDC, NCI, AHRQ, AMA, CMS, the Washington Business Group on Health, UnitedHealth, National Center for Tobacco Free Kids, and the Annals of Internal Medicine were held on tobacco and obesity policy, payer/provider/managed care issues, applied research, and prevention through education and primary care.

A wrap-up session at the end summarized the issues raised, including: better support for tobacco and obesity campaigns; coordination of programs; joint approaches with the food industry; the need for an explicit consensus national tobacco and obesity strategy; viewpoints of payers; changing Medicare's approach to prevention; private sector payment programs; improvements in applied research and dissemination of results; better science in programs; contributions from guidelines and accreditation; the roles of educa-

tion and problems in modifying medical practice; and conflict between individual choice and policy options. What was actually said at the symposium is reported, and edited to make it clear and friendly to the reader.

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Introduction

In 1996 the National Cancer Institute (NCI) and the Centers for Disease Control and Prevention (CDC) discussed with the National Academies' National Research Council and Institute of Medicine (IOM) the advantages of creating a National Cancer Policy Board ("the Board") administered by the IOM. In 1997, funded primarily by the NCI and CDC with some private sector contributions (for example, from the American Cancer Society [ACS or "the Society"]), the Board was established as a division of the IOM. The Board has 19 members with expertise in cancer medicine, science, and advocacy drawn from the national cancer community. As an independent entity, the Board sets its own agenda which involves identifying emerging policy issues in the nation's effort to combat cancer and preparing reports that address these issues, including those that arise in the prevention, control, diagnosis, and treatment of cancer.

One of the earliest and most important issues that the Board identified was the quality of care received by Americans with cancer. This was assessed and found wanting in a report titled *Ensuring Quality Cancer Care* (1999). That report concluded "that for many Americans with cancer, there is a wide gulf between what could be construed as the ideal and the reality of their experience with cancer care." The report also identified problems in cancer prevention and early detection, although it did not emphasize or explore all their implications. Given the importance of prevention and early detection to national cancer incidence and mortality, a closer examination of those issues became a logical next step for the Board.

That next step was taken in March 2003 with the release of *Fulfilling the Potential of Cancer Prevention and Early Detection.* Under the close guid-

ance of Board members, Tim Byers and Susan Curry[1], that report explored in great detail the deadly implications of the gap between what is known about cancer prevention and detection and what interventions are actually carried out. The report found that even modest sustained implementation of preventive programs of proven effectiveness would reduce annual cancer incidence by 100,000 and deaths by 60,000 by the year 2015. Twelve recommendations described actions that should be taken to enhance prevention and detection strategies and delivery of services. The Board and the IOM concluded that this important message needed to be disseminated and reinforced as widely and strongly as possible.

The ACS has been continuously represented on the Board, and was an important supporter and contributor to the prevention report during its planning and preparation. In addition, the Society has a long history of work in defining, supporting, and implementing cancer prevention and early detection, both domestically and internationally, and was prepared to share in the planning and costs of disseminating the information and urging the actions described in *Fulfilling the Potential of Cancer Prevention and Early Detection.* The ACS and the IOM decided that getting out the message of the report could best be accomplished by a symposium gathering together and hearing from those who knew most about prevention delivery, research, and education and asking them to share insights and consider ways in which the objectives of the Board's report could be achieved. These contributions could then be documented and distributed widely and could continue to draw attention to and expand the reach of the report and the salience of prevention and early detection as important national contributors to the control of cancer and to the public health.

An ACS/IOM planning group designed a one-day symposium in two major parts. The morning featured an overview plenary session with presentations from senior experts in cancer research and care, cancer epidemiology and control, health care disparities, and preventive services delivery and financing, representing the NCI, ACS, academia, and private sector delivery systems and health insurers. The afternoon consisted of group discussions on four major topics important to prevention and early detection and relevant to the recommendations of the report: policy in tobacco and obesity; payer/provider/managed care issues; applied research; and prevention though education and primary care. A brief summary session at the end of the day allowed the two rapporteurs of the group discussions to sum up the information and recommendations presented during the afternoon sessions. The agenda identifying the morning speakers and describing the group dis-

[1] Professor of Preventive Medicine, University of Colorado Comprehensive Cancer Center (Byers) and Professor of Health Policy and Administration, University of Illinois, Chicago (Curry).

cussions, posed the questions for assigned speakers, and related the topics to specific recommendations in the report. It can be found in the appendix. The speakers in each group discussion were assembled from different governmental, academic, and private sector organizations to provide a range of perspectives. All those invited speakers are also identified with their titles and affiliations in the agenda.

Following this Introduction, Chapter 2 presents the remarks of the morning plenary speakers in order of appearance, Chapter 3 presents the speakers and discussion from the afternoon group discussions, and Chapter 4 concludes the symposium with the summing up and further discussion from the rapporteurs and audience. All the presentations and discussions were edited for facile reading and to add graphic material from slides used in the presentations in the form of figures where essential. In this less formal forum than a Board report, much interesting information and analysis and many provocative ideas and suggestions could emerge during the day from the experts, officials, and opinion leaders who participated. This record of the day should provide continuing food for thought and ideas for actions in support of cancer prevention and early detection.

Roger Herdman
and
Leonard Lichtenfeld

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Plenary Session

Introduction of the Symposium and of the Director of the National Cancer Institute
Harvey Fineberg, M.D., Ph.D., President, Institute of Medicine

Good morning, everyone. It is a great pleasure for me to have this opportunity to welcome all of you to this symposium today. As you know, we are here to consider the ways in which the report *Fulfilling the Potential of Cancer Prevention and Early Detection* can be moved along to the next step: realization.

At the Institute of Medicine (IOM) and the National Academies more generally, we are very accustomed to the task of producing a report. I have often said to our folks here that when the report is done, the project is really only half complete, because what matters is not what is written on a piece of paper; what matters is what happens in peoples' lives as a consequence. A report is not done until it has been acted upon, and action is not complete until it has had an effect in the world.

So this gathering of all of you who are so engaged and committed to the task of cancer prevention and early detection is part of that task of completion: the task of moving forward together, beyond words on a page to actions by individuals, in clinical care, by health professionals, by institutions, by government. We will have the opportunity through the course of this day to engage in discussion of ways that we can move forward.

I am also very pleased that this program was sponsored jointly with the American Cancer Society (ACS) which over the years has done so much to enlighten the American public and to draw together resources and attention to the critical problem of cancer prevention. John Seffrin, I want to thank

you on behalf of all of us here for your support and sharing in this partnership.

There is hardly anyone who is better suited to start us off today than the Director of the National Cancer Institute (NCI), Dr. Andrew von Eschenbach. Dr. von Eschenbach, prior to the time that he was scheduled to become the Director of the National Cancer Institute, was poised to take over at the American Cancer Society as president-elect, so he has been detoured from that duty but, I understand from Dr. Seffrin, not permanently excused. Dr. von Eschenbach is a man whose professional life long has been committed to the very objectives that we are talking about today, and that he has championed in his term as the Director, which he began in the year 2001. It is a great privilege for me to have this opportunity to welcome and to introduce my friend, our Director of the National Cancer Institute, Dr. Andrew von Eschenbach.

Cancer Prevention and Early Detection: Key Strategies for Challenge Goal 2015

Andrew von Eschenbach, M.D.,
Director, National Cancer Institute

It is a great honor for me this morning to come as the Director of the National Cancer Institute, and begin with very sincere congratulations to you, to the Institute of Medicine and the National Academies, for the work, effort, and the product you have created with regard to the report on prevention and early detection. I believe this report will serve us well, not only as a road map for the future, but also as a means of bringing us together to walk that journey collaboratively and cooperatively, to be certain that in fact, we achieve all of the outcomes that we know are within our grasp.

This morning, I would like to spend the next few minutes with you, talking about that journey into the future, specifically talking to you about a destination that I believe is within view. I will talk about it from the standpoint of a research agenda that can lead us to that end point. I know that John Seffrin and others can talk very eloquently about this from the perspective of a cancer control agenda, but of course, both of these agendas are woven together into a very synergistic and complementary pattern. I would like to begin with a vision for this future destination. I think it was summed up very well at a recent important ceremony in the White House celebrating cancer survivorship, and the fact that we have moved from three million cancer survivors in this country around the time that the National Cancer Act was signed in 1971 to now over 9.6 million cancer survivors alive within the United States today.

President Bush noted at the ceremony that for the first time in human history, we can say with certainty that the war on cancer is winnable, and that this nation will not quit until this victory is complete. Obviously, we are very pleased with the commitment to continue on in this effort. But I think what is really interesting and at the heart of the matter is the realization that perhaps today for the first time, we have the ability to recognize with certainty that the ability to conquer cancer is within our grasp. The reason why that is true, in my opinion, or one of the reasons why it is true, is because of the investment that we have made in basic and clinical biomedical research, and because of the kinds of things that have been promoted by organizations like the National Academies. The result is that our 21st century quest to truly understand the fundamental nature of matter and the tremendous revolution that has occurred in biomedical research have now brought us to the point that Andy Grove describes as a very magical moment in time called the "Strategic Inflection": that time in which, by unraveling the secrets of the cell nucleus, we are creating entirely new paradigms in our ability to deal with diseases like cancer.

This strategic inflection in which we are immersed, this ability to now approaching diseases in fundamentally different ways, is in fact being led by the tremendous investment in cancer research. In that regard, the idea of the strategic inflection simply is the realization that with regard to diseases like cancer, for the first time we are really understanding cancer as a disease process, and understanding it at the very fundamental genetic, molecular, and cellular mechanisms. This strategic inflection, this new paradigm, is really creating for us extraordinary opportunities that enable us to begin to approach the burden of disease in fundamentally different ways. Instead of simply seek and destroy, find and kill, we now are opening up an entirely new portfolio in our ability to control cancer, to modulate it, as well as to eliminate it. That has created an opportunity for us. But it is more than an opportunity; it is in fact a responsibility and perhaps even a moral imperative. With the tremendous progress that has been made, with the enormous opportunity within our grasp, we now need to look into the face of cancer and recognize that it doesn't have to be the way that it has been. We should look to a future in which we can fundamentally change cancer.

In this regard, the National Cancer Institute has set a very bold, a very ambitious, and to some a very shocking goal. The goal is that we will eliminate the suffering and death due to cancer, and we will bring that about by 2015. We did not say we will eliminate cancer; we said we would eliminate the suffering and death due to cancer or eliminate the burden of disease. We will bring that about because we are in the midst of the strategic inflection in which we have assembled a significant amount of financial and intellectual capital. It may not be as much as we need for the future, but it is more than has ever been assembled before. In addition to the financial resources and

intellectual capital, another important development is that this entire effort is immersed in what has been essentially an explosion in enabling technologies. This has made the rate and the pace of progress exponential and exhilarating.

So, in terms of the strategy to eliminate the burden, the outcome, and the suffering and death that results from cancer, we can begin to think about a process of pre-emption. Pre-emption is a strategy that enables us to inhibit or pre-empt the initiation and the progression of cancer on its way to a lethal phenotype. We recognize cancer as a process. Doug Hanahan and Bob Weinberg have talked about the six essential steps associated with the process of cancer. If we now begin to think about the product of our investment in research as giving us an understanding of cancer as a disease process, we begin to see that there are multiple steps within that process that make cancer vulnerable. We can think about it as a process in which even before malignant transformation, there is a stage of the process in which we are susceptible to disease, susceptible because of exposure to things like tobacco, or susceptible just because of aging. There is a period of time in that process of susceptibility, and then a moment where there is actually a malignant transformation, and once that occurs, evolution of that transformation to the point where we actually encounter clinical disease. Then there is a continuation through a very complex series of events which ultimately give rise to the lethal phenotype of cancer, namely, the metastatic phenotype. Only then, at the end of that process, over a period, of time does cancer succeed in taking a person's life.

As we begin to think of this process and the burden over time, we can begin to think now of our ability to capitalize on our understanding of the multiple steps in this disease process. We can begin to think of a series of interventions that we can then apply, that are truly transformational, based on our new knowledge, to affect this disease process, and change its behavior. There are many steps, and these are at least a few of the possible steps that are associated with the evolution of the lethal phenotype of disease. In fact, patients do not generally die as the result of a primary tumor. Patients die due to the fact that we ultimately have a process of metastasis and evolution to a lethal phenotype. All of these steps and processes have been the subject of intense scientific scrutiny in cancer research, but there are also now incredibly rich opportunities for us with regard to interventions.

So as we think of this disease process, and as you go about your deliberations, we can begin to consider ways to interfere even in the pre-malignant phase of this process by preventing the actual transformation. Once that transformation occurs, multiple interventions are possible to detect it early at a time when we can apply effective interventions and strategies that we already have available, along with other strategies to modulate and

alter that evolution of pre-malignant disease into the process of clinical disease.

Finally, we have a whole portfolio of opportunities to interfere with the evolution of clinical disease to a malignant lethal phenotype of metastasis. So we begin to think about cancer as being preventable, able to be eliminated or modulated, so that patients do not die as a result of cancer. That is at the heart of the pre-emption strategy: a strategy along the same lines we use to modulate diseases like diabetes. The ultimate outcome is to enable people to live with and not die from cancer, to eliminate the suffering and death that occurs as a result of the disease. We will incorporate a comprehensive strategy of prevention, detection, elimination, and treatment of advanced disease and modulation of the disease process. There will not be a single magic bullet. There is no single intervention that will accomplish this. But there can be a significant strategy of integration of these interventions to enable us to bring about the outcome of modulation and elimination of suffering and death.

We have chosen to approach this at the National Cancer Institute in the context of a portfolio of investment in three areas: discovery; development; and delivery. This enables us to continue to drive our understanding of these fundamental mechanisms by our investment in fundamental research, but to rapidly translate that knowledge and understanding of cancer as a disease process into the development of interventions for detection, diagnosis, treatment, and prevention of the disease, and then to be certain that we are using our infrastructure to deliver those interventions to all who are in need. We can think about detection, diagnosis, treatment, and prevention as a systems biology approach or an integrated approach, in which we are looking at all the components, those components that are operative in the cancer cell or the tumor, those components that affect the person or the host, and particularly the tumor-host interactions. We can also look at the process of cancer as it relates to the environment or populations and gene-environmental interactions, and it is in all these interactions that we will ultimately achieve our desired outcome.

We are launching a number of new initiatives that we will guide and modulate over time to continue to drive towards successfully eliminating the suffering and death due to cancer. This morning I want to spend time touching upon some of the very important issues with regard to prevention, early detection, and elimination. We have a significant investment in our portfolio of cancer prevention, and that investment continues to grow. It is a very balanced portfolio, looking at all the varieties and various elements that will enable us to contribute to the prevention and early detection strategies. As you know, very recently we launched a significant and major investment in early detection of lung cancer with regard to the role of spiral C-T scanning as compared to chest X ray. I point this out for two reasons, one, because of

how just one single intervention can have a significant impact on the suffering and death due to disease. With the ability to detect lung cancer earlier than we are currently able to, we will have the opportunity to change a disease that carries with it an 85 percent mortality rate to one that could carry an 87 percent survival rate, just with currently available interventions and strategies. The other reason for pointing this out is the need for collaboration and cooperation. One of the very major successes in this study is that within its first nine months of being launched, it was ahead of its accrual goals. One of the important aspects of the launch of this study was a collaboration with the American Cancer Society to work in the community around the 30 centers that are carrying out this study to promote education, awareness, and recruitment to this study. So, again, it is a collaborative effort to achieve success.

We have investments in gene-environmental studies to look at mechanisms of susceptibility, because it is critical for us to understand those interactions that occur, that determine our susceptibility to cancer and the transformations that occur, and to segment populations into populations at risk, so that we can strategically apply the most effective and the most appropriate strategies for prevention. We need to continue to pay attention to the important elements related to the person with cancer. You are aware of the tremendous investment that we have made in tobacco cessation. I point out again the important success of the strategy, namely the trans-disciplinary tobacco research centers. These TTRCs, which are truly transdisciplinary in nature, have had a major impact on our understanding of the full complexity of tobacco addiction, on the impact that tobacco has on persons.

The other important aspect of that effort is to realize our opportunity to apply the lessons learned from tobacco research to other major challenges, especially the ones we have identified with regard to our need to address the problem of diet. You are going to hear later about the important collaborative and cooperative efforts that we have on the subject of energy balance where we are looking at the interaction of diet and physical activity. You will also hear about the important trans-HHS initiatives that are underway in this regard.

Prevention and early detection through screening are exceedingly important. We have a significant number of efforts underway to understand our ability to modulate and prevent disease, not only from the standpoint of behavioral modification but also of chemopreventive strategies. You are aware of the very recent publication around the role of finasteride. Peter Greenwald has been at the forefront of that and will speak to that in more detail. But we have established at least proof of principle that chemoprevention in an area such as prostate cancer is achievable, with a 25 percent reduction in incidence. Many questions need to be answered about the biology of prostate cancer and the impact of a chemoprevention strategy like finasteride, but

proof of principle is established that we can reduce the incidence of that malignant process.

We also have a variety of other opportunities with the COX-2 inhibitors, and the like, with regard to chemoprevention strategies in diseases where prevention alone could significantly affect suffering and death due to those cancers. And we have opportunities with regard to risk identification and the important role that the human papilloma virus plays, especially in cancer of the cervix. We have an opportunity through the development of cancer vaccines and the cervical cancer vaccine trials that are underway to be able to eliminate disease by a preventative interventional strategy.

As I mentioned earlier, we have tremendous opportunities with regard to early detection. I have alluded to the impact the national lung screening trial could have through just one intervention such as a radiological technique. But the opportunity that is opening in biomarkers, particularly with protein profiles, is truly mind-boggling. Our opportunities in genomics and proteomics, in terms of our ability to detect cancer early in its course and predict its biologic behavior, are rapidly unfolding advantages from our proteomics initiative. We have, as you are aware, a number of proteomic early detection strategies underway based on some of the experience of looking at protein profiles. In regard to ovarian cancer, these studies are evolving and continuing to track with 100 percent specificity and complete sensitivity the use of proteomic profiles for the detection of early ovarian cancer. These strategies are being applied to other diseases as well.

I have mentioned the importance of collaboration. Collaboration is at the core of the success that will be necessary to achieve the 2015 goal to eliminate the suffering and death due to cancer. One important collaboration I bring to your attention is the very recent interagency agreement and formation of a joint task force that the NCI has established with the Food and Drug Administration. Our goal is to optimize and accelerate our ability to move these interventions rapidly through discovery, development, and delivery and through the approval process, so that they can be applied effectively to patient populations. This is important to the work that you are going to be discussing. As we look at strategies for chemoprevention, as we look at strategies for the development of devices for early detection, and as we look at the opportunity to apply those, one key element in our ability to save lives and eliminate suffering is to be able to move those very quickly to the point where they can be applied to patients. That is at the core of that important collaboration. But there are a host of other partnerships that are critically important as well.

Many of you in the room are a part of those interactions and a part of those efforts. To eliminate the suffering and death due to cancer, and to accomplish that by 2015, is a bold pronouncement. But it is achievable based on the accomplishments that people like you are making possible. It is

achievable based on the incredible progress that we have made up to now, and based on the unbelievable progress that is within our grasp as we continue on this exponential upward trajectory, in this strategic inflection that will truly change the face of cancer and other diseases as well. It is a privilege for me to be able to share with you a glimpse, and it is only a glimpse, of what we are committed to doing to bring this about, and most important, to reaffirm to you the NCI's commitment to work collaboratively and cooperatively together with you. Working together, we can bring about the objectives and realize the opportunities to accomplish this goal.

View from the ACS: Fulfillment of the Potential of Cancer Prevention

John Seffrin, Ph.D., CEO, American Cancer Society

It is a privilege for me to be here and to represent the American Cancer Society, the world's largest voluntary health organization and the largest not-for-profit in America today that receives over 90 percent of its total support from private contributions. I am grateful for this opportunity to share with you our thoughts on the critically important topic that brought us here today, namely, the prestigious Institute of Medicine's recently released report, *Fulfilling the Potential of Cancer Prevention and Early Detection.*

This report, which provides comprehensive evidence-based recommendations for clear opportunities to dramatically reduce our nation's cancer burden, is a clarion call to action for all of us and for this great nation to put in place key interventions which will make a difference in lives saved and suffering averted from cancer. The twelve recommendations highlighted in this report underscore what is possible in advancing the fight against this disease. Now it is up to us and others in this room and beyond to put teeth into these recommendations through further research and most importantly, implementation. Contemplate the following statement: If implemented and properly resourced, we simply don't know anything else that can have a greater impact on this nation's public health in as favorable a way. Think about that.

Let me begin my remarks today by stressing the unmistakable and remarkable opportunity we have to prevent premature death and unnecessary suffering in this nation—not only from cancer, but other diseases, too. Our nation's leading causes of death are listed in order in Figure 1. I want to pause and have you consider them with me. I suppose there must be 10,000 ways that you can check out of this world. When I was in graduate school, we looked at birth certificates from the turn of the century, when a common

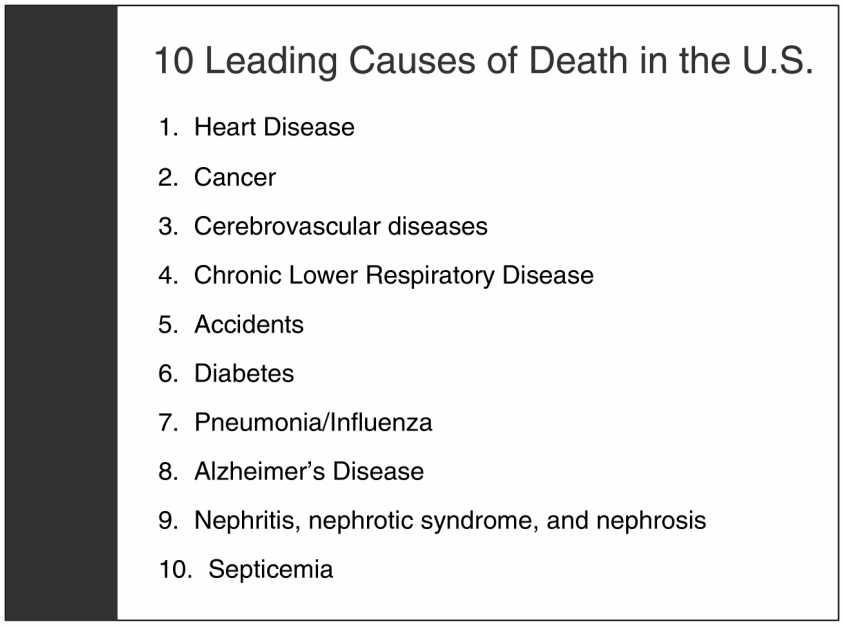

Figure 1. The ten leading causes of death in the United States. SOURCE: Mortality Public Use Data Tape 2000, National Cancer Center for Health Statistics, Centers for Disease Control and Prevention, 2002.

cause of death was being kicked by a horse. We live in a nation where we have roughly two million deaths per year. Would you believe me if I said that over 90 percent of those deaths were from one of this list of ten? These ten things, of the 10,000 ways you can check out of this world, really represent the ways in which people in our society die, and most often, they are dying prematurely. The most important thing about this list is that these diseases and health problems are largely preventable. They are certainly far more preventable than they are curable. So, indeed, for today and for the foreseeable future, prevention is the cure.

Figure 2 underscores the true root causes of death, and even more dramatically conveys the need for more aggressive national strategies to promote healthy lifestyles. While cancer is certainly a leading cause of death, number two overall, and the leading cause of death during the prime of life, it need not be so. If opportunities to prevent and control cancer were fully seized and realized, millions of lives could be saved. Cancer, the disease Americans most care about and most fear, over time, as we have already heard, could be eliminated as a major public health problem. What is more,

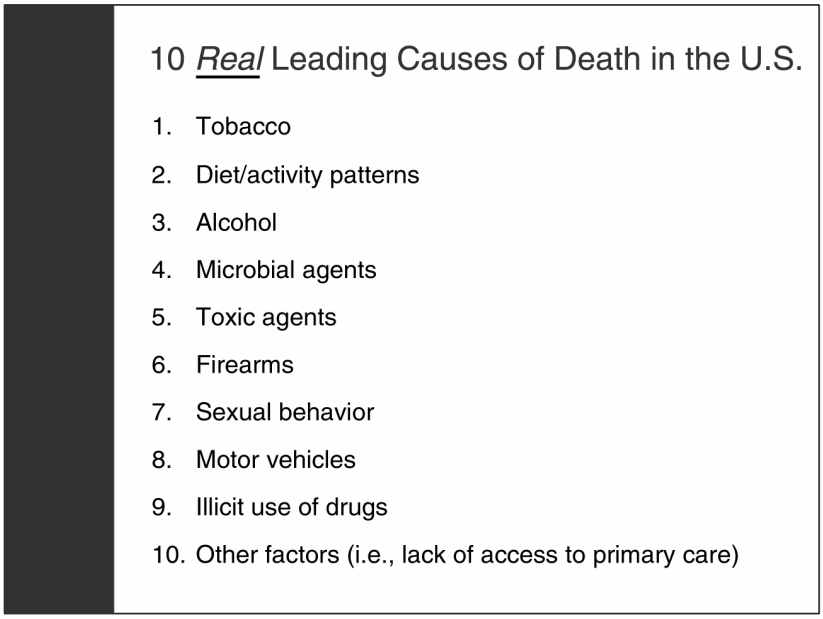

Figure 2. Medical perspective of the ten leading causes of death in the United States. SOURCE: McGinnis and Foege, 1993.

prevention strategies would also significantly reduce risks of dying prematurely from other diseases, such as heart disease, stroke, chronic obstructive pulmonary disease, and diabetes, along with cancer. So on that list of ten, add those five up, and we are talking about 80 percent of all of the deaths last year.

We are beginning to understand that if we focus on the right things, we could have an extraordinary, historically unprecedented impact on this nation's public health. Where is the evidence? Today, for the first time in our nation's history, we are witnessing sustained declines in overall adjusted cancer incidence and mortality rates in the United States. The trend is down, respectively, 7.5 and 7.2 percent over the last 10 or so years. This is due in part, of course, to progress in research and improvements in cancer treatment, but mostly due to more effective primary and secondary prevention efforts. That is impressive, although you might say it is not a free fall. But from roughly 1991 to 2000, that represents in the aggregate 200,000 deaths that didn't occur if the cancer mortality rates had remained the same. Remember, through most of the 20th century, the rates went up every year. But

even if they just stayed the same as they were in 1990, we are talking about saving 200,000 lives. Many of those whose lives were saved are in the prime of life—42,000 in the year 2000 alone.

With the exception of a spike around 1993 due to the widespread adoption of the PSA test, incidence rate downturns are real, though one might say, relatively modest, and they underscore two important points. First, cancer can in fact be controlled in this century if we do the right things. We have turned the corner on this disease, and while there is a great deal yet to be done, we are no longer simply trying to stem the ever-increasing tide of higher cancer incidence and mortality rates. Second, we have discovered that prevention works. That has always been true in theory, but now we have evidence. Indeed, we now know that some two-thirds or more of all cancers could be prevented if we intervened in the right ways more aggressively and with sufficient resources. The current trends prove the concept and bear witness to the progress that we have already made.

Here are just a few examples of the successes we have had in changing lifestyle behaviors to improve health and reduce the impact of cancer. Figure 3 shows the comparison between per capita cigarette consumption in the

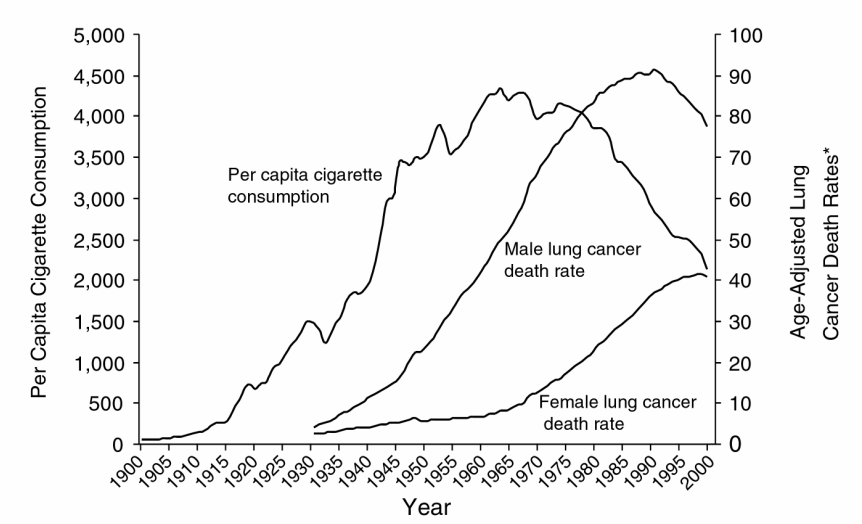

Figure 3. Trends in tobacco use in the United States during the 1990s. SOURCE: Death rates: US Mortality Public Use Tapes, 1960-1999, US Mortality Volumes, 1930-1959, National Center for health Statistics, Centers for Disease Control and Prevention, 2001. Cigarette consumption: US Department of Agriculture, 1900-1999.

U.S. and lung cancer mortality. Of course, we have known about the relationship between cigarettes and lung cancer. We have a literature of 50,000 studies about the causal relationship. But these data point out that you can change that, because if you can reduce the consumption, you can also reduce the diseases that it causes. Cigarette smoking prevalence rates in the United States for men and women show steady declines going back to 1964 when the first Surgeon General's report was released. In spite of the powerful addicting effects of nicotine, people can quit. We now have over 50 million former smokers in America. So, the opportunity to have an impact is incredible. I'll come back to that point later.

The prevalence of women reporting a recent mammogram has increased almost 40 percent, from 45 percent in 1990 to 63 percent in the year 2000. As you know, we have seen a decade of decline in breast cancer mortality in women in the United States. The prevalence of Pap tests within the past three years has remained high in women for a sustained period of time. Why go all the way back to the Pap test? Isn't that history? Use of the test has actually increased in the late 1990s. As a result, cervical cancer mortality, which was a leading cause of cancer death of women in America (and is still the leading cause of cancer death in women in most other parts of the world), is now controlled for most women in this country, and could be eradicated if we could solve the access problem. This is a powerful, powerful example of what could be. As these data make clear, continued progress in prevention interventions is key, absolutely key, to the future public health of this nation. Our progress in reduced tobacco prevalence and better screening rates is linked to the reduction we see in mortality rates.

While we are gaining ground on a number of fronts, there are still many areas where we must redouble our efforts. One of those areas has to do with promoting healthier lifestyle behaviors which is critical to achieving what we now know is possible in cancer prevention and early detection. As is highlighted in the Institute of Medicine's report: "Many of the behaviors that place individuals at risk for cancer are well recognized, and calls for behavioral change are not new. What is new is the growing body of evidence confirming the effectiveness of interventions to help people improve their health-related behaviors." It seems to me that changes the whole dynamic. It actually elevates it to a moral imperative for a great nation such as ours if it really wants to walk the walk and not just talk the talk of saying we want to do what we can to improve the nation's health.

In spite of all this, the epidemic of obesity may well prove to be every bit or even more challenging as other major public health threats like tobacco, and this is deeply troubling.

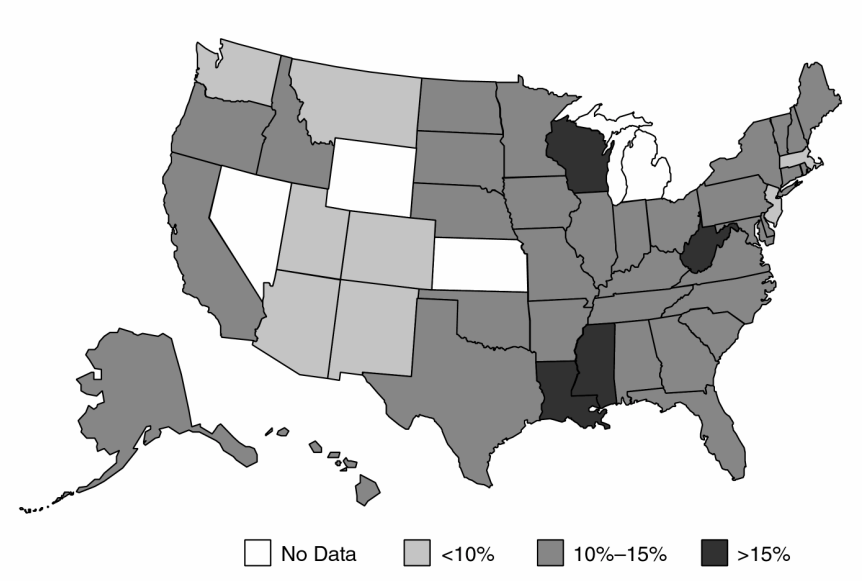

Figure 4. Obesity trends among adults in the United States (1985).

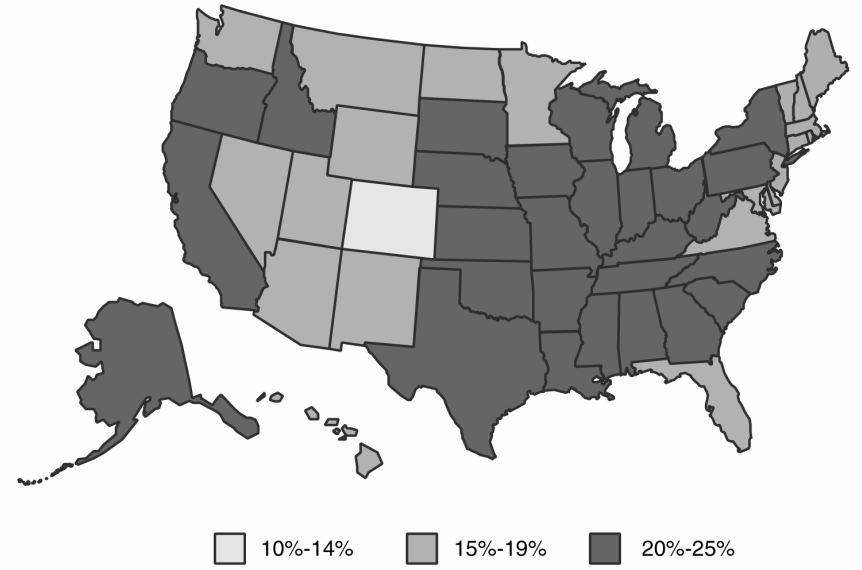

Figure 5. Obesity trends among adults in the United States (2001).

Today, in an overwhelming majority of U.S. states, more than 25 percent of all adults are obese, and the numbers are getting worse, not better. Of course, the obesity epidemic in this country is a major risk factor for numerous chronic conditions, and it threatens to undermine the progress we have made in other areas. Comparing Figures 4 and 5 illustrates how rapidly, from 1985 to 2001, obesity trends have increased and overwhelmed much of the country. What is troubling about this is that the data from the CDC indicates that the rates of increasing obesity are twice as high among our kids as they are for adults.

There are many factors that contribute to the soaring obesity trends in this country. Among them is our increasingly sedentary lifestyle. Let me share some data with you from the American Cancer Society's Cancer Prevention Study II (CPS II), which demonstrates the startling impact of tobacco use combined with lack of exercise. CPS II, by the way, is the largest prospective epidemiologic trial ever undertaken in the history of public health. We have been following people since 1982, and will continue to do so throughout the course of their lives. Figure 6 shows the absolute probability in our study of premature death from cancer for women in mid-life based on smoking status. As you can see, which is no surprise, I'm sure, the woman who smokes is more than twice as likely to die of cancer in mid-life as her non-smoking counterpart. But if she quits, her chances of dying

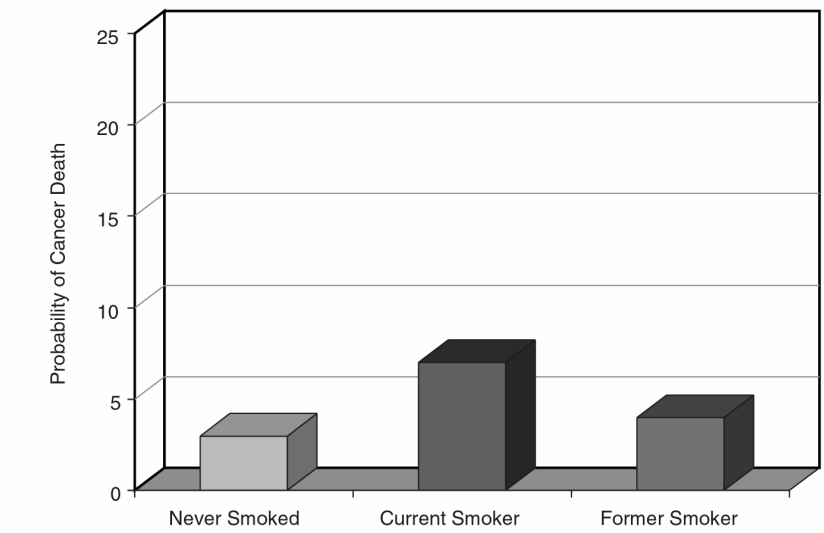

Figure 6. Probability of death due to cancer among women ages 35 to 69 compared by smoking status.

decrease gradually and eventually return to near normal rates. One of the findings from this study that was most gratifying, particularly when we tracked women, is what happens if we can get to her before her 50th birthday. We found we can save her life. So, here is a clear opportunity for prevention when time is on our side. It doesn't have to happen by tomorrow. Because many people start smoking early in life, we may have years or decades to get to them, but we must get to them. Clearly the payoff is incredible.

The findings are much the same for men. Men who smoke are almost three times as likely to die from cancer in mid-life. But if they change their habits, they can reduce their risk, as has been well recorded and was the major theme of one of our Surgeon General's reports.

When we look at tobacco use combined with exercise patterns, just two risk factors, the impact is predictable, and it is still shocking. Women who exercise regularly and don't smoke are less than a third as likely to die in mid-life than women who smoke and lead a sedentary life. The findings are even more dramatic for men. Men who smoke and do not exercise are almost five times as likely to die as those who exercise regularly and do not smoke. Now, there are data, and there are significant data, and then there are dramatically significant data. The key point is, to add to those factors body-mass index and diet, and you get dangerously close to flipping a coin as to

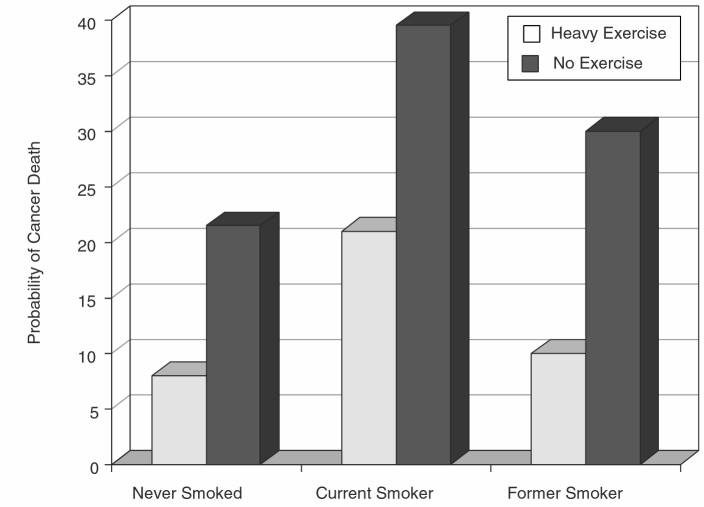

Figure 7. Probability of death among men between the ages of 35 and 69 compared by smoking and exercise status.

whether you die in mid-life or not. You may die at a time when you are most needed by your community and family. You may die in the prime of life.

The American Cancer Society, collaborating with others, continues to work to identify ways in which we can further prevent and control cancer. Here are just a couple of examples. The ACS supports evidence-based approaches to determining periodicity of age and gender-specific screening schedules for the early detection and prevention of cancer. Our guidelines have been developed in concert with—and publicly acknowledged by—multidisciplinary experts from the scientific and cancer communities. Furthermore, our guidelines for several major disease sites are complementary to those recommended by the United States Preventive Services Task Force, with both organizations striving to insure that the public is fully informed regarding life-saving cancer screening practices.

I was in town over the weekend for the meeting of the National Dialogue on Cancer, which the American Cancer Society is proud to be a part of with 150 other collaborating partners. The Dialogue's CEO roundtable has developed something called "The Gold Standard," which is evidence-based, state-of-the-art cancer screening and prevention guidelines in employee benefits. I am happy to say today that in 2004 some 37 CEOs from a number of major companies have agreed to include comprehensive cancer screening in their benefit plans. This initiative will improve cancer coverage for eight million employees, and when you include their children and family members, it ultimately reaches some 25 million Americans who will be covered by these state-of-the-art prevention guidelines. This will also include access to clinical trials. This is a tremendous opportunity. We also support the creation of reminder systems and other aids to assist the health care community in managing preventive care. Additionally, we believe it is important to place greater emphasis on prevention and early detection clinical trials, such as the National Lung Screening Trial that Dr. von Eschenbach has already mentioned. The American Cancer Society is very proud to be a collaborating partner in that project.

We believe that consistent messaging to the public across the voluntary health sector is also important. I am a little chagrined to share with you that it is only now for the first time in history that we are cooperating at the highest levels with the American Diabetes Association and the American Heart Association, through their CEOs and chief medical officers, to bring forth in 2004 a combined message about what the public needs to do to protect and promote better health. There will be clear messages about avoiding tobacco, preventing obesity, and the importance of medical checkups. Let me conclude by saying the Institute of Medicine's report—and Harvey is absolutely right—is a first step, and a darned important first step, because it is based on the evidence. The National Cancer Policy Board and the Institute of Medi-

cine have done this nation a great service, because here it is: no brag, just fact, here is what can be done. It is a compelling piece.

Nonetheless, its implementation is obviously the key to seeing the end results, which are the improvement in the public's health, and the improvement in the quality of individual and family lives. Indeed, if implemented, the results would be dramatic. It would make us the healthiest country in the world, which we are not now, even though we spend much, much more than any other nation on health care.

Cancer is potentially the most preventable and most curable of the major life threatening diseases facing Americans today. I believe that to turn that potential into reality requires a re-declared war on cancer and a battle plan based on prevention and building the nation's public health infrastructure. I pray that God will speed the day.

How Many Lives Can Be Saved?
Tim Byers, M.D., M.P.H.,
Professor of Preventive Medicine and Associate Director, University of Colorado Comprehensive Cancer Center

I have a problem. I am an epidemiologist, and I have a problem remembering numbers. People ask me, what is the breast cancer incidence rate? I don't know; I have to go look in a book. How many people are dying this year of heart disease? I don't know, I can't remember. I always have to go look in a book. How many people are dying this year of cancer? I'm a cancer epidemiologist, I can't remember. I have to go look it up.

I have decided to speak to numbers in a little different way, by explaining to you how, in the preparation of this talk, I have come to try to think of numbers starting with the number one. There are a half million or so, 557,000 to be more precise, deaths from cancer in the U.S. this year. If you do the math, that comes down to one every minute. In the course of the ten-minute talk that I am giving, that is ten deaths. How many of those are preventable? Perhaps with a magic strategy, if not a magic bullet, all of them. Perhaps we could turn most of them into chronic disease; hopefully, we will achieve that in the next decade. There is another way to think about it, however. If a third of all cancer is due to tobacco, and of the remainder, another 20 or 25 percent is due to the combined effects of physical inactivity, poor nutrition, not eating enough fruits and vegetables, and the like, one can begin to calculate that of this half million deaths a year, perhaps two thirds are preventable by dealing with tobacco, nutrition, and a few other interventions like early detection.

Why then in *Fulfilling the Potential of Cancer Prevention and Early Detection* does the report begin with the lesser estimate that we came up

with four years ago in our 1999 ACS article (Byers et al., 1999)? Why does it begin with a more conservative number of 60,000 preventable deaths per year if we would close the gap between what we now know and what we now do? The entire report is a report on that gap, and the more conservative estimate is cited because it is based on the premise that we can't do everything. We can't make tobacco go away. We can't reverse the epidemic of obesity or start screening everybody tomorrow. It is based on the premise that with additional efforts doing things that we know work—proven behavioral programs and other policies—with achievable, reasonable efforts, we could foresee improvements of about that order of magnitude, that is, about a ten percent further reduction. Now, that is not a ceiling, 60,000 deaths prevented, which in terms of minutes, by the way, in my ten-minute talk is one person. The reduction of 60,000 deaths that results in that one life saved just during these ten minutes is not a ceiling; it is a floor. I am assuming of course that we are going to re-double some efforts, that we are going to do some new things in tobacco, to bring the country to where Massachusetts and California are, and away from where we are in the South and in Kentucky and in places that aren't making as much progress. So that is what that number means.

I took a walk last night after I got here. I was walking by the White House, and I remembered when I was first in Washington in 1971, which is when the National Cancer Act was being signed, and when the tobacco epidemic began to turn down. Those weren't very prominent in my mind in 1971, because I was a student participating in one of the big marching protests against the Vietnam War. At that time, I was walking by the same spot I was walking by last night, the gates in front of the White House, and I was carrying a sign on my chest with the name of a boy from Kentucky who had died in Vietnam. I forget what his name was. I was carrying the candle and yelling out the name as I walked by the White House.

As I was remembering that last night, I looked down, and on that spot there was a rosebud, a beautiful little rosebud. So, I picked it up and I walked with it for awhile, and then was moved to go over to the Vietnam Memorial, and looked up randomly in the book there. The first Kentucky name I saw happened to have three names, the first, middle and last, and of the three names, one of them was mine and one of them was that of one of my children. I went to that spot, and on row 66, panel 9E, I found the name and laid the rose.

Then it occurred to me, there are 58,200 names on the Vietnam Memorial.That is a little less than 60,000. So, what do they mean—these numbers? The best definition of epidemiology is, it is the suffering of people with all the tears wiped away. What does 60,000 mean? If this is a conservative estimate of the number of lives we can save in this country every year by just doing some modest tweaking of the things that are already successfully

working—if that equates to one death as I am talking—what does that mean to us, and to what extent are we going to be moved ethically and morally or politically to take those kinds of actions? That is in fact what we are talking about today in our breakout sessions, what all the speakers are speaking to, what are the next steps, and what are the specific things that we can do.

I got a letter last week from a woman in Colorado that reminded me about the value of single lives. We are doing a mass mailing campaign in Colorado to Medicare beneficiaries to ask them to ask their physicians to give colon cancer screening, which is a Medicare benefit. We have tested this out, and we know we can get a five to ten percent bump in the screening rate. We are doing mass mailings to the entire state. After we did 35,000 mailings, I got a bunch of letters. One that I got last week was from a woman who said that the letter had come too late, that her husband had died of colon cancer after being seen for years by his physician for management of hypertension; in fact he had even had vascular surgery. Unfortunately, during all this time no one had told him to get screened. It is not a surprising story; it is happening all the time. We can reduce colon cancer death rates substantially in this country if we simply apply what we know. But most poignant to me was her comment at the close of her letter—we went to the moon in 1969, and you are telling me that we still have to be sending letters to people to do this now?

Applying the technology, applying what we know works, I think, is not so much an ethical imperative, actually, but a choice, an enormous opportunity to do enormous good. So in this meeting today, as we discuss how to close this gap between what we know and what we do, let's remember that 60,000 is pretty conservative. We can do a lot better. If we can eventually eliminate tobacco and turn around the obesity epidemic, we can do a lot better than that. But even one person in ten minutes is not insignificant. As we sleep through the night, through tomorrow, through next week, through next month, those numbers add up to a lot of lives.

Harnessing the Power of Cancer Prevention and Early Detection

Susan J. Curry, Ph.D.,
Professor, Health Policy and Administration,
Director, Health Research and Policy Centers,
University of Illinois at Chicago

It is really a pleasure and a privilege to share ideas with you today about how to harness the power of cancer prevention and early detection. It is always gratifying to come to a symposium like this and see the level of inter-

est that has been generated in this important goal. I am going to start with the premises underlying my remarks. The first one is that we are not talking about radical changes. Modest shifts in the proportions of the populations at risk can make a big difference. Not everyone has to quit smoking, nor does everyone have to become a fitness buff. Moderate and achievable changes at the population level can make a significant difference. By way of illustration, if, on average, every American lost 2.2 pounds, that is, one kilogram, in the next year, we would see a 25 percent reduction in the prevalence of obesity.

Second, although ultimately it comes down to individual behavior, it is important to focus our efforts on multiple levels. We don't behave in a vacuum; we are influenced by the organizations that we interact with, our culture, environment, policy initiatives, and the like. Thirdly, different models or interventions are not necessary for different behaviors. There are more similarities than differences in what works. So if something works for one behavior, it can work for others. The fourth premise is that while we focus on preventing morbidity and mortality from cancer, achievements there will also reduce the morbidity and mortality from heart disease and diabetes and other major causes of disability and death. This synergistic effect is important as exemplified by the sobering statistic that each hour as many as 85 Americans will die prematurely from diseases other than cancer that are caused by tobacco use, inactivity, poor nutrition, and obesity.

The good news is that steps can be taken to reach our goals. Because I have a brief time in which to examine some of those steps, I will be selective. My comments will reflect my personal biases about where we can make a difference. I will touch on ways to harness the power of cancer prevention and early detection at the individual, organizational, and policy levels. At the individual level, we should increase access to, and demand for, state-of-the-art programs that facilitate healthful behavior changes. There is strong evidence that effective behavior change programs can be delivered by telephone, for example, particularly for tobacco cessation. There are successful models among state and national "health lines," including state and national quit lines for tobacco use cessation. Evidence of their success has been published in the *New England Journal of Medicine* (Zhu et al., 2002). The Cancer Information Service has been leveraged to include participation in cancer screening and for the adoption of healthy eating behaviors. There is no reason why the infrastructure that is in place for these programs at the state and national levels could not be expanded. The availability of these resources should be accompanied by active mass media campaigns. Such campaigns create demand; they enhance motivation, and they can reinforce the changes that individuals make. As an example of how much demand a media campaign can create, recently New York City launched an initiative to provide free nicotine replacement therapy for smokers. The availability of this initia-

tive was widely advertised through the mass media. Over 280,000 calls were received, although the city had the resources to provide only 35,000 courses of treatment.

In an April speech at the National Press Club, entitled "A Little Prevention Won't Kill You," our Secretary of the Department of Health and Human Services, Tommy Thompson, said: "The alarming growth rates of preventable disease also point to how out of whack our health care system is in America. We wait until people get sick before providing care. We invest mostly in developing technology or medicines to keep the sick living longer rather than preventing them from getting sick in the first place. This doesn't make sense. We need to strike a better balance between preventive care and treatment." I believe that we will achieve this balance if we can make prevention a standard of care in health care delivery. How can we do this? First, changing the culture of care begins with the training and licensing of health care providers. If it is a standard of care during training, it will be a standard of care during practice.

Second, health care systems do respond to outside influences. Employers and major purchasers of health care can hold systems accountable for the delivery of preventive care. *The New England Journal of Medicine* (Bodenheimer and Sullivan, 1998a and b) has documented successful examples of this kind of response. Accreditation organizations such as the National Committee for Quality Assurance (NCQA) or the Joint Commission on Accreditation of Healthcare Organizations can include prevention-related performance indicators. For example, NCQA does this for tobacco cessation assistance, mammography, and cervical cancer screening. These efforts can be built upon.

Front-line health care providers need resources and accountabilities for prevention as a standard of care. We are trying to bridge the gap between what we know and what we do, and we know a lot. Unfortunately, that means there is a lot for health care providers to remember. Clinical information systems that allow doctors to track their patients' progress, identify relevant evidence-based practice guidelines, and the like can really make a difference. Research shows repeatedly that these kinds of reminder systems work.

If prevention is a standard of care, then health care providers should be paid to do it. A ten-minute follow-up visit with a patient who is trying to stop smoking or lose weight should be paid for. As a personal example, I just took my 16 year old daughter for a preventive checkup. Her doctor, a good one, addressed tobacco use prevention, healthy eating, and physical activity. The statement that I received from my insurance company denying payment to the doctor said that this type of prevention visit is not covered, and I am paying the highest premiums for the most comprehensive plan that I can get. Moreover, we can't expect physicians to do all of this alone. The

culture and the organization of health care delivery could change, so that it is provided by well-trained, multi-disciplinary teams that include appropriate prevention expertise. As noted in the IOM report, prevention and early detection should be viewed as an essential part of any basic insurance benefits package. As one of the nation's largest insurers, the federal government can take a leadership role in making this happen.

There is much that has been and can be done at the policy level.We have had remarkable successes in tobacco policy. Why not apply them to other behaviors? For example, we collect and spend taxes, and, although nobody likes taxes, there are two possible benefits. First, revenues from taxes can be used to pay for what is needed to increase access to, and demand for individual programs, such as health lines and mass media campaigns. Second, we know from careful research with tobacco that when taxes increase prices, there is a direct and significant effect on tobacco use. Fewer kids start smoking, and more adults quit. Now, with or without added taxes, revenues can be earmarked for prevention. Tobacco excise taxes can fund a national quit line infrastructure.

What to do in other areas is less clear, but some examples have been suggested. Revenues from foods could be used for subsidies that reduce prices on healthful foods. Monies collected from the use of roadways can be devoted to creating physical environments that encourage walking and biking and other activities that help us increase our physical activity levels. With regard to regulations, clean indoor air laws and regulations for smoke-free workplaces are commonplace, accepted, and also shown to lead to reduced rates of tobacco use. This approach can also be applied to other behaviors such as providing point of purchase information about the foods we are eating, so we can make more informed choices in fast food restaurants and other places. Physical activity can be encouraged as an integral part of our daily lives through requirements for daily physical education in public schools. To my knowledge, my state of Illinois is the only state in the country currently to require this.

Our continued investment in prevention research is also important. As we heard this morning, there are clearly very new exciting and important frontiers to explore in preventing cancer. But let's be sure that as we do that we also invest in applying what we already know. For that latter goal, it is important that we evaluate new policy initiatives. There will be pockets of early adoption of innovative ideas. Good evaluation data from these early initiatives can motivate later adoption and faster diffusion. We also need to focus resources on learning more about how to get from development of effective programs to their wide-scale delivery.

I want to close with a quote from Dr. Geoffrey Rose, who said, "The knowledge that we already possess is sufficient if put into practice to achieve great health gains for all and to reduce our scandalous international

and national inequalities in health" (Rose, 1992). This quote is over a decade old. Wouldn't it be nice if it was an anachronism in 2013?

Comments, Questions, and Answers
Leonard Lichtenfeld, M.D., Deputy Chief Medical Officer, American Cancer Society, Moderator

Participant: On September 18 and 19 of this year, the National Dialogue on Cancer will convene a prevention summit to which they are inviting key leaders from around the nation, including state and local officials, community-based organization leaders, and others. They plan to develop a strategy to address systems and policy issues related to prevention. Dr. Dileep Bal, who was one of the reviewers of the IOM report, is chairing this conference. The IOM report provides a good basis for this follow-up with the National Dialogue on Cancer. So, I want to commend you, and I hope many of you in this room will come to this meeting in September. It is at the tail end of CDC's national cancer control conference.

Dr. Byers: The key challenge that we have for the rest of the day is to be as specific as we can about what we might shift and change and grow or contract to try to reach these goals. I hope we could focus on some specifics, even if they may be a little chancier or a little wild, that will fold into the National Dialogue on Cancer summit in September in a complementary way.

Dr. Greenwald: The specifics are what I wanted to address. This report has 12 recommendations, most fairly broad, with a lot of sub-recommendations. At least half ask Congress to increase funding for something. I would like your reaction to the idea that a report like this would be more meaningful if it had priorities that were very focused with milestones and a forceful effort to achieve them. Because if you recommend everything, no matter how important, rather than focusing, you can end up with nothing.

I would like to suggest two foci. First, support Medicare coverage of preventive services through the Center for Medicare and Medicaid Services. That could help in tobacco control, obesity control, the use of evidence-based procedures for early detection, and coverage of medical costs associated with clinical prevention and early detection. That's one thing that would have a huge impact, and it would be great if the IOM championed it. The second focus has to do with physical activity and institutional or community behavior, which would be to encourage throughout the United States inclusion in elementary and middle or junior high schools physical activity for every child as part of their regular curriculum.

Dr. von Eschenbach: I think the first two comments raise an important issue about the theme of collaboration and integration of the various efforts and initiatives, so that we really get synergy and get major impact. Harvey Fineberg and I had a sidebar conversation about thinking ahead as to how we can integrate the report, the outcome of this conference, into many of the initiatives that are under way, some of them through the National Dialogue, some of them occurring even within the Department of Health and Human Services. I would like to see an implementation strategy that thinks about the integration piece, how it would connect to Dialogue initiatives. To make a point about the importance of that, I would like to ask John Seffrin to amplify the issue he raised in his talk about the National Dialogue on Cancer's CEO roundtable, in which they have implemented a "gold standard" program within their corporations for provision of healthy lifestyle initiatives and early detection and screening opportunities for their employees. Although the reason for doing that is better health, there is a very significant economic piece to it as well.

Having been a part of watching that scenario unfold, I can tell you that the scales didn't tip until the financial analysis demonstrated that it would cost them something like $2.60 per member per month (pmpm) to implement those additional benefits. But they would experience a return on their investment of $3.00 pmpm[1]. There would be a net gain to the corporation of 40 cents per member per month. Now, 40 cents per member, per month is a little bit like Tim's thinking about this as one life per minute. That net gain to them provided those corporations the economic rationale for making public health, welfare, quality of life decisions. They are implementing this plan, and it is going to save them money over time. We have to build the economic model as well as the public health model and get the alignment with the people who are essential if we are going to implement this across the board in our society.

Dr. Seffrin: This has been one of the most meaningful stories in my three-decade career. We learned from this that it doesn't always have to be like pulling teeth when we do public health. It often means doing the right thing at the right time with the right people. The bottom line is, we went to any number of human resource directors and chief medical officers with things we thought made sense, and never could get to first base. But we began moving when we got CEOs around the table and thinking who was their

[1] The costs of getting from current coverage to 100% compliance with ACS screening guidelines for breast, cervical, prostate, and colorectal cancer over about five years, not including costs of treatment of cancers, the benefits including disability, life insurance, and employee replacement cost avoidance, among others.

most valuable employee—their chief financial officer?—their administrator?—and thinking about losing them through premature death from cancer.

And then we went to Milliman USA[2], a company we knew they respected and said you do the economic analysis. We presented those data to them, and it was a done deal. It was quite an experience to see the CEOs of major companies, employers of over eight million employees, make a commitment. We will have another meeting paid for by one of the CEOs, but he has already implemented the program, including providing reimbursement for clinical trials.

So we learn from this that sometimes we make public health more complex and difficult when we don't push on the right buttons. We have the evidence; it is a matter of getting it in the right form and talking to the right people to get the job done.

Dr. Byers: What I would say as far as that point is that employers are important, but the employees also have certain demands, so it is a push-pull in this marketplace. I would also agree with Peter Greenwald that CMS coverage for clinical preventive services is important; in fact, coverage for preventive services across all the federal programs from the Indian Health Service to prisons to Medicare and Medicaid is important. Also employer, employee, insurance company relationships with regard to clinical preventive services are important.

But we shouldn't lose sight of the importance of tobacco and nutrition. We need to put some emphasis on those big players; what kind of policy initiatives can we have in those areas? I also agree that our recommendations in this report are pretty general. There is a lot more specifics that we need to get to.

Dr. Curry: The concept of building the business case for this, not just within the health care system, but at the public health infrastructure level, is very important. There are many audiences, and the numbers that one audience wants, what the purchasers want to see, are not what the managed care CEOs necessarily want to see, or what the insurers want to see. I think there are some really good studies going on, and the data are out there. I am excited, to hear about the Milliman data, and I wonder if there is a way to disseminate that work; it would be incredibly helpful, because we are asked those questions all the time.

Ms. Eastman, Contributing Writer, Oncology Times. There were some mixed messages in the results from the recent prostate cancer prevention trial. There was a good message about taking finasteride, but there was concern about the grade of prostate cancer when it did develop. The general public needs things put in a simple way. So, I wonder, Dr. von Eschenbach, if you could address how you can communicate to the

[2] Contact ACS for full report.

public the importance of cancer prevention in a way that is not confused by the scientific complexities that are often the case when doing this kind of research.

Dr. von Eschenbach: We are in the process of closing out a negotiation for someone who will be extraordinarily effective in that role, working across the entire NCI in addressing that important problem. Often research gives us insights that themselves are quite complex, the finasteride study being one of them. Clearly, the 25 percent reduction in incidence of prostate cancer is a proof of principle and a positive finding, but the aggressiveness of the disease that was not prevented by the finasteride needs further analysis. How we communicate clearly, without resulting in what I describe as threat fatigue because of the dire messages that we keep giving to the public, is a major problem for us, and one that we will be strategically addressing and researching.

Ms. Mulhauser, Clinical Social Worker, Children's Medical Center: Several years ago there was an effort to increase internist reimbursement for preventive services, but it was not a real successful effort. I am wondering what will happen as a result of this report that can help us approach that effort in a different way with the insurers and with perhaps a Congressional mandate.

Also, in the training section of the report, the one discipline that has the most access to low income families, social work, was not mentioned. I would advise you to think about emphasizing that and perhaps some other professions to bridge to those populations. The Institute of Medicine also had a wonderful report last May on health disparities (Smedley et al., 2002). I see some of the recommendations from that report as being very important to synthesize with this report so as not to re-invent the wheel.

Dr. Lichtenfeld: I have had experience with the physician reimbursement side, particularly with the Medicare fee schedule. We have codes for reimbursing physicians for preventive services, but they are not paid. They are not allowed or are considered uncovered services. When you go to insurers and you say a benefit will cost X number of cents per month, they respond that when that cost is applied to a million people each month it amounts to real dollars, but we will be talking more about that this afternoon. Furthermore, it is said that if every health care provider, primary care provider, devoted the time they are supposed to devote to providing all the preventive messages they are supposed to provide, it would take them around 7.4 hours on a daily basis (Yarnall et al., 2003). That is obviously not possible.

Dr. Byers: I concur with your comment about medical social workers, to the extent that is relevant to clinical psychology and dentistry and many other allied health services beyond that. I think the idea of multidisciplinary

training, not only training in multiple disciplines, but true multidisciplinary training is where we need to go.

Dr. von Eschenbach: Let me just comment on health care disparities. This year the Department of Health and Human Services at a senior leadership retreat established five strategic initiatives to focus on across the entire Department. One of the five is elimination of health disparities, and it will address specifically disparities in cancer and will be led by Harold Freeman who will be speaking to you shortly.

Dr. Fineberg: I have two comments. First, the themes that emerge when we begin probing a topic as rich as prevention of cancer ramify in a lot of directions. It is important for us to keep focus on this problem, while also remaining mindful of these wider implications. Specifically, disparities is a topic which is of not only deep significance to health and growing attention within the Department, as Dr. von Eschenbach was saying, but also the subject of a series of reports that preceded this report, the most recent prominent one being the report on unequal treatment (Smedley et al., 2002).

On the question of professional education, I might also reference a summit held here which produced a report on health professions education for improving quality (Greiner and Knebel, 2003), which ramifies again in a lot of directions, but which also emphasizes specifically the importance of training across the professions from a patient point of view rather than from a traditional provider point of view. Finally, on reimbursement, isn't it notable that only with prevention do we ask that a service save money and not merely save lives? We pay for many treatments that we know will not produce net dollar savings, because we know we have to treat disease and reduce suffering. If we applied the same standard to prevention, we would be paying willingly and frequently for preventive care.

Dr. Seffrin: In addition to the Milliman data, I point you to the Lasker Foundation's report commissioned from nine renowned economists at leading American universities (Lasker Foundation, 2000, and see also http://www.fundingfirst.org). Their conclusion was that a 20 percent reduction in cancer mortality in the United States will benefit the American economy by $10 trillion. We know how to reduce cancer mortality rates by 20 percent, so the investment, even though I don't think it needs economic justification, can be justified on that basis.

Dr. Douglas Weed, Director, Cancer Prevention Fellowship Program, NCI: I'm glad the subject is turning to training. Dr. von Eschenbach mentioned that cancer prevention is a problem we inherited. For those here from the American Cancer Society, the academic community, it's a moral imperative. Who is going to take this imperative into the future beyond these well established people? I do training in cancer prevention at NCI, and it is a challenge, because it involves both training and expertise in prevention. It is

critical to this effort to have people who say, yes that is what I am trained in, and that is what I am doing.

There is another group, the physicians, the nurses, the social workers, the clinical psychologists, and the epidemiologists, who participate in clinical medical practice and public health. The final group is the people themselves who believe that this is possible. I'd appreciate any reflections you have about this.

Dr. Curry: The important thing that Dr. Weed is saying is this notion of demand. We've talked in behavioral medicine about a framework of push-pull, where there is the scientific evidence and capacity providing the push. You also need the demand for this to happen. The kinds of changes and investments that health care systems will make in response to patient demand are amazing. Complementary and alternative medicine, much of which do not have the evidence base that we have for prevention, are in high demand, and they end up becoming a part of what patients can receive. It is part of the imperative to legitimize on the part of the American public that if your physician and your health care providers are not addressing prevention, you need to demand it.

Dr. Byers: We need to train individuals so that professionally and ethically they are motivated to spend a lifetime career in prevention. In terms of the institutions, it has to be collaborative across a number of them, NCI, CDC, ACS, and the like. One of the important questions that the National Dialogue on Cancer has to grapple with in its September meeting and beyond is - where is the leadership to make sure that is done?

Dr. von Eschenbach: Maybe there is an opportunity here. Secretary Thompson has been stressing this issue. Maybe, he and the Surgeon General can provide some additional visible leadership on this to get us where we want to go.

Mr. Bill Corr, Executive Director, National Center for Tobacco Free Kids: Dr. Fineberg began the meeting with a very important statement when he said that the work of this excellent report isn't done until we implement its recommendations and actually have done something about it. The report captures so well all we know about tobacco control, all the proven solutions that we have implemented in places around the country. In my personal travels, I find that many elected officials, state legislators, local city council people, and many federal officials, do not know that we have proven solutions to reduce initiation of tobacco use and to help people quit. We have to find more creative and more effective ways of communicating the kind of information that has been compiled in a way that is real to our elected officials. Dr. Byers mentioned the California and Massachusetts tobacco control programs that have had great success. The Massachusetts statewide prevention and cessation program has been cut in the last year from $ 48 to $2 million, and it may end up with nothing in its current cycle.

I realize that we have a huge deficit, but here we have a proven solution that will save lives and reduce costs to the state. Yet it gets on the cutting block very, very quickly. Across the country, while many programs have been cut, tobacco control programs have been cut disproportionately. I'm not quite sure why or what is behind it, but I know that we have to get elected officials to understand and appreciate what you have compiled in this report. I would urge us to think of ways, creative new ways to get this information out in front of our elected officials.

Dr. Curry: You make an excellent point, and I don't have an answer for it. But while I was on the National Cancer Policy Board, and while this report was in progress, we released *State Programs Can Reduce Tobacco Use* (IOM, 2000). There were master settlement funds then that were being infused into states. The CDC has a wonderful document that described the ideal program, and we wanted to contribute to that effort. We sent copies of this report to every state legislature, but I haven't met a person yet who knows that the report existed. So, I do think that we are challenged to come up with creative ways to do this.

Reducing Disparities in Cancer
Harold Freeman, M.D.,
Director, Center to Reduce Cancer Health Disparities, National Cancer Institute, Medical Director, Ralph Lauren Center for Cancer Care and Prevention

I'd like to begin my remarks with a personal comment. I have spent my career in Harlem, New York, a place that former Mayor Jenkins called the village of Harlem, and it is a village. The things that I have accomplished in this line of work reflect my 35 year experience as a surgical oncologist in Harlem, a community of people who are 41 percent poor, heavily black, and more recently Hispanic, but minority in general, and who have a set of the worst health indices seen in the world. Indeed, in 1990, a colleague and I wrote a paper called "Excess Mortality in Harlem" in the *New England Journal of Medicine* (McCord and Freeman, 1990), that reported that a black male growing up in Harlem had less chance of reaching age 65 than a male growing up in Bangladesh, a third world country.

Superimposed on that experience, I have had the opportunity to advance to national positions that have allowed me to look at the entire nation. For example, as the national president of the American Cancer Society in 1988-1989, or for a number of years as chairman of the President's Cancer Panel, I could look both ways, big, broad, but probably always through the lens of

my local personal experience. So, I am going to talk to you about some of that today.

Over the years, there have been important reports that have dealt with the issue of disparities. In 1989, the American Cancer Society report on cancer in the poor (American Cancer Society, 1989) found from the poor that spoke at hearings that they had difficulty in getting through the health care system; even with cancer, there were barriers to getting through the system. They told us that they made sacrifices in trying to get health care, like losing jobs, losing automobiles, losing dignity. They told us that the educational system in America, they felt, was irrelevant and insensitive to them so many times. They told us that they had more pain and suffering and death due to cancer because of late diagnosis. They told us that ultimately they become fatalistic and gave up hope. For this knowledge base, this was a major turning point which came from the American people themselves. Tim Byers said that epidemiology is data with the tears wiped away. At those hearings, the tears were there. So somehow we have to put together the epidemiological findings and the real experiences of the American people to try to understand this disease.

Then there were two major IOM reports, one in 1999 (Haynes and Smedley, 1999) and one in 2002 (Smedley et al., 2002), *Unequal Burden* and *Unequal Treatment*. We are standing in that institution now. I won't go over those, except to say that they brought all of the known literature together and drew conclusions, looking mostly at black and white comparisons, that there is an unequal burden of cancer in black Americans in comparison to other populations, and there is also unequal treatment, which is a different issue.

Then we had the Healthy People 2010 report (U.S. Department of Health and Human Services, 2000), *Voices of a Broken System*, from the President's Cancer Panel, (President's Cancer Panel, 2001), and the initiative that Andrew von Eschenbach mentioned, the Health and Human Services Secretary's initiative on eliminating health disparities (http://www.raceandhealth.hhs.gov), which is one of five major goals for this Administration.

Traditionally, we look at causes of death by disease or condition, and cancer is the second most common cause. But there is another way to consider actual causes of death as McGinnis did in his 1993 paper (McGinnis and Foege, 1993).The "real" causes of death, as he stated from CDC, are somewhat different. Tobacco becomes number one, poor diet and lack of exercise number two, alcohol number three, followed by infectious agents, pollutants and toxins, firearms, sexual behavior, and so forth (see Dr. Seffrin's Figure 2). So this is a different way of looking at the causes of death, and perhaps gives a road map for action. You can say heart disease and cancer, or you can say tobacco and diet.

We believe at our center, the NCI Center to Reduce Cancer Health Disparities, that the lesion is the critical disconnect between discovery, development, and delivery. This is what I call the pathological lesion that results in disparities. The discovery-delivery continuum, which Dr. von Eschenbach speaks about a lot, needs a lot of attention. The engine for everything is discovery, naturally, and then it has to be translated. But finally, it must be delivered. To the extent that we fail to deliver both knowledge and access to populations in America, that is what creates disparities.

We don't have time to go deeply into the causes of disparities, but there are three overlapping causes—low economic status/poverty, culture, and social injustice; they seem to me to be probably not all, but certainly much at the root of the problem. Low economic status and poverty, overlapping with culture, which is not necessarily a negative or a positive, but lifestyle, attitude, and behavior are very important, and then the element of social injustice, brought out in the unequal treatment report of the IOM in particular, overlaps as well. My sense is that these three factors are major causes of disparities and that they may overlap to different degrees at different times in the history of our nation. There have been times when social injustice was the biggest; we had 350 years of slavery in this country. That is diminished, comparing 2003 with 1700, but, still, the factor is there.

Culture, lifestyle, attitude, and behavior—whether you smoke, your diet, among others—comprise a critical set of issues. Data were shown today illustrating the fattening of America. This was shown the last couple of days by the CDC Director as well, how fat we have become, and 20 percent of cancers are said to be related to the factors of obesity and diet. Then there is the issue of poverty and economic status. Notice that race is not in this picture; it is mostly in the sphere of social injustice, where race has an effect.

Life expectancy tells the story in a different way. In the end, it has to do with who dies and who lives in America. If you look at population life expectancy according to sex and race, here is the pattern. Black males—65 years, white males—73 years; black females—73 years, white females—78 years. We need to understand whatever is happening to create these differences. I do not believe that being black in and of itself causes people to live or die. I think it is the life circumstances that make the difference. It is clear to this audience in particular that some groups don't do as well as others. We need to define who those groups really are, and try to understand the real variables that are causing disparities, and not just simply be satisfied to say it is black and it is white. I don't think that is the best way to understand disparities. If there is a population that is black that is also disproportionately poor, that would overshadow that it is black, for example.

Cancer always occurs under human circumstances. We have been reminded of that this morning by several of the speakers. Social position, economic status, culture, and environment are critical determinants of who is born healthy, who grows up healthy, who sustains health throughout the life span, who survives disease, and who maintains a good quality of life after diagnosis and treatment. It is not just the medical disease, the molecular manifestations, that we must learn to understand. As well as we are coming to understand carcinogenesis, how much we understand about the molecules, we should never consider molecules more important than people. So, the end result of what we are trying to do in our research organizations, the NIH and other elements of our society, has to have human benefit.

I don't want to dwell on statistics. I don't remember these things either. As Tim Byers said, I have to look at the graphs. But Figures 8-12 show that there are racial differences in cancer experience and mortality. In every one the African-American death rate is the highest.

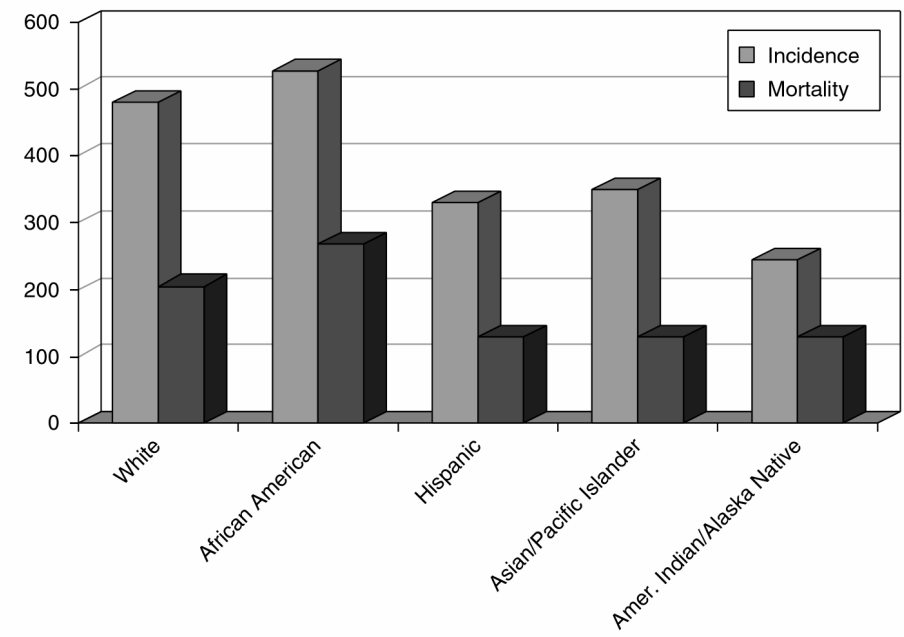

Figure 8. National incidence and mortality. All cancers by race and ethnicity (1992-1999).

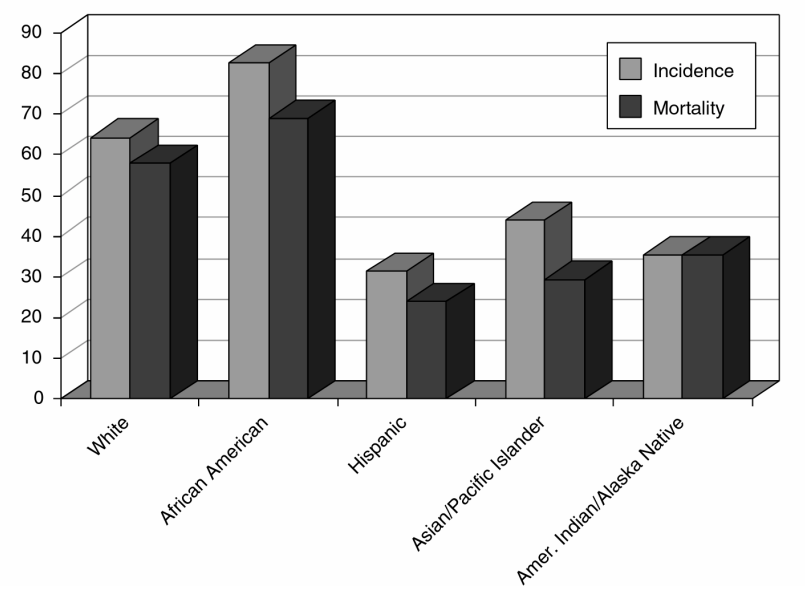

Figure 9. Lung and bronchus cancer national incidence and mortality by race and ethnicity (1992-1999).

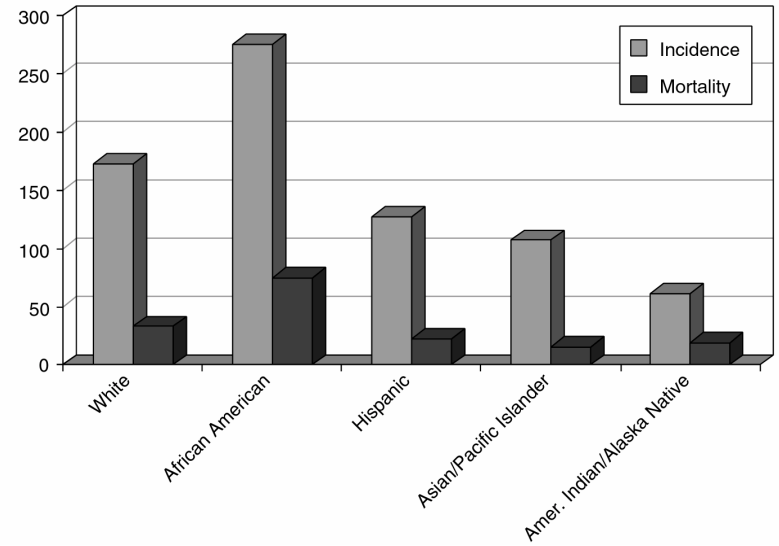

Figure 10. Prostate cancer national incidence and mortality by race and ethnicity (1992-1999).

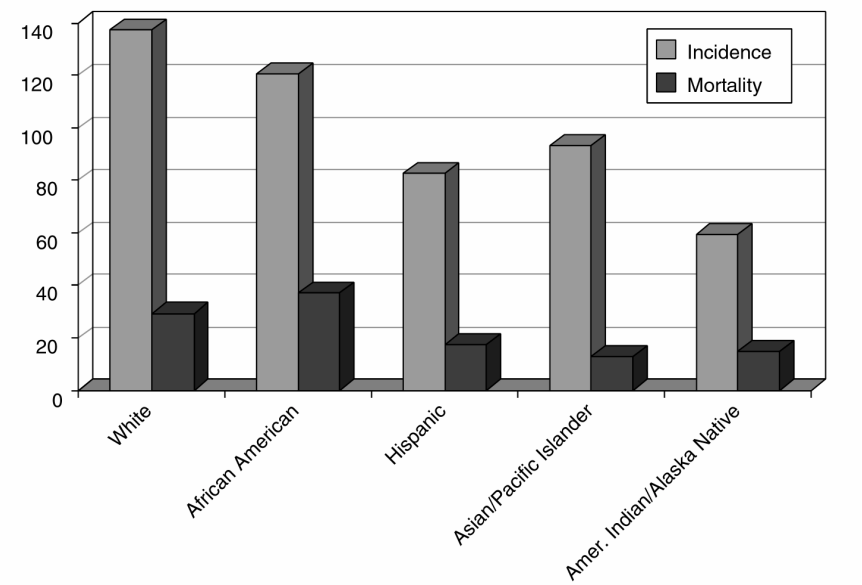

Figure 11. Female breast cancer national incidence and mortality by race and ethnicity (1992-1999).

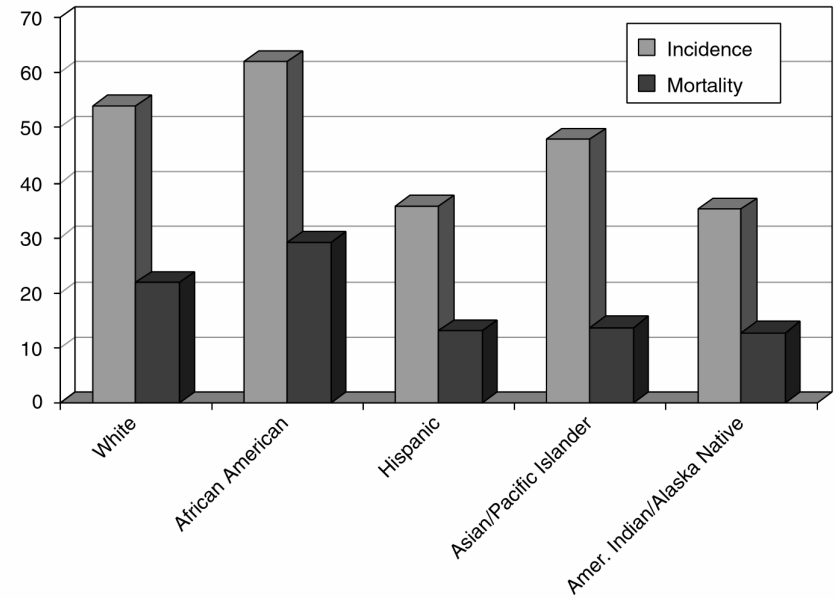

Figure 12. Colon and rectum cancer national incidence and mortality by race and ethnicity (1992-1999).

For these four most common cancers, lung, prostate, breast, and colorectal, usually the incidence is higher, and always there is a high death rate. We have some explanations—late diagnosis at the time of initial treatment, for example, for the differences in five year colorectal cancer survival—U.S. whites, 62 percent, U.S. blacks, 52 percent, poor blacks in Harlem, 19 percent. We're not sure of the reasons for all these differences. So the questions then center around why. We are looking at race, but are we looking at the right variable when we say it is race? I suspect that we are not.

I'm not going to dwell on primary prevention. I'm not particularly an expert in this area. But in examining who smokes among adults in America, the highest percentage is in Native Americans. According to National Center for Health Statistics surveys and SEER data, they are smoking more than anyone else. Black and white American adults are smoking at about the same rate; recently there has been a decline and smoking rates have almost come together. We continue with a problem of the number-one cause of cancer death and death in general, tobacco. So this would have to be a first line of defense. If there are populations that are smoking more and dying more, let's identify who they are, and let's direct our programs, culturally targeted to those groups.

I am going to spend most of my time on secondary prevention because this is where I have experience. I want to take the local experience that I have accumulated over the years and look through that lens, and see what we can do to generalize that experience.

This has to do with Central and East Harlem. Central Harlem is mostly black; East Harlem is mostly Hispanic. The people in both communities are poor: mean income in East Harlem $23,309 per year; in Central Harlem $22,367 per year. It is not enough to say Hispanic, because it catches many different groups. In East Harlem in particular, there are Puerto Ricans—51.8 percent, Mexicans—nine percent, Dominicans—five percent, Central Americans—three percent and Ecuadorians—one percent. In Central Harlem we are now seeing ingress of people who have emigrated from Africa, African-Americans, double jeopardy perhaps. When you say black, it is becoming a diverse group of people even within the black population, and certainly that is so among Hispanics. We also know the educational levels in these communities: in East Harlem median years of school completed—11 years, in Central Harlem—12 years. So, just a hint again that we need to be more focused to identify the real populations that are illustrating disparities, and not just be crude about Hispanic, black, or Asian. The Asian population has 32 different groups and cultures, I understand.

We have found through study in Harlem that there are certain barriers reported to getting through the health system. The principal barrier we found through actual study is financial. People need medical coverage; many people are uninsured. They have problems with billing. Then we have undocu-

mented people, who aren't even officially counted, although they do count. It is very hard for an undocumented person with cancer to be covered. You have to go through some heroic maneuvers, sometimes, to get a woman who has cancer in Harlem, who is undocumented, to treatment. This is not acceptable.

In addition, there is the complexity of the health care system itself. For example, procedures are cancelled; clinic appointments are cancelled; test results are missing; people come back to clinics two weeks later after having a mammogram, results are not on the chart, resulting in a wasted day for the person; long waiting periods, a complex health system for every one of us, even if we have money and education and insurance. And there are communication problems, different languages, same language but patients don't understand what you said: "Doctor, because you only spent five minutes with me, and you really haven't told me what I have."

Let me exemplify these problems with some real experiences that are local, but I think are also generalizable; this is what the experience has been in Harlem. Let's take breast cancer in particular. Twenty-five years ago, I started a free breast cancer screening clinic in Harlem, both within Harlem Hospital and at a place outside of Harlem Hospital. We eliminated right away the question of whether people could get a mammogram; that had been a problem, so we made it free. People didn't turn out in big numbers even though it was free in the beginning; we had to do some things to convince them to come in. We learned that having something free is not enough in and of itself.

So we provided the free screening, irrespective of whether people had insurance. Then after people came in and had the mammogram, we uncovered another set of problems. They have a mammogram; it shows positive findings, but they have no insurance. Now they have to get to the hospital, and the hospital is not readily accepting people without insurance. Then we had to rethink this. You give the test, but the person still can't get through the system. So we thought of the concept of navigation, which actually came out of the 1989 American Cancer Society report on cancer and the poor. In that report, the people said to us that they had difficulty in negotiating the health care system. So we set up a way to navigate people through. At the point of a clinical finding, a patient navigator sits down and talks with the patient and finds out if there are any barriers to getting to the next step, the biopsy, as the doctor has recommended. Then we did things to empower the navigators, so they could move the patients through the system. Our hypothesis was, and is, that with patient navigator assistance, patients will receive more timely diagnosis, receive more timely treatment, receive more information and education relating to treatment and cancer-preventive lifestyle behaviors, and have more satisfaction with the health care system experience.

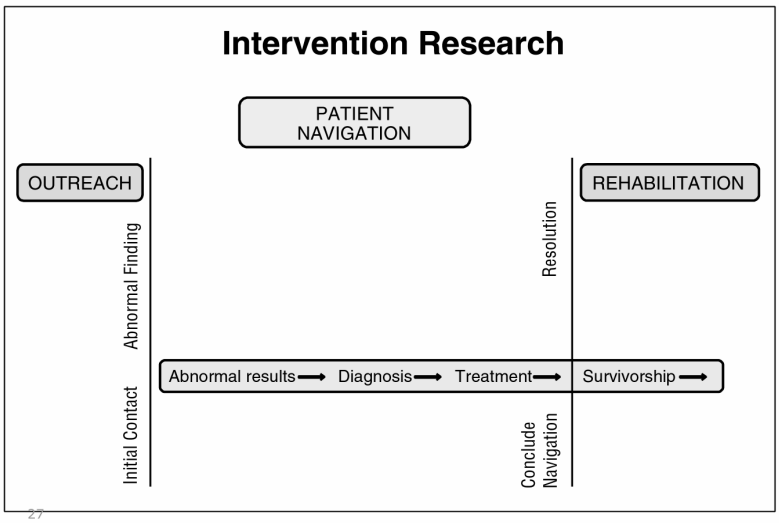

Figure 13. Patient navigation helps patients transition from an abnormal finding to a resolution by assisting in their journey through the health care system.

Our concept in Figure 13, which we are still working on, needs more research to prove whether it is good or bad. It certainly is good in Harlem. It has to do with outreach, the initial contact, and an abnormal finding and how the patient enters the system, the line on the left of the figure, and the journey to the line on the right, resolution and the conclusion of navigation. Resolution might mean treatment of a cancer, but it could also mean another mammographic view of the breast proving that what we thought was suspicious is not suspicious. That is resolution as well, and it has to be done.

We have set up this process, a one-on-one process, to get people through the system, from the point of finding to the point of resolution. We also realized that outreach is needed. Navigation doesn't particularly address that part of it. The people who know how to navigate are not skilled at outreach, and the people who are skilled in outreach are not skilled at navigation, because navigators have to focus on knowing the system to which patients have to go and be wired to the power system. If these people can do primary education, that is very necessary. We then carried over into rehabilitation, which also must be done.

We found that when we set up a system that the community began to trust, if people could come into this center and could learn their way through it, then more people came in. So, part of the challenge in the poor communities of America is to give people the confidence that the system is friendly to them and will work. Once that is done, it becomes outreach in itself. One of the findings in the hearings I quoted early in my talk, in 1989, in terms of

cancer and the poor, people said—we don't bother to come in, because we know we can't get through. What I've just described is an idea that at least has worked locally, and I am going to show you some evidence for that.

I published a paper from Harlem in 1989 (Freeman and Wasfie, 1989) looking at 606 women who presented at Harlem Hospital, who had breast cancer, over a 22-year period ending in 1986. Of those patients, none had *in situ* cancer, six percent were stage one, 45 percent stage two, and 49 percent stages three and four, which essentially is late disease. With free access to mammograms and examinations and adding navigation so the people got in and through, the results at the same hospital over a later five year period, ending in 2000, without changing the socioeconomic status, were 12 percent *in situ*, 29 percent stage one, 38 percent stage two and only 21 percent stages three and four. I can also tell you that, as you would suspect, the proportion of women who had a radical or modified radical mastectomy fell from 71 percent to 45 percent, and the five year survival increased from 39 percent to a projected 70 percent (Oluwole et al., 2003). These results show what we have done, without changing the socioeconomics or culture of the population, by making a system change to assure that people can have a test and get through the system. I believe it has worked, and that it suggests that poverty is not a hopeless condition. We may not be able to eliminate poverty, but we can change the things that poverty causes, by educating people and by providing access and conduct through the complicated health care system. This we can do.

Let's shift to a different disease. This is a very new experience. We are just working this out now, but if you can change outcomes in breast cancer, what about the colon? In a study we published in 2002 (Freeman and Alshafie, 2002), the crude survival rate for 615 patients with colorectal cancer was 18.7 percent. Compare this with the national mortality and incidence percents in Figure 12 for white Americans and black Americans. So we are seeing something within race. Something is working beyond race here, and we believe it is poverty.

What can we do about this? The stages of the people who were in the study in Harlem were eight percent of them in stage one compared to 38 percent in the national SEER data and 61.8 percent in stage three and four compared to 23 percent in the SEER statistics. So, people are coming in very late with colorectal cancer, just as they did for breast cancer. This is a new challenge, and one that we believe we can meet. This is an access issue, too. We need to provide access to colonoscopy in a community like Harlem. We also believe we have to navigate the people through when they have a positive finding in the colon that needs to be diagnosed and treated.

As a solution, we already had people coming in with 20 years of confidence in the breast system, so we piggybacked colonoscopy onto mammography. The first six months pilot phase of our new program offering colono-

scopy to women at the time of routine mammography were documented by a fellow, Dr. Genoa, from Memorial Sloan-Kettering Cancer Center. In this study, a nurse practitioner sat with 649 women at the time of their mammography and told them that although they had had their mammogram, they were also of an age when they should also have this other test. Of those 649 women, 321 of them made an appointment and, within the six months study period, 140 of them had colonoscopy scheduled, and 80 had the procedure. In this group of people, who had come in for a different reason, we discovered one with early colorectal cancer and seven with tubulovillous adenomas, that is, risky polyps that were removed. So, colonoscopy can not only lead to curing cancer, it can prevent cancer. Furthermore, 18 of these women had tubular adenomas, which are not as risky, but they could grow into cancers as well.

At the newly established Ralph Lauren Cancer Center, we now have a one-year experience beyond the pilot, with data for a complete year through June 2002. Of women who originally came in for mammography, 712 were referred for colonoscopy, 664 were scheduled, and 414 had colonoscopy. We achieved this by piggybacking on mammography and navigating the patients between facilities and assuring them that they would have access. In this group, in 128 biopsies, we found five early colorectal cancers, six tubulovillous adenomas, and 32 adenomatous polyps of other kinds. We think that if we have success in getting people in for one thing, whatever it might be, and breast cancer screening is popular with women, why not see if we can take them to the next step? Furthermore, we are going to try to persuade these women to bring in their husbands. If they want him to be with them longer, bring him, too. We have to create a good slogan for that. So, this is an early experience, but I believe that it is something that has some lessons for all of us.

Let me give you some final considerations. This is not a complete set of considerations, just some thoughts. Most cancers can be prevented in this population, like any population. For people who are poor, prevention works for them as well. But we need to do some special things in these populations with respect to education, cultural targeting of messages, and so forth. Tobacco in particular would be something to target; that could save the most lives, and correct the disparity, probably more than any other way, I believe. As for obesity, I'm not sure, I think everyone is fat in America now, so I don't know if it is more prevalent in different groups; although, I think there is some information out there that black women tend to be more obese than others. So, there is a need for more research on how obesity affects disparities. As for the health care delivery system itself, I have suggested that if we create a system that people who are poor and uninsured can gain confidence in, then they will utilize it. So, I think we need to do some work to make this

system friendly to all of its users, to improve the infrastructure related to health care delivery in screening, early detection, and treatment..

I would also suggest that it is cost effective, even if you are only looking at economics, to see that all people who have suspicious findings go to diagnosis, pay for it if you need to, and that people who have cancer are treated. I don't think that is asking too much. If people have cancer, there ought to be automatic access. Call it automatic Medicare, perhaps. It is not reasonable, either economically or from a human perspective, to deny treatment to a person with cancer; it just doesn't make any sense. But in America, we haven't solved this problem. The President's Cancer Panel report, *Voices of a Broken System*, has said that no person in America with cancer should go untreated. It probably also would save money, because ladies and gentlemen, you know that anyone who has cancer will get treated. The question is when, not if. But treatment of late stage disease, when the breast is ulcerated and bleeding or the colon cancer has spread to the liver, still presents a substantial cost to society. We are going to have to pay it. Why not pay it up front where we have a chance to save a life?

No person in America should be bankrupted by a diagnosis of cancer. There are people who are bankrupted trying to get through the health care system. Let me ask you to keep in mind the triad of overlapping factors that cause disparities that I discussed at the beginning of my remarks, to keep in mind also that we believe that the critical disconnect is between discovery and delivery with respect to disparities. And, finally, to remind you, as has been said here this morning before I spoke, that this is not just a medical and scientific dilemma, this is a moral and ethical dilemma for our great nation and for us. A dilemma because we are not delivering all that we know about cancer prevention or effective treatment to all the people. I leave you with a quote from Goethe that is appropriate for the theme of this conference, "Knowing is not enough. We must apply. Wanting is not enough. We must do."

Delivering Quality Cancer Prevention
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I am very pleased to have been asked to speak here today and privileged to be among such distinguished speakers and panelists. I am a practicing oncologist, now practicing in palliative care as well as oncology.

My task today is to talk about the systems that we at Group Health Cooperative have developed to improve and deliver cancer prevention. The theme of the day so far has been—we need to close the gap between what

we know and what we do. But there is another theme—we can't do everything. There is a gap that has been unspoken, which is the gap between what we know and the resources we have to deliver what we know.

In our own quality division, we have experienced an approximately 20 percent reduction in our costs over the last seven years. Although we are making huge investments in clinical information systems, we are decreasing the number of people we have building content and building guidelines. We have to become more efficient. I think that our financing system is broken, and until we can deal with that financial reality, we are going to be struggling to deliver what we know in this country.

But let me tell you a little about Group Health. Group Health is an integrated delivery system—100 percent prepaid, 100 percent capitated. We are a cooperative, the largest health care cooperative in the country, meaning our users are our owners. They sit on our board. So, we speak with the voice of the consumer. We have 581,000 enrollees in the state of Washington and a small number in Northern Idaho. We have 30 primary care clinics. We have a large group model of 1,000 salaried physicians and clinicians, and in our network model we contract with over 3,500 physicians.

The cooperative started on the basis of prevention. Since 1946, in our bylaws we have emphasized that we give special attention to preventive medicine: an ounce of prevention is worth a pound of cure. “To transform health care, working together every day to improve the care and well being of our consumers and communities” is our present statement of purpose. We are organized around transforming health care to close the gap between what we know and what we do. The glimmer of hope for achieving that, we believe, lies in an integrated system like ours. We are known for certain innovations, but we haven’t got it right yet; we are definitely a work in progress. We struggle to develop the resources to be able to do what we know is best for all of our populations.

Our clinical vision in the mid 1990s was built on the cornerstones of patient-centered care, a prevention focus, continuous improvement of value, and state-of-the-art information plus technology. To deliver wellness, episodic, and chronic care, we are strongly invested in an explicit evidence-based process. We start with the evidence to do what we know is best, and we base it on planned care for defined populations. Our populations are in the three broad categories: those who are well; those who have acute illness; and those who have chronic illness. We know also, that while our systems of care have traditionally been designed around acute illness, 75 to 80 percent of our costs are driven by chronic illness. So, we need better systems to take care of those with chronic needs. But our foundation is really based on how we design our delivery system: the prevention and self management support systems that we have, the specialist support, meaning how we integrate con-

sulting specialty into our primary care models, and most importantly, what kinds of information systems we have.

Since 1978, our committee on prevention has used these criteria for developing screening:

- The disease or risk factor is important;
- There is a recognizable presymptomatic stage;
- Reliable detection methods exist;
- Presymptomatic intervention is more effective;
- The capacity to address the problem exists; and
- The costs and benefits of implementing a state-of-the-art approach have been considered.

That is why we have prevention programs and screening programs for breast cancer, colorectal cancer, and recommendations for prostate cancer which I will speak about, but our primary prevention strategy is in cessation of tobacco use.

Our current care model as illustrated in Figure 14 is the paradigm upon which we organize the systems of care, both for prevention and for disease management.

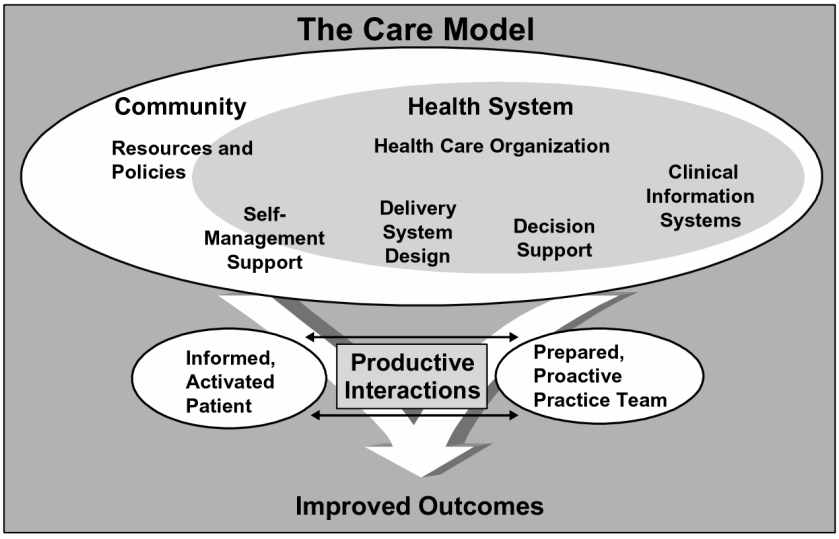

Figure 14. Current Care model for prevention and disease management.

Those four building blocks of self management support, delivery system design, decision support, and clinical information systems, are the systems that we include in the program, whether it be around prevention or around chronic care management. It is all done in support of an informed and activated patient. We know that 87 percent of care is delivered by the patients and their families, and so they need innovative systems to support the behavioral changes that will allow them to improve their own health outcomes. The interaction with the prepared and active-proactive physician is the critical relationship that all of these systems are designed to support.

As tools for implementation, we use patient-based registries that are available for our primary care practitioners, clinical guidelines, patient education materials, case management strategies for chronic care, as well as case management for certain prevention strategies, referral guidelines and most importantly, clinical information systems. The business of health care is really in transmitting information, and the clinical information system is Group Health's one capital investment that we have been making over the last five years.

Figure 15 shows that the systems we have are at multiple levels in the organization. For prevention at the corporate level, we have screening program centers that are designed to remind and assist practitioners. We have information systems, reminders, outgoing outreach, and telephone calls to populations at risk to get them in. We don't believe that the visit is the primary or only currency of health care, because we see perhaps at any one

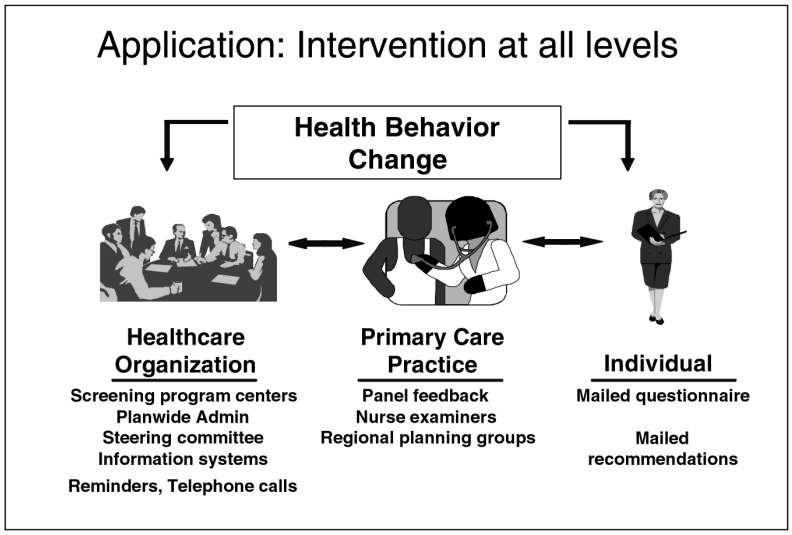

Figure 15. Interventions at multiple levels in Group Health Cooperative.

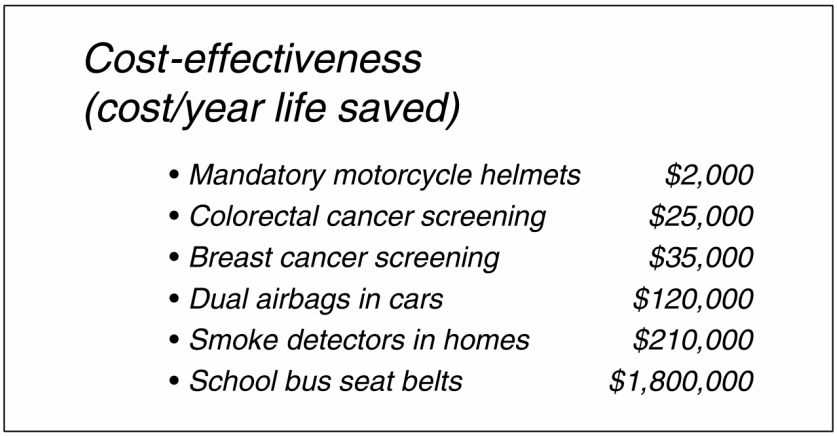

Figure 16. Cost-effectiveness (cost/year life saved) for several interventions.

time just 20 to 30 percent of our population who make a visit on an annual basis, so we need to reach out to those who should come in to get the appropriate screening. Then we support primary care practices by reports and feedback on how they are doing with their panel of patients. We support nurses who are key practitioners in providing preventive care and population-based care, and we have regional planning groups that oversee the implementation of these strategies. Then for the individual, we also have materials that can be sent out on a regular basis.

Our prevention initiatives at Group Health emphasize what we know we need to do, and also what we can't do. Tobacco cessation is our number-one prevention strategy; we also do screening for breast cancer, cervical cancer, colorectal cancer, and prostate specific antigen (with a guideline of shared decision making), immunizations, and head injury prevention. We were the first to do the research on bicycle helmets and demonstrate the huge benefit of bicycle helmets in children in preventing head and spinal injuries. What we don't do, and we stopped in the late 1970s and 1980s, are multi-channel blood tests and routine chest X rays as part of routine screening tests, because there was evidence even at that time that they were not effective and not good screening tools. Figure 16 reminds us that in terms of quality of life years adjusted, these simple interventions are quite inexpensive per life years saved. Colorectal cancer screening is still one of the most cost effective screening programs, as is breast cancer screening. Those are built into our system. They are completely covered. We don't have arguments about whether they are covered or not. But we don't build into our system—we don't ask about airbags and smoke detectors and school bus seatbelts, or advocate for those in our community.

Since 1992, tobacco cessation has been our number-one priority. Our goal was to see 12.5 percent tobacco users in our population by the year 2000. We were the first health care organization to incorporate coverage, much due to the research by, among others, Dr. Curry when she was at our Center for Health Studies, in terms of showing the benefits of coverage of the programs and increased numbers of patients who participated in those programs. Our "Free and Clear" is a cessation program that involves individual telephone contacts and is very effective in terms of long term cessation, and we also have broad communications with members through all the vehicles that we have at our disposal, member newsletters, the GHC magazine, patient handouts, practitioner guidelines, and the like.

We use the five A's (ask, assess, advise, appoint, arrange) in terms of simple, repetitive messages. We identify smokers; we assess them, advise them about how they can quit, and we cover smoking cessation programs. We cover nicotine replacement therapy as part of the cessation program. If you join the covered cessation program, nicotine replacement therapy is a covered benefit. If you don't join the program, you pay for the nicotine replacement therapy. Identification of smoking status, brief, repetitive positive advice, assistance offered to those wanting to quit, and, of course, coverage, are some of the things that need to be systematically put into the system. We also implemented documentation of smoking status in the record, going from clinic to clinic with local champions, advocating simple ways of identifying smokers, and placing a sticker in every chart regarding tobacco use status. This has yielded identification of the status of almost 95 percent of enrollees at this time. Now we have automated a query in our scheduling system so that if you come into the clinic you are asked at that time if you are a current smoker or a recent smoker.

Participation in the Free and Clear program increased to about 4000 enrollees in 2000. This appears to be the most sought-after program, the most appealing to individuals; group sessions are not as high in participation. Our quit rates still are hovering around 25 percent at one year. Starting from about the same level in the mid 1980s (about 25 percent), smoking prevalence in the general Washington population and in Group Health enrollees had diverged as of 1997. Our smoking prevalence has come down. Washington is still hovering around 22 to 23 percent. We know until 1997 and 1998 that we were below 15 percent, and we know that on a continuing basis, if you are a smoker, you will be asked at every visit about your smoking status and advised and assisted to stop tobacco use. One of our problems now is generating the resources to be able to do the survey of our total population, to identify what our prevalence is. We haven't had the resources to do that as yet. I hope if I ever come back that I can show you that our prevalence rate is down below even ten percent.

For breast cancer, we have a systematic approach with mammography centers throughout our delivery system, and we also support clinical examinations and breast self examination. We screen over 78,000 women, 30,000 each year. We have a risk-based screening program, so that all women over 50 are offered screening at two to three year intervals. Women from 40 to 50, based on their risk, are also offered screening. The screening is covered for any woman, but we recommend that it be used only for those at significant risk. We have multidisciplinary steering committees, coordinating groups, and information systems. Letters go out to women that are enrolled in our breast cancer screening program to remind them when it is time for their regular screening. The information system tracks these women and provides clinical reports to clinicians. The results of our breast cancer program are shown in Figure 17 with our rates in the late1990s.

	GHC n = 580	Community n = 5,602
In Situ Stage 0		9%
Stage I	47%	43%
Stage II	25%	32%
Stage III	4%	5%
Stage IV	3%	5%
Unknown	10%	7%

chi square, p = 0.001

Figure 17. Stage at diagnosis: Comparison of national SEER and Group Health Cooperative data.

The SEER data are on the right. We are finding *in situ* and stage one cancers more frequently, and the late stages are less frequent. This should result in greater cure rates and lower mortality. It is a significant investment that we made in the early 1980s and will continue to make despite some of the controversies surrounding mammography. The value of a screening program depends on its integration with a treatment program. In 1979, we recognized that lumpectomy and radiation therapy were as effective as radical mastectomy, and our program emphasized breast conservation for appropriate women. We use breast conserving therapy for over half the stage one and two women in our program.

Our PSA recommendation is consistent with my theme of we can't do everything. This was the controversy of the mid 1990s with the American Cancer Society, American Urologic Society, American College of Radiology, among others, recommending mass population-based screening and the National Cancer Institute, the U.S. Preventive Services Task Force, among others, more cautiously not recommending mass screening or recommending a shared decision making model. We have followed a more conservative approach suggested by the 1993 quote from the National Cancer Institute, that "the history of medicine has taught us…that interventions that seem reasonable—based on the current medical paradigms—may ultimately prove to be worthless or even harmful." The example of autologous bone marrow transplantation for advanced breast cancer is instructive in this regard. We were forced to cover this intervention during the 1980s and early 1990s, and it ultimately proved to be no better and more dangerous than conventional treatment. We have a prostate screening guideline which recommends shared decision making between practitioner and patient, although for African-American men we do recommend screening at the appropriate age. The potential benefits are the possible but unproven decrease in morbidity and mortality for those who are found to have localized disease and who choose to undergo treatment and the peace of mind gained by those with normal exams. But the harms are unnecessary diagnostic procedures, earlier diagnosis that may lead to mental stress in men knowing of their disease for a longer time even though increased survival has not yet been shown, and unnecessary treatments with side effects.

Our PSA campaign in 1991, when we were very conservative in our recommendations, reached opinion leaders in 19 clinics, provided a one day training program covering barriers to decreased use and epidemiology, and aimed toward fully informed patient decision making. We also fed back to our practitioners every three months the amount of PSA screening that they were doing, and we found that there was a significant increase as the original studies were coming out. As we went through the educational program clinic by clinic, we found that at Group Health, only two to three percent of our primary care physicians were recommending routine screening over age 50,

whereas three quarters of other primary care physicians were recommending it. Is this right or wrong? Are we inhibiting appropriate treatment? We don't know. We really want better data on this condition. Right now, routine screening has increased significantly in our system. Upwards of 20 to 30 percent of our primary care physicians are recommending PSA screening, or at least, patients are coming in and choosing it.

In summary, evidence is the key to the success of our prevention program. We have an evidence-based process that evaluates new technologies, our drugs, all through an explicit evidence based system. We have the system approaches using the four building blocks I mentioned earlier: self management support; delivery system design; decision support; and clinical information systems. We have made a huge investment in clinical information systems which will help coordinate care and remind busy practitioners of the right things to do, as well as link to information systems that are now accessible by our members. Eventually, in the next year or two, members will be able to have access to their medical records and see the results of their tests. Then we apply continuous quality improvement to all of this.

The model involves the systematic use of self management tools, the ability to assess when members are ready to change and to assess their behavior. We design the delivery system to move from an acute care to a chronic care system. Decision supports, both guidelines and registries, with the help of a clinical information system, all support improved outcomes.

In answer to the question, what can we focus on, I believe that tobacco cessation remains the number one preventive goal that all of our systems must take on, although we are now learning about the obesity epidemic and what we can do to stop that. As the IOM report says, "Helping the 23.5 percent of adults who smoke cigarettes discontinue their habit and preventing youth from adopting the habit will save more lives than the sum of all the incremental benefits of improving cancer screening rates or cancer treatments."

That is my quick run-through of how Group Health Cooperative is trying to close the gap in hopes that others may learn something from our efforts and experiences. I would like to hear how we are going to get the resources to do all that we want to do, the resources that will be necessary to fulfill the promise and the recommendations that are in this report from the IOM National Cancer Policy Board. But until then, if we focus on key strategies such as tobacco cessation and perhaps now begin to deal with the epidemic of obesity, we will make progress and perhaps save those 60,000 lives that are talked about in the report.

Private Sector Perspectives on Cancer Prevention and Early Detection

Lewis G. Sandy, M.D., Executive Vice President for Clinical Strategies and Policy, UnitedHealth Care

I am really delighted to be here and present at this symposium. First, I want to commend the National Cancer Policy Board, the Institute of Medicine, the American Cancer Society and particularly Drs. Byers and Curry for their report. I think it was extremely well done, very thoughtful, and I learned a lot from it. I hope the larger medical community and the public will as well, which is what this symposium is all about. This is a topic of tremendous importance to me, both from my experience at the Robert Wood Johnson Foundation and also personally. My mother is a cancer survivor, probably had cancer from smoking, and I am grateful to the work of the American Cancer Society and NCI and everyone in this room.

I am not going to cover the whole private sector. I'm not even sure what the private sector comprises in its totality, but I would like to organize my comments into several different domains. First, I want to talk about some of the myths and realities about the private sector and cancer prevention and screening. Second, I want to talk about what I see as structural challenges to implementing the agenda that has been outlined in the report. Third, I want to remind everyone that one of the major barriers to that implementation is the fundamentally poor performance of the health delivery system and the delivery of evidence-based medicine. Fourth, I would like to talk about some of the big problems and issues that have been touched on, and just highlight those for the afternoon discussions. Last, I want to close with what I see as the fundamental problem in achieving the recommendations that have been outlined here in the promise of cancer prevention and early detection.

Let me quickly review the myths and realities. I think this group is probably better educated than most about the actual private sector perspective. There are myths that insurers don't cover prevention and screening, payers don't pay for it, and payers don't support it, when in fact, the reality is that the private sector, the insurance industry, the payer industry, really do support and believe in evidence-based prevention and screening, for all the reasons that have been outlined by previous speakers and supporters. The insurers get it both ways, coming and going. When the insurance companies were using the gatekeeper model, they were accused of restricting access to care. Now that the companies have evolved to more open access to care, they are increasing health care costs, intrusively watching their patients, and nagging them to get more tests and see specialists. So, in fact, the industry has evolved to promote greater attention to evidence-based medicine and

actual delivery of proven services as a way of keeping their enrollees healthier.

As for coverage, I will touch briefly on UnitedHealth Care's as a large health insurer, actually the largest health insurer in the country at this point. Insurers like UnitedHealth have a role in trying to ensure that evidence-based medicine is delivered in the rest of medicine that is not represented by integrated delivery systems such as Group Health Cooperative and Kaiser, which are the minority of health care delivery organizations. Our benefit package covers tobacco counseling via office visits. Zyban pharmacotherapy is covered by a pharmacy rider. The evidence that pharmacotherapy is effective in conjunction with an organized program and not in isolation has led us to take this position. Although we offer this coverage as a rider for employers to purchase in addition to their base benefit package, the fact is it has a very low take-up rate—something I will come back to as a structural challenge.

Behavior change and counseling via office visits is covered. If there are comprehensive programs, those are covered through office services. But as has been pointed out previously, most of the delivery world doesn't have the kind of organized approach to the five A's, to a comprehensive model, to a multi-level model that actually has been shown to be effective. The evidence-based screening services, those represented in the IOM report as meeting a consensus about what ought to be covered, are covered as part of our basic benefit package. A report that is under development through the Partnership for Prevention, funded by the Robert Wood Johnson Foundation, examines an active set of initiatives to try and better understand and encourage the role of employers and their perspectives on the delivery of preventive services (http://www.prevent.org/publications/Preventive_Services_Helping_Employers_Expand_Coverage.pdf)

It is important from the private sector's perspective to outline how that sector, read employers, looks at payment issues. Employers are facing an affordability crisis in health care. In fact, as they think about how to deliver health care benefits or fund health care benefits for their workforce, increasingly they are struggling with tradeoffs in benefit design and benefit structure. They are starting to look more and more at what is essential to providing health insurance, versus what is nice to have. Unfortunately, many preventive services, particularly the ones that relate to behavior change, are viewed as in the nice to have bucket, which are the ones that employers increasingly say they can't afford; if people want it, they will have to pay for it out-of-pocket, and that is a challenge with increasing employee cost sharing.

From the employer perspective, it is not just that health care costs are going up, but that they are going up much faster than worker productivity

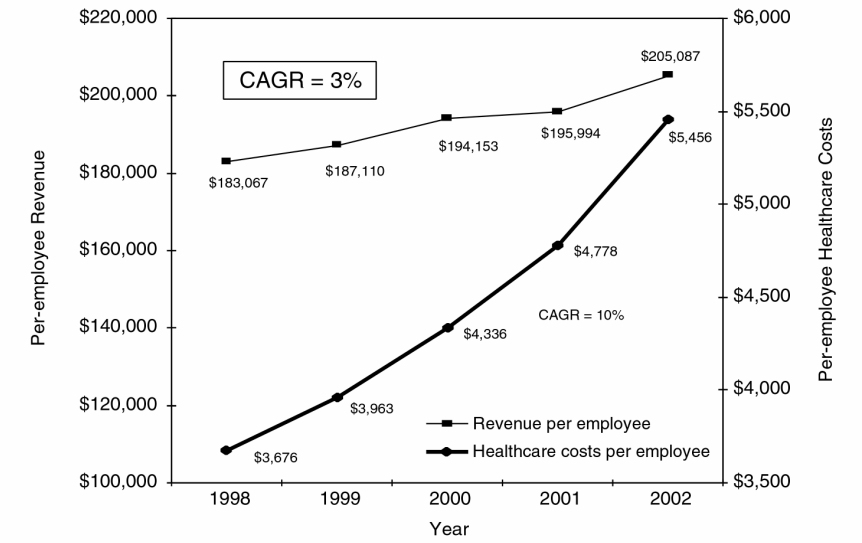

Figure 18. Per-employee revenue and health care costs. CAGR=compound annual growth rate. SOURCE: Hewitt Health Value Initiative; United States Census; Bureau of Labor Statistics (2002 Productivity estimated based on first 3 Quarters).

(see Figure 18). The compound annual growth rate of per-employee revenue, what companies are bringing in, is growing about three percent annually, whereas health care costs are going up about ten percent annually. The response by the employer community has been to pick up some of those costs, but also to have more employee cost sharing. Consequently, employees are seeing more and more of their total take-home compensation eaten up by health care costs, either costs for premium sharing or for out-of-pocket costs associated with services. At this point in 2002, almost half of the annual increase in total worker compensation is being taken up by health spending

So employers are stuck in this dilemma. They see this escalating cost of health care, and they ask harder and harder questions. What are they paying for, what is the value equation—and they know about the range of unexplained variations in health care delivery, quality, and safety (see Figure 19), and about emphasizing employee involvement in related decision making as they pick up a larger and larger fraction of the cost and participate in health care financial risk. Delivering information to employees is something that is becoming more and more important so that employee choice of provider is affected appropriately.

Turning now to some of the structural challenges in health care that relate to cancer prevention and screening, one of the recommendations was

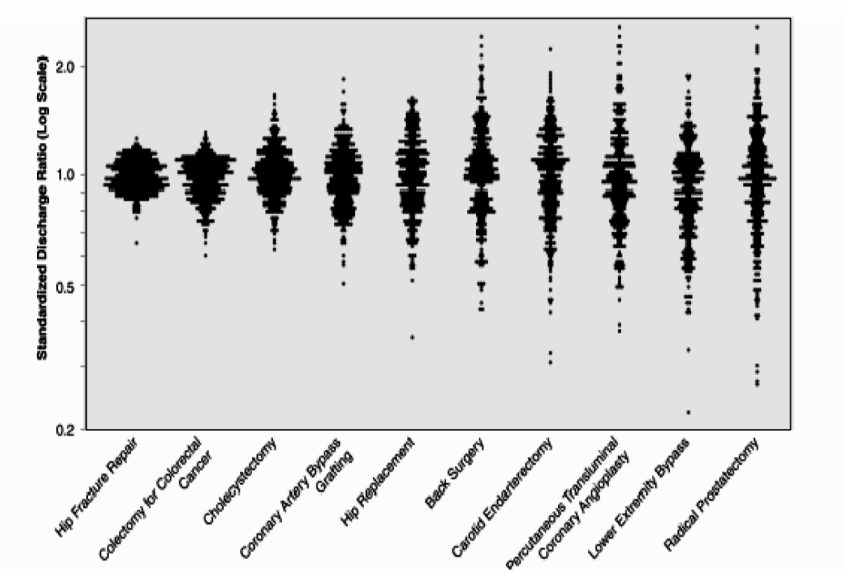

Figure 19. Admission rates for common conditions show five to ten fold variations.

that insurers should take the proven effective benefits and mandate them. However, it a truism that insurers deliver and provide services that are paid for by employers. An insurer can't mandate anything as essential, and this particularly holds true if the leading public payer, Medicare, doesn't pay for it. This is one of the major barriers to tobacco control, or offering tobacco cessation as a defined benefit. In any case, what are the challenges with mandates, although they seem like an attractive idea? Mandates tend to be rigid, they tend to raise costs, and they are typically not evidence-based. An example is prohibition of "drive-through delivery," or, in particular, the example of autologous bone marrow transplant that was pushed as a mandate in the absence of evidence—these seemed like attractive approaches, but they had some real problems.

A second structural issue is the temporal problem for preventive services. Costs of preventive services are incurred today for benefits that often accrue far in the future. Employers facing an affordability crisis ask why should I incur costs for these services today when I may not have this worker two or three years or five years or ten years down the road. It is a public good, but why should I pay for it? I think that is a serious disincentive to delivery of preventive services.

Can we generate some novel ideas to resolve these problems? Would it be possible to structure a better market for preventive services? For example,

could Medicare, which is really a giant HMO for everybody over age 65, cover public prevention in the 50 to 65 year age group? The benefits will ultimate accrue to the program; is there some way to model that? That is not a new idea, but I think it is something that could be worth promoting. Another idea might be a prevention "credit bank" to keep track of the delivery of evidence-based preventive services on a population basis and therefore avoid duplication of effort and provide for rational delivery of these services over time.

We also know that the evidence for clinical preventive services could be better. There are unexplained variations in care, slow progress on the improvement agenda, and the clinical community unfortunately has little sense of urgency here. The variations that have been documented by the Dartmouth Group include admission rates for common conditions that vary five to ten fold. That is true across the board; Figure 19 just shows some examples.

I should point out that the private sector has a role and, I believe, a key responsibility in promoting evidence-based medicine. UnitedHealth Care takes clinical evidence from the British Medical Journal and distributes it twice a year to over 500,000 physicians and advanced practice nurses. We view it as our responsibility to try and diffuse the evidence that is out there as broadly as possible, not only to physicians directly, but also through workshops, CD-ROMs, PDAs, and through other partners.

The private sector can also be a source of innovation based on data and analytics, on consumer information, and consumer decision support. Dr. Straley spoke about getting information directly to the consumer. Figure 20 identifies some of the capabilities of UnitedHealth Care through our consumer portal or myuhc.com.

The portal has information, a health risk appraisal, best treatments, benefit information, physician database information, performance profiles, and so on. We view this kind of web-based technology as a major step forward in promoting consumer-directed health care. We also have a whole other company that has 24-hour nurse lines for counseling, behavioral interventions and so on.

Another innovation is the use of reminder programs, pioneered by the health insurance industry with leadership from NCQA. I mention these not because you haven't heard about them, but just to show you some of the scale that insurance companies are capable of—that is, 430,140 reminders for mammography screening sent out last year and 537,913 reminders for cervical cancer screening in the form of attractive and thoughtful Hallmark cards with the result that screening is driven from 50 to 69 percent and from 70 to 78 percent for breast and cervical cancer screening, respectively. The point here is the industry's ability to send out large numbers of reminders, to

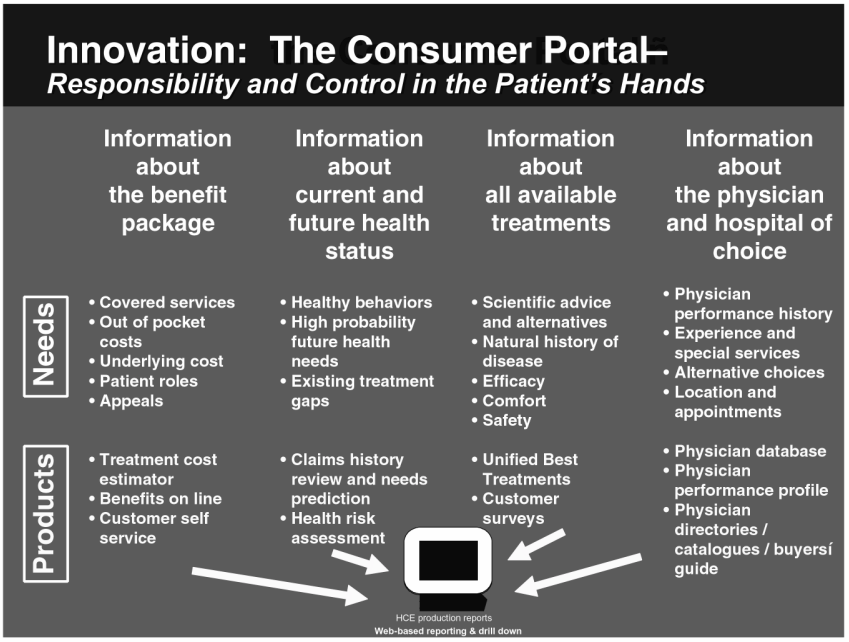

Figure 20. UnitedHealth Care's consumer portal promotes consumer-driven health care.

of track performance, and to increasingly customize these programs based on the use of information technology and predictive modeling as an example emphasis on detection, prevention, and appropriate care. As Dr. Freeman commented, navigation is another increasingly important facet of trying to actually execute and get services delivered. Consumers find themselves in a very fragmented, uncoordinated delivery system, and so greater navigation capability is another thing in which we have invested heavily.

In the last few minutes, let me talk about what I see as the big issues, problems, and questions and ask the group to think with me about some of these fundamental issues that haven't had sufficient attention. These generally center around values, choices, and resources. First, why cancer prevention instead of disease or morbidity prevention? In promoting an agenda, why not look at all of health care spending? Fortunately, most of cancer prevention actually is good health improvement, as was noted by the IOM report. Second, what is the role of personal responsibility? What role should be played, especially during an affordability crisis? Some of you may have seen the article in the Wall Street Journal, "Skyrocketing Health Care Costs Pit Worker against Worker. Employees gripe that those with bad habits drive up insurance charges for all." The more you push a preventive medicine

agenda, the more this may raise challenges. Is the forklift driver too fat, for example?

Finally, who is responsible for channeling resources from ineffective to effective care?

The fundamental problem is simply this: too much money is being spent on things of marginal or no value. So while the challenge has been framed today as getting more resources for cancer prevention, for screening, for early detection, the real challenge, in my opinion, is national reallocation and redirection of resources from things that have little value to things that have proven value. In fact, services for which evidence of benefits is lacking should be excluded from coverage. For example, routine screening of smokers using spiral C-T does not presently meet standards of evidence, even though it, like a number of other technologies, is suggested to the public as a possible preventive test that a person might want to have.

As a solution, I propose a national discourse on the realities of health care. Health care is expensive; billions of dollars are wasted on services that have little or no value or are even harmful. There is no consensus on an essential benefit package. If we had one, I believe that preventive services of proven merit would be in it. A dialogue to spread this sort of information would be helpful. Fundamentally, we don't have a system in place to analyze the sources of waste, redirect resources to more productive uses, and to promote evidence-based medicine as the standard. This kind of a report and this symposium present an opportunity to raise that resource allocation issue, because there is ample evidence from the report itself. For example, resources directed at smoking cessation have potentially greater benefit than further intensification of screening, yet this is not a Medicare benefit; seventy percent of colorectal cancer cases occur in the Medicare population, 14.1 percent screened, no change since 1995. Yet, PSA is covered in the Medicare program, although not recommended by the U.S. Preventive Services Task Force. If the largest public payer doesn't step up to the plate and drive change like it has in other aspects of organization and financing of care, then it is difficult for the private sector to lead on this front.

So, I would hope, and I have a very specific suggestion, that the group think about a codicil to recommendations two, four and seven in the report relating to a national strategy, to coverage, and to federal programs. The codicils should say something to the effect that resources should be redirected away from ineffective care, non-evidence-based care, towards effective evidence-based practices to achieve those aims. I think each one of these sectors has a role in that redirection. The American Cancer Society has a tremendously important role as the lead voluntary organization in this field, to raise the issue not only of advances in research at the basic level, at the translational level, but also to encourage the effective delivery of services to the entire nation, to all of our population, particularly those who are most

underserved. The way that will happen in a resource constrained system is to push for resource reallocation. The Institute of Medicine can play a role, as it has in the *Crossing the Quality Chasm* report (Committee on Quality of Health Care in America, 2001), in some of the work that is being considered relating to taking up the challenge of an essential benefit package and what might be in it. The public sector clearly has a role in ensuring that evidence-based medicine becomes the standard and proven evidence-based preventive services are in place, and the private sector role is to support innovation, to go to scale, to continue to support evidence-based prevention and screening, and to work with the other sectors to make all this happen.

Comments, Questions, and Answers
Len Lichtenfeld, M.D., Moderator

William Dietz, M.D., Ph.D., CDC: My question comes from a book called Epidemic of Care by Halvorson and Isham (Halvorson and Isham, 2003), which talked about how effectively we have insulated consumers from the cost of their disease care, and how important it is to begin to make that connection. Could the speakers comment on how the various organizations have attempted to do this, because I think it affects both the costs of disease care as well as the accountability for preventive care.

Dr. Sandy: This is a very hot topic in the private sector. The trend is for consumers to commit a larger proportion of their resources, greater skin in the game, as they say. One of the challenges is that people do need a far more important educational process about where health spending makes the most sense than I think heretofore has existed. Concomitant with the idea of having more consumer resources in health care has to be far greater education.

One of the system challenges I see is that the level of knowledge about health promotion activities tends to be quite limited, even among relatively well educated people. Most people think if you just avoid bad habits, you will stay healthy, as opposed to increasing evidence that you must adopt proactively healthy behavior, such as physical activity, to stay healthy throughout the life span.

Dr. Staley: We have seen in our system and in other systems as well, that Medicare patients are now paying out of pocket for their drug costs, and they are not taking the drugs that are recommended. But with education and with provision of the least expensive choice, they will comply. So, our system is trying to provide that help now, because we are seeing that more and more out of pocket costs are being borne by Medicare beneficiaries as well as commercial subscribers, as our employer groups are transferring costs to employees. So we are trying to provide them with the least expensive choice

for the most evidence-based intervention. Patients generally choose the least expensive, least invasive, highest evidence-based choice that we can provide them.

Dr. Ron Davis, AMA: Dr. Sandy, I just wanted to follow up on your suggestion that we try to redirect resources in health care away from things that don't work toward things that do. I wonder if you have any thoughts on how we operationalize that. It seems it would be easier to add coverage to things that work that aren't now covered, like preventive services covered by Medicare, rather than ask Medicare or UnitedHealth Care to retract coverage from things that have been covered for many years and are now found to be ineffective.

Dr. Sandy: It is always easier to add, which is why we have such an expensive health care system. Part of the answer, it seems to me, lies with getting the broader public to understand the things that people in this room understand about what works and what doesn't. My guess is that most of the public would consider restrictions on ineffective care to be a bad thing, whereas most people in this room would think that would be a good thing. The American public is in a very different place relating to tradeoffs and choices, compared to the rest of the world. So, educating the public is one place to start. The second piece I think is more activism in Medicare and other programs in saying not just that something is ineffective but that it shouldn't be paid for. So, again, that is a role for organizations represented here.

Dr. Davis: It seems the greater challenge is dealing with all of the medical services for which there is no, or insufficient, evidence on effectiveness. If you look through the guidelines for clinical preventive services from the U.S. Preventive Services Task Force, over and over again you see there is insufficient evidence to recommend for or against. We have a lot more of that situation, I would think, than we do situations where we have solid evidence of ineffectiveness.

Dr. Sandy: That is exactly right. The challenge there is to direct resources towards the research agenda that was outlined in the report. We need much more research devoted to understanding what works and what doesn't, taking advantage of the clinical information systems that are out there, and in settings such as Group Health and other places, that can actually develop and extend the evidence base as a vital part of the answer.

Dr. Peter Greenwald, NCI: Dr. Sandy, do you feel there is enough in the way of authoritative reviews on this topic to give you the leverage to make the change? If so, I'd like to know, if not, would that be a useful topic for the IOM? There are private sector people I would like to contact about how to accomplish that.

Dr. Sandy: The more the better, in terms of valid, professionally sound, externally-based reference standards. At UnitedHealth, our guidelines and

programs are mostly not designed by us; we reference externally valid evidence-based reference standards. It is not something that an insurance company has come up with, for the very reasons that I think are well understood –that the standing of an insurer in this field is viewed with great suspicion. So the more there can be valid evidence-based standards promulgated by specialty societies, by voluntary associations, by federal agencies, by the Institute of Medicine, by groups that are recognized such as the Cochrane collaboratives, the better it is, the more leverage for the private sector in promoting evidence-based medicine.

Dr. Robert Smith, ACS: The statement was made that mandates are rigid, raise costs, and are typically not evidence-based. As there have been more and more mandates, these would seem to be anathema to the health insurance industry in general. But the other point you made is that it is hard for companies to take on preventive costs alone, in other words, to do the patriotic thing when all those around them are not. A very good example of this might be colonoscopy for colorectal cancer screening. It is very expensive up front. You then hand off a screened person to another payer; so this seems to be an area where a mandate might actually improve care for everyone. If all companies have to do it, then it benefits everyone as well. In addition, the remark you made about Medicare is very well taken. Here is an instance where private plans can deliver a healthier individual for Medicare later on, so some cost savings would be extended.

Dr. Sandy: The problems with mandates is that they are structural in nature. They tend to be rigid, so they don't flex with advancing knowledge. When there is new knowledge about a particular procedure or a particular population, because the mandate is written in statute, it becomes very challenging to accommodate. Mandates are also essentially coercive social insurance. We have decided that this procedure, this condition, has special status, so much so that it should be broadly socialized and the incurred costs spread out across the entire privately insured pool.

Mandates in aggregate raise aggregate costs, and in an affordability crisis environment when those costs increase, more people lose coverage. Those who lose coverage tend to be disproportionately people of low income and minority. So, my plea to the group is to think about the downstream effects of mandates, because they do sound like a viable way, particularly when there is a consensus, to cover a service such as prevention. But it probably makes more sense to think about broad public programs like the ones that I mentioned, extending prevention coverage by the Medicare program to people in middle age, because the program itself is almost guaranteed to accrue the benefits.

Dr. Nancy Lee, CDC: I would be interested in your assessment of the ability to get providers to change their practices to do evidence-based medicine. We have been involved in some qualitative research in the past year,

and I am profoundly depressed at the ability of physicians to interface with the U.S. Preventive Services Task Force recommendation to change screening patterns in cervical cancer. Granted, we do need to educate the public about the importance of doing things based on evidence, but the first challenge is to get the providers to buy into doing what we have evidence for.

Dr. Straley: I am very distressed as well about how to change practitioner behavior, particularly now when all our practitioners are being asked to do more with less. Staffing has been reduced; the number of physicians has been reduced; they are taking care of larger populations. A year ago, they said we can't do all that you are asking us to do. Our successful programs are those that were carved out of primary care. Our breast cancer screening program, our tobacco cessation programs were integrated; information was transferred back and forth. But the amount of work that had to be done by the practitioner was minimized. Now, we are hoping that our rules-based information system will prompt our practitioners to do the right thing, but we are starting slowly with a minimum amount of prompts, so that we are not overwhelming them with all the rules. But it is a very slow and incremental program to change behavior, even in our well-managed system.

Dr. Lee: The plan recently in cervical cancer was actually to lengthen the interval between Pap smears and to not screen women who had had a hysterectomy. In both cases, physicians dismissed those recommendations. I know those, but I don't do them. I screen women who have no uterus, and I believe in getting them in every year. In both instances, the recommendations would decrease what they have to do.

Dr. Straley: In our system they look at it as a workload issue, so we do screen at a lengthened interval and don't screen women who have had a hysterectomy. But even with that, they are saying it is still too much, we can't do it all, because we have got this large load of patients that are coming through the door that we have to take care of on a daily basis.

Dr. Sandra Reed: I am a practicing obstetrician-gynecologist, and I have experience with this issue. There is a lot of confusion for practicing physicians. You have a lot of hurdles getting information to them on guidelines. They are being bombarded by information from the American Cancer Society, the guidelines you just discussed, as well as the guidelines from the American College of Obstetrics and Gynecology. So, we do have a lot of information coming to us and have to decipher what is best for our patients. But we also see these patients on an annual basis, at least I do. I have the privilege of having a practice without a lot of patient turnover, so I know my patients well. Even if you are dealing with a guideline that women with hysterectomies don't need a Pap smear, period, or over a certain age they don't, you also have to take into account their high risk behavior in the past, because this does give them a risk factor. A lot of times, patients will not go

into that with you. You can ask them about it, and well, yes, maybe I do need a Pap smear.

Then you also have to overcome the anecdotal experience of physicians themselves, about having that one hysterectomized patient on whom you didn't do the Pap smear, who gets a vaginal carcinoma, so you have a lot of factors that you have to overcome as far as educating the physician. Plus, physicians are dinosaurs; we tend to practice what we were taught in residency. Overcoming that and changing behavior is very difficult once you are in private practice.

3

Group Discussions

Group Discussion I
Policy in Tobacco and Obesity

Dr. Clement Bezold, President, Institute for Alternative Futures, Moderator: There is a paragraph in the agenda that outlines some of the questions about tobacco and obesity. We want to address those and think about what needs to be done to implement Recommendations 1, 2 and 3 from the report.

Dr. Harvey Fineberg, President, Institute of Medicine: I'd like to begin by telling you a story about New Liquid Tide. I don't know how many people use this product. It was introduced about 20 years ago by Procter & Gamble at a time when they already had the leading washing detergent in the country, which was—guess what? Tide. But it was the powdered Tide. They developed a new, liquid product that they wanted to promote. This was a company that already had the market leader by the same name, so the consumer didn't have to learn a new name.

I just want us to think for a moment about the behavior change that the company was aiming for. You are a shopper. You wash clothes. You are in the supermarket. Picture yourself going down the aisle with your shopping basket, and you come to the detergent section. As you pass the detergents, you come to a detergent you used to buy, and there is next to it New Liquid Tide. This is the behavior change that the company was seeking. Instead of reaching like this, you had to reach like that. You were already prepared to buy. You already needed the product. You already knew the name. You just had to reach to another neighboring spot. That is the entire behavior change they were aiming for. In the early 1980s over the first six months of new product introduction, they spent $38 million to educate the American public, to promote this product, and accomplish the change.

Now, I tell that story so you can think about that behavior change, that investment, that prior predisposition compared to the challenge of tobacco or obesity. I think a moment's reflection will persuade any of us that we are really not yet serious about the investment needed to make significant changes in smoking, eating, and activity behaviors, although we have had significant success in reducing tobacco use. The 50 million people who are former smokers is an extraordinary success, but one fact that wasn't mentioned this morning is that, on average, the remaining smokers smoke more than the people who quit smoked before they quit. We are getting down to a harder core than in the previous smokers, and we still have the problem of new beginning smokers.

Now, to our question about policy for tobacco and obesity, I think first there are meaningful lessons to be learned from the tobacco story thus far, because it is a tremendous partial success. The lessons to be learned and to be translated include the scale of investment subsequent to the tobacco settlement that has been deployed and, in public health terms, lavished on the problem, the degree of success yet with still more to do, and how far we are from similar progress in obesity. If we had done a color chart of the country's smoking rates like the color chart of obesity rates we saw this morning, it would have gotten progressively lighter but there would still be plenty there to work on. The main message is that the scale of commitment required is orders of magnitude beyond where we are accustomed to thinking in preventive programs aimed at fundamental behavior change.

For obesity and for tobacco, the amount of investment is still not where it needs to be. The reason for that is simply that there isn't any one entity with the resources that has an interest in making the changes in the right direction. It is a social good for which social investment is required, and that is hard to mobilize. Part of our task is thinking together about how we can and will be successful in mobilizing the necessary investment. I am eager to hear what stimulating thoughts others here have and what we can discuss together.

Dr. Robert Croyle, Director, Division of Cancer Control and Population Sciences, NCI: One of the lessons of the tobacco control movement from a science perspective is that there were a lot of programmatic activities that we tried out early on in school-based prevention and other domains that were not terribly informed or effective. One of the reasons was that we grossly underestimated the importance of addiction and that we were dealing with an addictive drug. Once that was more clearly recognized, we were able to bring to bear pharmacological agents to help deal with the addiction, and we were able to double cessation rates.

Therefore, in obesity and physical activity, given so much of the research effort is focused on obesity and weight loss at a clinical level as opposed to the public health effort, we, in collaboration with CDC and others,

have got a big public health research agenda. I am concerned that NIH hasn't quite gotten that yet. When we talk to colleagues across NIH, public health relevant research is always a bit of a struggle and is always a fairly small slice of the pie. Therefore, the speed of responsiveness to something like the obesity epidemic which is changing so rapidly is going to be tough to achieve. This kind of group, this report, and these collaborations can help each of us to get our own broader organizational entities involved, although that is difficult because being organized around diseases, not risk factors, makes it hard to marshal rapid coordinated efforts targeted towards public health issues and risk factors.

Another lesson is the importance of changing social norms and social climate. Part of turning the corner in terms of tobacco, even as we lose ground with the cutting of state programs, is the changing social norm about tobacco use and its acceptability. This has been reflected in clean indoor air laws and other policy efforts.

For tobacco, policy changes have been important in addition to individual level efforts and have been enabled by the shifting of attitudes and social norms. Also important for tobacco control has been understanding the industry. You have got to understand the product that the industry is marketing. Clearly, it is easier in the case of tobacco than it is in the case of food, nutrition, and diet, but I think we need to get more folks in the public health program health research world learning more about and understanding more about the food industry, how it operates, how it functions. People in public health education and promotion need to understand how to work on obesity and diet, sometimes around but sometimes with industry. It will be harder than for tobacco in the sense that it is more complex. It is more varied. It is much harder to determine who the good guys and the bad guys are, because with large industries there are good and bad elements and products and sectors throughout.

Another lesson was the ineffectiveness of the use of single isolated channels for behavior change and public health change. School programs sound great, but they are not enough on their own. Communication campaigns are great but not terribly effective on their own. A lot of the debate emerging in obesity and diet is the same debate we had 15 or 20 years ago in tobacco; people were arguing over whether we should we do school prevention, or media campaigns, or should we focus on policy, or is it just all about taxation, or is it all about drug development for nicotine replacement. Of course, the answer is that it is all of those. The effect size of each one of those is greater when used in conjunction with others. The interaction effects make for synergy.

Another lesson is looking to simple things that can be done with big impact. Dr. Dietz has talked about the number of venues in the area of physical activity. It took a while with tobacco. It took too long to figure out

that sometimes you could do something that didn't cost a whole lot but would have a big impact. Some of those things were in the policy domain. When I addressed the committee for the IOM report as they were first talking about this report, I spoke about what I labeled as MINC, minimal intervention necessary for change. When dollars are tight, one of our focuses should involve trying to identify those things that have a big bang for a little buck.

Finally, in communication and campaigns which was Recommendation 10, we have had a real struggle trying to get other Institutes at the NIH talking about how to synergize all the fragmented health promotion campaigns that are scattered about, the National Cholesterol Education Program, National High Blood Pressure Education Program, the Obesity Initiative, our Five-a-Day Initiative, and on and on. There are bits and pieces of health communication campaigns all focused on chronic disease prevention, most of them focusing on similar risk factors. The effectiveness of these is undermined by the fact that they are scattered. They are independent. They are not synergistic or coordinated. How do we avoid the diffusion of responsibility that occurs once we are not talking about disease specific problems? Here we are talking about cancer prevention and early detection, but I think it really does make sense in terms of planning and coordination to talk about chronic disease prevention. Therefore the disease groups, both public, private, non-profit advocacy, all of us government and non-government, still have a way to go in terms of putting our forces together.

Bill Corr, Esq., Executive Director, National Center for Tobacco-Free Kids: I am very pleased to be here and hope that I can try to adapt what I was going to say given the very thoughtful comments that have already been made so we can get to the discussion. There are three big lessons that have been learned from tobacco that still need to be applied in tobacco and maybe have a good deal of relevance for obesity.

First, with all the attention that is being paid to tobacco reduction, with all the money, and resources that are available, with all of the study that has been done on the impact of tobacco and how to address it, there are still a number of major misunderstandings. I say this not based on a scientific sample but on my own personal experience as I have gone around the country talking to state legislators and city council people and members of Congress. You would be amazed at how many people think the tobacco problem is fixed. I think that is because they are part of the 75 percent that don't smoke, and they don't see it very much anymore. They hear things like a 27 year low in high school seniors smoking. Although 26.5 percent or so of high school seniors are smoking. They hear the first half of that and not the second. They hear adult consumption is declining overall, but we still have 25 percent of adults smoking, and, as has been said, this may be the tougher group. They hear about all the people who want to quit, but they don't hear about the

small percent that succeed. They understand that there is lots and lots of money—would you believe that over $20 billion a year is generated by the master settlement agreement and by tobacco excise taxes. But of that $20 billion, only about 3.5 percent this year is being spent on tobacco prevention. Unfortunately, much of the rest is going into deficit reduction.

Many people think that the effort that we are making now will suffice, that we just have to keep doing what we are doing. What they don't realize is that the industry, in the three years since the national settlement agreement, has increased its promotion and marketing expenditures by 66 percent. The industry is not letting go of this issue by any means, which makes it all the harder to succeed with prevention and cessation programs. All of these misunderstandings lead to the possibility that we will actually undercut, not succeed with, our current efforts in tobacco. Many people think there is enough tobacco money so that we can share some of it for this other major public health crisis we have got in obesity. We would undermine our tobacco efforts. We would underfund our obesity intervention efforts. We simply cannot allow those kinds of misunderstandings to continue which is why this report is so valuable.

We have to find some new ways to overcome these misunderstandings. I know that it is daunting to think in terms of new resources for public health. At the federal level we have got huge deficits. At the state level, you have all been reading about unprecedented levels of deficits in many states. However, I can tell you personally from over 20 years of experience in Washington, on the Hill, in the Executive Branch, that if we in the public health community are shy about raising our voices for what is needed in public health, we will get nothing. A long time ago a fellow Hill staffer was pushing very hard for money at a time when there were limited dollars and I said, "Brian, don't you think you ought to take into consideration all these other needs?" and he said, "Somebody else who is advocating for those needs has got to speak for them, but if we don't speak up for our needs we are not going to get any money," and it is true about public health. We simply cannot be intimidated by the difficult budget situations.

We have to take a crystal clear message to our elected officials and to our policy makers that we must spend more money on public health. We need to spend more money on obesity, and we have got to use the money that we have for tobacco prevention and cessation. We are an advocacy organization so we can speak out. I know that there are many organizations, including the IOM, that have some limits on what they can do in terms of being advocates as opposed to providing objective advice, but the public health community is going to have to be more aggressive if we are going to get the additional resources that we need.

Second, I mentioned this morning that elected officials, as a general rule, do not know about the evidence-based solutions that have already been

developed and that are being used. I was in the State of Maine talking to a legislator. Maine is one of the most progressive states in terms of its tobacco prevention efforts—36 percent reduction in high school smoking in three years. They have got a state-wide clean indoor air law. They just amended it to strengthen it. They have taken all their master settlement agreement money and put it into the Fund for a Healthy Maine. Part of it goes to tobacco prevention and cessation. Part of it goes to other health care. They are exercising leadership across the board; both parties are dedicated to creating a healthier Maine because they think it is going to be a more economically advanced Maine, and they have just done a spectacular job. But even in Maine, talking to a legislator, you hear comments such as: "If I take a dollar and put it into expanding one of our research centers, we will get $8 from the NIH. That is a lot of research funding. So, I know a dollar spent there will get me $8. What will a dollar spent on tobacco control get me? I will feel better, but will it get me anything?" It is a very important question, one that we have to be able to answer with legislators across the country.

There is a strong evidence base for raising excise taxes; a 10 percent increase in tobacco prices causes a 7 percent reduction in the number of kids who use tobacco, 3 to 5 percent reduction in the amount that adults smoke. Since, January 2002, 30 states have raised their tobacco taxes, some to very high levels that no one ever dreamed possible. The problem is, as soon as these state deficits are solved you will see the end of tobacco tax increases. They use health rhetoric now, that it is good to stop kids from smoking. However, what they are really trying to do is solve the deficit problem. We are again going to have to fight hard to keep people using evidence-based solutions for public health purposes. Many states, New York, Delaware, Connecticut, Florida, have all passed statewide clean indoor air laws. Yet you still hear many, many legislators espousing the industry's line that this is going to hurt business. All the evidence is that it either has no effect, or it actually improves business.

The third big issue is that we have to have an implementation plan. I know everyone is committed to seeing the report implemented, but you have got to have an action plan and that means that organizations have really got to pull together to figure out how are we going to get legislators better educated; how are we going to get the provider community, the health insurance and health plan community, and employers better educated about the value of cessation. We have got to get down to concrete steps if we are going to make progress. I think it will be all the tougher with obesity. As was said, so much time and energy has been spent on tobacco, a great deal has been learned. Now that same learning curve is going to occur with obesity. Hopefully, it will be faster, but organizations have got to be assigned responsibilities. They have got to take responsibilities and be coordinated and really push the implementation of these kinds of recommendations. Too often these

excellent objective recommendations based on good science and good evidence are articulated, are sent around the country, and they go on somebody's shelf, and there just isn't any follow through. So, we have got to become much more proactive and determined to implement these recommendations.

Dr. William Dietz, Director of the Division of Nutrition and Physical Activity, CDC: What opportunities are there to link and create synergy between policy initiatives for tobacco and obesity? We have to be quite clear that there are two intersections of obesity and tobacco use. One is the covariance of tobacco use with obesity and other risk-taking behaviors, and that suggests to me that there may be a core of individuals who are in both camps for whom much more intensive and perhaps non-public health approaches might be merited. The second is that increasingly, particularly among adolescent girls, smoking is used as a weight control measure, and concern about weight gain is one of the barriers to smoking cessation. So, I think that there is an opportunity for thinking about combined strategies that address these two overlaps.

With regard to tobacco policy successes and the implementation of obesity related policies, it is very important to recognize that we are in a much more primitive state with respect to obesity control than we are with respect to tobacco control. Some of that has to do with a lack of evidence, or the lack of understanding I should say, because, although the public perceives it as a cosmetic issue, the evidence is that obesity is a health issue. In contrast, tobacco is widely perceived as a health issue. This difference was brought home to me by an African-American physician who started a weight control program in an African-American community in Kansas. She found as a result of her focus group work that African-American men and women did not understand the linkage between obesity and type 2 diabetes and its complications. In contrast, an extensive series of reports has identified tobacco as a health issue and made it possible to move forward into policy.

In contrast to tobacco use, stigmatization does not work for obesity. There is no group in the United States that is as stigmatized as those who are overweight. Despite that, the prevalence of obesity is increasing. In contrast, a reasonable argument could be made that stigmatization of smoking has been quite effective at reducing smoking rates. Stigmatization has been one of the consequences of the non-smokers' rights campaign. One of the conclusions that is quite clear from the tobacco experience and should hold true also for obesity is that the medical approach has a role that can't exist in isolation from the public health approach, as others have said.

A fourth important point is that, in contrast to tobacco use, obesity is much more complex. Tobacco is a single product, and there is no evidence that any tobacco use is beneficial, whereas you can't survive without eating. Fifth, vilification of the industry, which has been so wide spread in the to-

bacco wars, is probably not going to be effective in the food arena despite what the tobacco lawyers would have us believe.

Food industry groups are responding to consumer demand, and they do what they do very well. They produce an inexpensive product that is readily available, tasty, and quick, and we haven't developed food alternatives that meet those same criteria. One of the risks that we face is that if we begin with opposition to the food industry, we lose the opportunity for alliances that I believe are going to be necessary to move this issue forward. Housewives, who 20 years ago spent an hour preparing dinner, are not going to go back to the old days. Quick service products are with us for the foreseeable future. Under those circumstances, the strategy needs to be to change the product and change the demand for the product. In contrast to the tobacco issue, the role of public health in the obesity epidemic is to help create a demand for those products if industry moves in that direction. I think there is every indication that that movement has started; the decision of PepsiCo to eliminate trans fat which has nothing to do with obesity and to lower the total fat in their products is one of the examples of industry's responsiveness to consumer needs.

Now, another reason for partnering with business is that we are not going to have the resources that business has to promote healthier alternatives. I think there are opportunities for partnership and understanding how to develop campaigns that meet needs from the public health or governmental perspective as well as the industry perspective. The other important point about industry is that we tend to think of industry only in terms of the fast food industry, when, in fact, other industries are potential allies. There may be very strong vested interests in the business community that are willing to support strategies to reduce the prevalence of obesity because so much of their income goes for paying the disease costs associated with obesity in their employees.

Finally, in contrast to state tobacco programs which have been free standing, the obesity program, that we are beginning to initiate within 20 states this year, has to connect with the other chronic disease efforts. Partnerships in that respect are crucial. There is an emergent broad alliance. The American Cancer Society, the American Heart Association, and the American Diabetes Association, the American Dietetic Association, and the American Academy of Pediatrics have all initiated activities in this area, and the Washington Business Group on Health has established an institute on obesity. However, we do not yet have a clear focus on the strategy. There is a consensus that a problem exists, but there is no consensus yet about what to do about it. In contrast to tobacco where it was quite easy to say we must stop smoking, what do we do about obesity? We do have some strategies, like promotion of breast feeding, control of television time in children, and physical activity, but we don't yet have a food-related strategy.

I should finish with a word on disparities. I don't have a clear idea yet about how we craft the strategy specific for the groups that are most affected, but I think we have moved towards identifying the most vulnerable populations that may contribute a disproportionate share to the burden of disease associated with obesity. The first of these is children and adolescents. Despite the fact that they only account for 25 percent of adult obesity, obesity which has its onset in youth and persists into adulthood is much more severe in adulthood than obesity which has its onset then. The second group includes African-Americans and Mexican-American children and adults; both males and females have a higher prevalence of obesity than Caucasian youth or adults. A particular problem is the group that has a body mass index (BMI) greater than or equal to 40—roughly 100 pounds overweight. Five percent of the U.S. population have a BMI over 40, but 15 percent of African-American women have a BMI over 40. This suggests to me that African-American females are another very important and vulnerable population group for whom very specific strategies that address culture, socioeconomic status, and social justice become very important**.**

Dr. Clement Bezold, moderator: You mentioned the PepsiCo issue. As a futurist, I read the press about this. It has been getting a lot of attention, front page of the Wall Street Journal and in Forbes. Pepsi is in effect trying to make its product line, its portfolio across the board, healthier. Do you consider them as an ally? Would you interpret that as an opportunity?

Dr. William Dietz: I think it is a very important opportunity. I think their market research is telling them that this is an issue whose time has come, and they need to position their products to capitalize on what they see as a shift in consumption patterns. A couple of months ago, someone from the advertising industry commented that 15 years ago products had to begin to address diversity. That was clearly an issue whose time had come and required a response in crafting messages from the industry. He went on to say that today we need to do the same thing for obesity. This is an issue that is going to be with us, that is going to be pervasive, and the impact of obesity on products needs to be addressed or their will be marketplace consequences. I think that reflects a growing sensitivity on the part of both industry and advertising to the importance and relevance of obesity.

Participant: I am a clinical professor at George Washington University and CEO of a new company called Diet Fit, Incorporated. I find the comments very interesting, and I have a proposal regarding nutrition strategy. There is an imbalance between the motivation of the food industry that depends on increasing food consumption for its products and the desire to shrink portion sizes and slim down the population. This conflict has to be resolved through incentives or disincentives because that is the only thing that really seems to work in a free society. It is difficult to persuade people to give up food addiction or habits which have been instilled in childhood

and which they have lived with all their lives. I have seen that in different cultures that live in the United States which follow their dietary patterns faithfully from childhood.

Could we consider a tax on calories? Calories obviously come more from fat than from protein and carbohydrates, so a tax would be a disincentive to include fat because you would be raising the price of your product. It would encourage the creation of lower calorie products. As fat has decreased in some products, sugars have gone up to compensate for loss of taste. The result is that people who think they are consuming fewer calories because they choose low-fat products actually are consuming more calories because of the fundamental change in the formulation. That would also be overcome by a tax on calories. This could in effect subsidize healthful food but that might introduce a higher level of complexity, and I think most healthier foods can be lower in calories anyway.

Dr. Tim Byers: If the goal is simply raising money with a tax on calories, we can do that, and we can raise money. Many small taxes on soft drinks currently raise a lot of money. If our strategy is to begin to tax and manipulate the prices of foods enough to affect healthy eating behaviors, I just can't imagine that that will be successful. That is too complex and would not get broad public support. I don't support it, and I am a nutritional public health person. Given the wide range of foods, imposing a tax in order to affect prices that would then in turn affect behavior I think is a losing strategy.

Dr. William Dietz: I think that a tax requires several elements that are not in place for obesity in contrast to what is in place for cigarettes. The first is a clear linkage between what you are taxing and its consequences. You can tax tobacco because you know there is a disease consequence. I don't think there is an adequate evidence base that justifies calorie taxation, anymore than you could justify taxation on the other side of the energy balance equation. I suspect that incentives may work better. Secondly, the one survey I'm familiar with of attitudes of Americans about various steps that could be taken in the obesity epidemic ranked taxes extraordinarily low. On the other hand, we are willing to pay for improvements in school lunches or more parks and recreation facilities. So, although you may think taxes are a good idea, I am not sure that we have an evidence base that supports them or the political will to pass them.

Dr. Harvey Fineberg: You made the observation that there is the consensus more on the problem than on the solution or strategy for the obesity problem. We have been talking so far mainly about the food side, the nutrition side, not much about the activity side. From a strategic point of view, is it wise to be thinking about the obesity problem as a kind of energy balance problem which has intake and expenditure simultaneously in mind? If so what strategic implications does that have from your vantage point?

Dr. William Dietz: It absolutely is a problem of energy imbalance. One can think about it in terms of increased intake or reduced expenditure. I think there are two distinct strategies here. There is a nutritional strategy, but there is an equally important physical activity strategy. Ironically, even though we know much more about the changes in the food supply that have accompanied the epidemic, we have better evidence about the importance of physical activity to address it. Even though physical activity doesn't help people reduce weight very much, once their weight has increased it does appear to have a very substantial effect on co-morbidities associated with obesity. So, although we desperately need a food strategy that we can emphasize as much as the physical activity strategy, I think we can say for sure that we need to be promoting physical activity.

Participant: I am not oblivious to all the difficulties of doing this, but it seems to me price is used to control purchasing in this society constantly. Small adjustments in fuel prices for example produce hysterical reactions from the public who suddenly find the price goes up at the gas pump. It doesn't stop them buying the gas, but it does certainly affect them. I think you have to think how we make a choice in buying food, because right now we have a disincentive. Low-fat milk or skim milk is more expensive than whole milk, and so-called "health foods," or healthier foods, tend to be more expensive. That is working against what we are trying to do. A final point, portion sizes have pretty much doubled during the last 20 years which is the period of the epidemic because food is so cheap and because fast food joints offer, for example, two hamburgers for the price of one in a special deal. Everything is done to encourage over consumption, and very little is done to discourage it. That is really what I am searching for ways to discourage.

Dr. Ron Davis: I wanted to make a couple of comments and ask for reactions from the speakers. First, on the point about synergy between tobacco and obesity (including the relationship between smoking and body weight)—one of the biggest problems we deal with in smoking cessation is that people are discouraged by the tendency to gain weight after they quit. One of the points I make in the quit smoking program where I work is that if people can exercise or increase physical activity as they are going through a quit attempt, it will help them avoid that post-cessation weight gain, and secondly, it will help them deal with the stress of nicotine withdrawal.

There are powerful ways in which we can combine these two interventions (quitting smoking and increasing physical activity), and I think that this is particularly important because our DHHS guideline on smoking cessation actually states that you are better off not dealing with the weight gain situation with people who are quitting smoking, because they have all they can do to stay off cigarettes without worrying about another major behavioral change. That was the one thing that came out of our DHHS guideline on smoking cessation published in 2000, to which I took exception.

My second point follows up on what Bill Corr said about the need for a national action plan. We don't have a national plan for tobacco control as amazing as that may seem. The closest we come to a national plan for tobacco control is Healthy People 2010. As I have argued previously (Davis, 1998), the fact that Healthy People 2010 (and Healthy People 2000 before it) was controlled by the Federal government and was cleared through the White House and OMB makes it something short of a national consensus plan. In addition, most of the goals in Healthy People 2010 are not actionable. Michael Stoto, when he was with IOM, talked about how the goals need to be actionable so that you can have accountability for them. So, I would like to reinforce that we need to have a national plan for tobacco control. This needs to be a consensus plan. It should not be controlled by a federal clearance process, and it needs to be actionable with accountability.

Dr. Jon Kerner: That statement actually was the second point I was going to make about a national action plan. We actually do have a national action plan for tobacco control; it has to be cleared. It was a partnership effort made by Robert Wood Johnson, Legacy, NCI, CDC, and AHRQ. It spent like 12 months in development, and it has been 10 months in clearance.

Dr. Ron Davis: That plan you are talking about is the Blueprint document (*A National Blueprint for Disseminating and Implementing Evidence-Based Clinical and Community Strategies to Promote Tobacco-Use Cessation,* 2002)? It's just cessation though.

Dr. Jon Kerner: Yes, but it is a consensus plan addressing smoking cessation. It doesn't cover the whole waterfront, and your point on clearance is well taken. It takes a long time, and it really brings me to the question I have for the group which is that throughout the report, there is an implied assumption that we are all in agreement. That we know policy works, and everybody supports policy. I would like to suggest that we have a competitor for policy. That is the individual responsibility philosophy which is challenging the policy approach and makes it somewhat difficult to actually address these issues of tobacco and diet selectively. If we conceptualize, and I think many do, that this is about individual responsibility, it is sometimes harder to make the case for policy. Is there a strong and compelling demand for policy approaches outside this room?

Dr. Harvey Fineberg: There is demand, and there is controversy, just as you are pointing out. For those who argue for individual choice, I would point out that there are also powerful cultural determinants, the context in which we might think we are making choices. For example, look around this room. Look how we are dressed. Just take that obvious example. Look how many of the men in the room are wearing ties, how many women are wearing the kind of clothing we are accustomed to wearing. We don't even think about those decisions when we get up in the morning. We dress the way we

dress because that is the way we dress, but there is nothing obvious or ordained about it. We might think we have made a big personal choice by what tie we take out of the closet this morning, but that is individual choice within such a cultural constraint that the argument that these choices are devoid of powerful cultural determinants is, I think, flying in the face of everyday overwhelming experience.

Dr. Jon Kerner: Someone made the comment that very few policy makers understand what the options are. I would argue that they don't care. It is not a question of understanding. I would argue that their focus is on certain choices. Probably the most important choice is the choice at election time, but that is then followed by what choices are going to be made in terms of supporting an issue. So, it is more than the science; that isn't the argument. It is the willingness, interest, the political will to take this on, and I think there are lots of people in this country who still believe today that people are addicted to tobacco because they choose to be. People are obese because they choose to be and that we shouldn't be spending all this money on this. People are just making bad choices, and if they could just get it right they would be fine. I am curious whether you agree that that is an issue we have to address because I didn't really see it well addressed in the report.

Dr. Tim Byers: I think absolutely it is an issue we need to address in the way we project this. If we project that it is individual decision or the heavy hand of government through policy, that is the wrong paradigm. As you were saying, we all make choices in the social context, and in the area of tobacco, for instance, you lose your free choice when you get addicted. So, what is free choice about that? So, I think it is important not to frame these as either/or but how policy enables free choice and individual decisions.

Dr. Robert Croyle: Everybody loves policies that benefit themselves or their constituencies. Every advocate or lobbyist on Capitol Hill is pushing a policy of some sort. So, back to the point about the food industry, the trick is to identify policies that have the usual benefits to as many possible constituents and still achieve the goal that you are trying to achieve. Just as you would with any legislative political policy issues, you try to characterize this so that it not only achieves the goal we want to achieve, a public health goal for healthy eating for example, but also enables and empowers an allied constituency which it also benefits. One area where we work with CDC is with the produce industry about the five-a-day program. That is a large industry that is chronically stressed by changes in the weather, many commodities' oversupply, but one where we have a very strong alliance. We want to promote fruit and vegetable consumption, and so do they, and the amount of resources that that industry sector puts towards that campaign far outstrips the federal investment.

Returning to my earlier comments about MINC, minimal investment needed for change, I don't think we know what such investments are yet for

energy balance. I propose that as a major scientific question that we need answers to pretty rapidly, because I think there is still a lot of difficulty in terms of the small size of the evidence base regarding energy balance. In terms of tobacco, this report and many others run through the options, excise taxes are an example, a clean indoor air law is another example; one of the appeals of policy actions is their relatively low cost. In the areas of cancer screening and other cancer early detection technologies, a lot of evidence supports reminder systems as an example of a MINC, and that is oftentimes using the tools we have now in terms of information systems. Informatics and health technology provide us with a much longer list of potential MINCs than we used to have.

Participant: I feel that it is important to try to create some coordinated way of educating youth and the public about moderation, because it's hard to get a radical policy change. Can we try to make all these things we have been discussing attractive? We need to make healthy alternatives attractive and gradually change attitudes.

Dr. Robert Croyle: The food example is a good one. Efforts of USDA, most recently with support from Congress, to change the nature of the food supply in school lunch programs reflect the importance of behavior. In that case, modification of food preferences through exposure is essential at an early age, not targeting individuals and haranguing them. The five-a-day demonstration project partnership with four states and the USDA around the country provides some pretty good evidence that simply providing for the availability of fruit as a snack in school settings had a significant impact on behavior.

Once you move to adults and changing long-term behavior patterns, part of the challenge is that many of the environmental changes that may work more effectively in kids are tougher with adults. The IOM report, for example, talked about work site interventions. The evidence there is mixed, and it is a small effect. The major barrier for so many people now is the time barrier. Even if you have access, even if you have a trail, even if you have a health club membership, many people never go. We discussed the role of employers and insurers and payers in terms of screening and treatment of sick people, but a huge untapped, uncharted territory is employer support for time for physical activity.

Dr. Bruce Black, American Cancer Society: Regarding a national tobacco plan, I believe that there is an opportunity right now with state cancer plans. There are about 20 states that now have comprehensive cancer plans, and by this time next year all 50 states will have them. States are going to be implementing those plans mainly in the community, and this provides an opportunity for us to begin to put together tobacco, obesity, diet, physical activity and all of the rest of the early detection and research continuum. It would be wonderful to have a national kind of strategy; otherwise

these states are going to be floundering. You know in the states all of these programs are fragmented. So, we are trying to develop a comprehensive cancer control approach and in chronic disease as well. If we could come up with some actionable objectives, a national plan with ideas about how to integrate these pieces, so that they can, by leveraging each other, increase the power of the whole cancer community at the state and local level, this would be really fabulous. I think it is really a nice way of taking this IOM document that talks about the need for multilevel interventions and implementing them into the real world through this framework.

Dr. William Dietz: CDC is funding 20 states this year for nutrition, physical activity, and obesity programs, and the mandate that those programs have is to integrate across current state programs which include the cancer, cardiovascular disease, and diabetes programs as well as across agencies. Programs like WIC, for example, need to be part of the state plans for nutrition and physical activity programs directed at obesity. We are also asking those states to link to non-governmental organizations. I am still ambivalent about whether we should take the best of those programs and incorporate them into a national plan, or whether a national plan should be created which feeds down into those state programs. I think that the place where change is most likely to happen is at the community level through the state programs, and there is benefit in looking at those to identify the best practices that then go forward into a national plan.

The other program that is very relevant to this discussion is the Steps to a Healthier U.S. program which carries with it this year $15 million for communities to work on asthma, diabetes, and obesity through tobacco, nutrition, and physical activity strategies. Next year in the President's budget there is $100 million for those efforts. That provides an opportunity to give the kind of funding communities need to begin to implement these more comprehensive strategies, and in STEPS just as in our state programs, partnerships are mandated and expected. Hopefully some innovative and potentially effective strategies will emerge from those activities.

Group Discussion II
Payer/Provider/Managed Care Issues

Len Lichtenfeld, Moderator; One of the key items for the symposium and for the group discussion is to try to develop actionable items, a list of things to focus on that would be beneficial in moving forward.

Ms. Helen Darling, President, Washington Business Group on Health: I'm happy to comment on what employers can do, because there are a lot of misconceptions or misinformation about this sector. The Washington

Business Group on Health is a membership organization of about 175 large employers who are forward thinking and dedicated to finding innovative solutions to the health care cost and quality crisis. The organization has existed for nearly 30 years, and it is made up of companies that provide comprehensive benefit packages and have innovative human resource practices. Employers can play a very important role in providing information to their employees. The evidence, much of which is summarized in IOM reports, is that a little over 50 percent nationwide of health care is what it should be, which means that a little over 40 percent is not. Part of the concern of the employers is that we are paying for a lot of care that isn't doing anything useful and possibly is harmful. So, when the business community is asked for more money, the response is, wait a minute, we will give you all the funding we are giving you now, but stop doing the things that are either ineffective or downright harmful, and do the things that are effective with the current investment.

Of course, the question is also how we reallocate these resources. But the payers are not going to spend any more. The average family coverage in this country in January 2004 nationwide will be $12,000. The average pay package in this country is $27,000. Health care costs went up 14 percent, but pay rose only 1.7 percent. So at the rate we are inflating, we will be giving the average American worker more benefits in health care than we give in wages, which by the way are taxed (at least FICA and Medicare tax). So, actual take-home pay would be a minority of the total compensation package.

Before employers spend more money, they need more evidence. We need the health industry to provide short, crisp messages about what is truly effective. Perhaps, experts could give us one large table that lists interventions that are definitely effective, smoking cessation being the best example. Employers in America could let their employees know, through posters and other communication methods, that there is scientific evidence from the National Cancer Institute, American Cancer Society, and other authoritative sources: a) that these things work; b) that this is what they do for you; and c) that this is all you have to do to realize the benefits. Those very simple messages should be in bullet form, citing the authoritative sources.

I learned recently from CDC officials, that we should not tie the nicotine patch to a requirement that the patient receive counseling. The reason according to CDC is that you will pick up additional people if you don't force them to do both. I had always believed, based on earlier evidence, that the patch and counseling produced the best results. I was glad to learn that on a net basis, an employer would do better to not have the linked requirement because that writes off a group. So, this is something that is a big problem, that is preventable, that is a killer, and yet there isn't clarity on what to do. It would also be important to have the actual evidence, since real expenditures

with such a change could grow rapidly with concomitant success, which could alarm employers again.

So if the most knowledgeable people who are designing programs don't have it down pat, the average person out there trying to make Ford Motor cars, or pay claims, is not likely to be able to act on the information. It will be very powerful when we get targeted evidence-based treatment plans, options in the simplest form and clearest language, with the sharpest distinctions and with the easiest communications.

We had a program on smoking cessation that brought companies together with CDC and researchers and knowledgeable people, and they gave us advice. So, we are making the information available online to members. The aim is for employers to be able to download instructions on how to change behavior, and what information might make a difference. Employers could also provide the information to employees through their intranet. The IOM's report is very good about talking about options, but there is still a need for more clarity. There are two or three screening or diagnostic tests where there is relative agreement. But there are also two or three really big ones like PSA testing where there is a mixed message made even more complicated by the recent evidence about the test's accuracy.

One of the things that confuses my members is shared decision making. Shared decision making is offered when there is little or no certainty, or there are mostly negative messages. Nobody seems to have the answer, but we know that most of the male health officials are getting the PSA test for themselves. The public can see through this, so it's no surprise when people say I don't know what to do so I'll do nothing, and that may not be the right course. Physicians should understand that shared decision making is a way to deal with the fact(s) when there are no simple solutions and somewhat unsatisfactory options about which patients should be informed. Patients should be given an opportunity to decide whether they want the treatment or the test, but I think that if professionals would say that there isn't a definite answer, but other things being equal I would do this, that might provide some welcome certainty. Shared decision making tends to get thrown in when providers don't know with certainty what to do, but it should always be an objective of clinical practice, not just when there are no easy answers. For now, we will push those preventions that have certainty, smoking cessation and colorectal cancer being examples.

Dr. Sean Tunis, Chief Medical Officer, CMS: What I have to say is straightforward; it is just a problem of missing one word in the statute. Medicare is structurally a defined benefit program which means that categories of benefits are defined in the statute, so getting patient care is a defined benefit; durable medical equivalent is a defined benefit. The things that are not defined in the statute as categories of benefits are not coverable no mat-

ter how good they are, or how valuable they are, or how cost effective they are.

As an example, outpatient prescription drugs is a missing benefit category at the moment, and preventive care services is currently a missing benefit category, unmentioned in the statute. Not being explicitly defined in the statue means that the only way of extending services is a statutory change. The other part of the statute that is important to know about that goes along with this is the critical line in law [1862(a)(1)] that Medicare may only pay for services that are reasonable and necessary for diagnosis and treatment of illness and injury. It is not *prevention*, diagnosis and treatment; it is diagnosis and treatment of illness and injury.

The absence of the prevention language has meant that it is not possible to add preventive services in the Medicare program except from time to time through individual statutory changes. So, mammography screening, cervical cancer screening, osteoporosis screening, all were added to Medicare one at a time by congressional action and are therefore paid for by Medicare. Colorectal screening was added to the program in 1997, so that is now covered.

There is an interesting nuance and subtlety in that a lot of screening tests are also used as diagnostic tests. For example, fasting blood glucose or glucose tolerance testing for diagnosis of diabetes are also potential screening tests. The differentiation is that something is considered diagnostic and therefore coverable if it is done in the presence of signs or symptoms of disease. In other words, if somebody has weight loss, polyuria, fatigue, any of those signs or symptoms of illness, Medicare will pay if a fasting blood glucose is ordered, but if someone has a family history or three generations of diabetic family members, a blood glucose test on that person in the absence of signs or symptoms of the disease is not covered.

This question came up recently; Secretary Thompson was quite interested in adding glucose screening for diabetes, so we went through quite a round of discussions, particularly with our general counsel. The feeling was that the statute did not actually prohibit us from going through a regulatory process to add payment for diabetes screening. But it would have to be done through a regulatory process, and if we went through a formal rulemaking for this, we would also have to explain why we would be adding it for diabetes screening in the presence of high-risk characteristics and not for screening of other potentially discoverable conditions in the setting of high risk characteristics. So, anyway, that is just some of the legal and regulatory framework. Not to say that anybody that works up in Baltimore is constitutionally opposed to screening and prevention. It is simply an issue of very limited legal and regulatory ability to pursue that.

One other point to make, which is that in pursuing statutory change in prevention as a category of benefits in the Medicare program, one should be mindful that there are interests lined up that would like other categories of

benefits added to the program too, and some of them are fairly extensive. We don't cover telemedicine very well. There is no statutory authority for covering the evolution of electronic delivery of health care. For example, the current Medicare system will only pay for physician-patient encounters if they are face-to-face. That seems kind of unreasonable, because a lot of encounters can be accomplished quite efficiently through email or through some kind of electronic medium. But the statute doesn't allow Medicare to pay. Many people would like to alter the statute to allow Medicare to pay for these kinds of services.

There are a lot of people who would be interested in Medicare's paying for drugs and devices in the context of clinical trials. Medicare already pays for routine services rendered to patients in clinical trials, but not the experimental interventions, and only in federally sponsored trials. So, in other words, there is a fairly long list of missing benefit categories that prevention is competing with. It is not easy to make the case for prevention and not all the other equally meritorious, or arguably meritorious, services.

The recent House and Senate Medicare bills seemed remarkable for the absence of many preventive benefit enrichments to the program. The only ones I am aware of are payment for the initial preventive examination, waiving the deductible for colorectal cancer screening, increased payment for mammography, and diabetes screening. In the House bill these are, I think, the four items that deal with prevention, and there is nothing in the Senate bill that I'm aware of. I do think that trying to push for and make the case for preventive benefits as evidence-based, cost-effective services makes a lot of sense. I've also heard about some sort of flexible spending account for preventive services. Such an account would allow each Medicare beneficiary a certain amount of money. This was actually a recommendation of the Partnership for Prevention report (Partnership for Prevention, 2003) that somebody from CMS suggested. It would accommodate things like PSA testing in the absence of clear evidence. It would allow patient choice instead of a paternalistic governmental decision on benefits. It is not possible currently but an interesting theoretical approach.

Ms. Helen Darling: There is though in the House bill a medical savings account that is not an MSA, but actually more like a health reimbursement account. So it might be used for that purpose. It has a high price tag, so it may not survive conference.

Dr. Len Lichtenfeld: The Medicare Payment Advisory Commission in its 2002 report made the observation that the Medicare population has changed. The increasing population element is going to be the well elderly moving into the Medicare group, and we are going to have to pay some attention to prevention in this population. I am glad to hear you make comments about the current bills, because I have found it incredibly frustrating to try to get any accurate information about anything that pertains to any of

these bills. Dr. Gerberding from the CDC was talking the other day stressing the importance from her perspective of prevention as part of the Medicare bills. She said that she was going to be following them very closely as a top priority, so prevention is still on the table.

A second thought concerns a booklet I have on my desk describing Medicare preventive services for women. I found it dauntingly difficult to understand this book, because of conundrums, such as the Pap smear is paid for, but the examination to do the Pap smear is not covered, or this was covered in full, but that is covered in part. One of the important barriers to access for preventive care if you are not a wealthy person is the presence of copays. For example, in colonoscopy the 20 percent copay, even at Medicare rates, can be an obstacle.

Dr. Lewis Sandy: The only thing I would comment on has to do with vulnerable populations, those who have the greatest gap between what we know should be delivered and isn't, particularly for low income adults. Children are in far better shape because they have S-CHIP and Medicaid. Low income adults are increasingly going to be shut out of the health care financing system, to a great extent now, more as we move forward. So, in terms of disparities, and particularly focusing on how low income adults receive preventive services, this seems to be a major area that currently has, and will have an even greater gap as we move forward. That gets to issues of support for CDC in breast and cervical cancer prevention and screening and extending that to colorectal cancer. I don't see how low income adults are going to get screening for colorectal cancer unless something like this is put in place.

Ms. Helen Darling: The more we keep just saying general prevention, the more the world will tune you out. So, you need to be specific. It is very important you say what it is you want and provide the evidence. If you keep saying preventive benefits aren't covered, everybody just wants to walk away, because number one, they know they cover a lot of them; and the current cost and affordability crisis is not a sustainable business model. So, get specific, prove what works, demonstrate it, and it will get paid for, but it won't if we keep talking about general prevention.

Dr. Peter Greenwald: You mention that a lot is covered. What is a lot?

Ms. Helen Darling: A lot of care, much of which isn't labeled prevention. When CBO scored a new screening mammography benefit for the catastrophic bill, they scored it at zero, because they said it was already being paid for by Medicare as mammograms under general health care.

Dr. Nancy Lee: The two most important things I don't think are covered are organized evidence-based ways to keep people from, or help them stop, smoking, and the other big thing is to help people figure out how to lose weight and increase activity. I don't think either of those is covered, correct me if I'm wrong.

Dr. Peter Greenwald: The other thing I wonder about is pediatric/adolescent age group smoking cessation, or prevention which is a more effective.

Ms. Helen Darling: That's on our information list. Ways to help parents understand how they might be successful in keeping teenagers from smoking.

Dr. Susan Curry: The biggest risk factor for smoking initiation is parents smoking. So, if you target cessation, you will get prevention. If you look at the projections out to 2050 (I'm not saying we shouldn't be taking a longer view), your biggest gain in terms of reducing morbidity and mortality is with smoking cessation, not with smoking prevention. So, I think you don't want to pit one thing against another, but I do think that there are ways of focusing.

Participant: Since the initial premise of Medicare was for illness and injury, and that stems from a time when the population demographics were very different than they are now, and prevention was not understood in the same way—that money that is put out now would certainly be saved later with the smoking cessation programs—could a regulatory solution be worked through Congress to change the basis of the illness and injury wording in statute?

Dr. Sean Tunis: I think there is a pretty clear consensus that the historical structure of the Medicare program as a statute that was written in the mid-60s is out of date. It was the episodic acute illness and injury model. We didn't think of the care of the elderly in terms of management of chronic illness over time, coordinated care, and so on. That being said, given that that is the legal statutory structure of the program, it would have to be changed through a statutory mechanism. That is certainly not something we should take off the table, but remember that part of the reason for the defined benefit design has to do with setting limits to resources expended. I suppose it is possible that if Medicare became a means-tested program, as some would have it, we could move away from defined benefits. But when you start playing around with the fundamental structure of the program, you can't just fool with little pieces of it.

Ms. Hellen Darling: There is some value in just picking one or two unequivocally agreed upon conditions, or circumstances, or treatments, or diagnostic screening, or whatever it is. The reason some have prevailed and others haven't is because they had a compelling case. The problem with going in with lots of things is, you lose them, but if you go in with smoking cessation, for example, that is something that you can define sufficiently, the evidence is compelling and has been for awhile and is getting better and better. It is much easier to continue to fight off all the other interests, because you have the evidence and they don't. There will be an attack, but the nar-

rower and more compelling the argument, the easier it will be to defend, and the harder it will be for others to make the same case.

I tried for example to change mental health benefits in Medicare, and not only got eaten alive by all the usual forces including all those who wanted their own pet project, but we even got attacked by the different professions, because one professional group said, if you let others come in, it will kill the bill. Then the others said, if you don't let us in, we'll kill the bill. So even with something there is no argument about, there are these other forces. But I think probably smoking cessation may be one which you could define narrowly enough to make it really attractive for everybody.

Dr. Sean Tunis: As a fairly good model recently, medical nutrition payment was actually added as a Medicare benefit. Interestingly, medical nutritionists had not previously been official Medicare providers eligible for payment under Medicare. They came in with an IOM study on medical nutrition therapy, with the best evidence supported condition, and what really helped in the bill too was that the Secretary was asked to do a report on additional conditions for which medical nutrition therapy could be extended.

Dr. Len Lichtenfeld: What I think I am hearing is that clearly prevention in Medicare, as separate from commercial insurance, is a real issue and needs further attention. That requires study and it also requires action. Unfortunately, we had hoped that this discussion was going to occur as part of the debate of a restructuring of Medicare. The present restructuring is happening quickly and quietly so no one really knows the details as yet. I don't know whether our chance has passed.

Ms. Helen Darling: I think members of Congress would say we're targeting now on the prescription drug benefit because that is so important. But if anything, they will come back with renewed enthusiasm. They do know they need to restructure the program.

Participant: I just wanted to make a couple of comments. When you start talking about evidence-based and speaking about things like behavioral interventions or behavioral modifications, what works in one population isn't necessarily going to work in another. When you think about evidence-based, you need to think for whom, because if you work in a specific population and you are talking about weight loss intervention or other sorts of physical activity programs, one program is not going to be effective for everybody.

Dr. Peter Greenwald: Is there evidence that smoking cessation for the Medicare population is effective?

Participant: There is a lot of evidence, but not for the cancer risk given the lead time for development of cancer. The evidence is good for cardiovascular risks. There are effects within five years.

Participant: I can't quote it chapter and verse, but there are some studies that have been looking at recovery from invasive procedures including

cancer treatments with benefits in recovery time to smokers who quit versus those who don't. So it is not just the diseases but physiological reactions.

Dr. Len Lichtenfeld: CMS has a demonstration project where they chose seven states, and they are going to randomize usual care versus special care, including paying providers for smoking cessation in the over 65 population. Accrual for that program is supposed to be done in September 2003. They want 40,000 people, they've got 5,000 so far, I believe. I'm sure that there is evidence to show smoking cessation is effective in this population. The general principle is that prevention—I think as one of the other comments for this meeting—is not only good for cancer but applies for a number of other conditions that we discuss.

Dr. Cheryl Heaton, American Legacy Foundation: I'm not sure if I agree with the primacy of cessation as primary prevention. I'll share with you a document that RTI prepared for our board at the American Legacy Foundation, where we do spend a great deal of our resources on primary prevention of smoking for the youth campaign, a media and grass roots campaign called the Truth Campaign. What they concluded was that they were roughly equivalent. You could stop a lot more from ever starting with the primary prevention and media campaign and grass roots activities, but of course the payoff would be far delayed. But you have got a four to one preferential impact with the dollars spent in adolescence versus further in the life cycle.

When I became president of this foundation three years ago from my former position as Professor of Public Health at Columbia, it would have been impossible for what I'm about to say to have come out of my mouth. So, I am a convert to something that I had very little faith in during my 20 years in public health prior to coming to this job, that is, the ability of mass communications to substantially reframe the way Americans view any particular issue, as a consumer or even in terms of how they feel about it as a lifestyle question, and whether they even view it as a lifestyle question.

I'll take the Truth Campaign as an example, where we have an enormous impact on stopping young people from picking up the smoking habit, probably about equivalent to the impact that price has had. For instance, by simply reframing the act of smoking, in the case of adolescents, as a rebellion, to not smoke is rebellious, because there is a corporate engine out there that needs you for continued profitability. The result is, it reframes everything. I think that we underestimate the role that mass media can play on changing adult behavior around things like diet. I don't think we have ever made the investment that would be equivalent say to the investment that we have made in the Truth Campaign, or that ONDCP is making, I think unfortunately in some respects not terribly fruitfully, in the drug campaign. My own view is that they chose the wrong drug.

I am now a great believer in the impact of mass media. If we were to invest three to four hundred million dollars a year as a mass media campaign, so that every man, woman and child in the United States would have five to six impressions per month, I think you would be amazed at what would slowly happen culturally. I think the massive decline in smoking that has occurred in California is almost entirely attributable to the mass media campaign activating peoples' thinking about smoking. It resulted in the change in the clean indoor air laws; it resulted in many more people seeking cessation services; it resulted in many adults quitting, and children didn't start because they didn't see their parents smoking. So, we have to be careful not to give the impression of one intervention being a higher priority than another; we need both.

Ms. Helen Darling: The Ad Council every year allocates a certain amount of money to do pro-bono work. We have been actually pushing—and the IOM and the American Cancer Society could be influential as well—to enlist a young woman -she has got a single name and she's gorgeous, she is a young singer. I just saw her the other morning on CNN. They showed her talking about how she had decided that she wanted to be fit. The whole thing was about how fitness was important to her, not necessarily being thin, which she also was, but it was about fitness and about food. Now, something like that will place an emphasis on being healthy as a positive for young women in America. There are millions and millions of 13 and 14 year olds who would love to be like her. Something like that could have so much more power than anything we could ever do.

Dr. Susan Curry: I think what has been very clear in this discussion is the complexity within both the public and the private insurer-payer role; it is complicated, it is messy for the major insurers, for Medicare it is statutory and the language is outdated. But I also heard that there is a willingness and interest in both worlds to coalesce around some very specific targeted evidence-based initiatives. If we just pick the low-hanging fruit, we will make progress.

We talked a lot about tobacco cessation and paying attention to making sure that we provide the public with the best that there is to help people quit. We talked about trying to move that through, with maybe a model for doing so and for working on nutrition, too. What has also been interesting to me is that, having said all those things, the discussion then suggested that maybe we are not the most effective leverage point, and there are other ways that we can achieve this.

I would make a personal point that there is no one single way. If you can be more effective with mass media, that does not get the payers and the insurers and the health care delivery systems off the hook, because media campaigns work, there is going to be greater demand on the part of consumers for the systems to catch up.

Ms. Helen Darling: We certainly didn't mean that if we were successful in changing the environment, anyone was off the hook. It is more a recognition that the problem is multifactorial, the solutions must be multipronged, and they have to recognize that if you are going to reach any one person, you are going to have to do it dozens of different ways, especially thinking about disparities. The approach that would work really well for one group won't for another We probably need a couple of hundred tool kits that we can apply in the case of the employer and in the case of Medicare and Medicaid, all around the country with all sorts of different people. The solutions will have to be highly varied, and you want to be nimble about how you apply them.

Dr. Len Lichtenfeld: I was really impressed with the data from Group Health that showed that only two percent of subscribers were getting PSA testing, especially in relation to the comment that shared decision making may be an excuse for making no decision.

Dr. Robert Smith: I like the program at Group Health, but I would say that two percent implies actually discouraging the test (although it's now up over 20 percent). But what impresses me about Group Health is that they send out a notice saying you are due for your mammogram on a certain date.

This is how it's done in Sweden. They send a letter saying your appointment is in two weeks. Shorter than that is too soon. Longer is too late. If the woman can't make it, she reschedules. The compliance rates are close to 75 percent on the first appointment, and on follow-up—90 percent. So making an actual appointment is as easy as a reminder. Data show that women are getting mammograms in the U.S. but not at the optimum regular intervals. We know that an encounter with a trusted clinician or health plan can be very influential. So this sort of reaching out needs to be encouraged.

Ms. Helen Darling: The problem is that there is a shrinking proportion of Americans that are HMO subscribers. The majority are now in preferred provider organizations. We have to have policies and procedures now that are focused on what is typical.

Dr. Nancy Lee; You don't need a system for individual providers, There is software for that; the difference is to set up the appointment ahead of time.

Participant: One actionable item. I still am convinced that medical spending plans, not the kind you described, but the pre-tax medical spending plans that can go up to, I believe, $5,000 per year for an individual, are under exploited. As some of you may have known before Weight Watchers got in there and was negotiating, nutritional and tobacco interventions were not covered. That was not considered something you could spend your own pre-tax dollars on. You now can do that. It is an opportunity for employers to develop an organized and systematic way to identify smokers at job entry and give them the option of a medical spending plan. The problem is, you

can't carry it over. Maybe the regulatory framework could be looked at, because it is in the IRS code, and make it more user friendly, and make that part of the whole system.

Dr. Lichtenfeld: That is a wonderful idea. I would want to know, for those employers who are offering those plans, what choices are people making, how are preventive services being covered, and if they are on the menu, how they are being selected

Ms. Helen Darling: Most of the consumer directed health plan models, as they are called, now have a prevention module. Actually most employers, try very hard to get employees to use appropriate services; that is good for both employee and the employer.

Group Discussion III
Applied Research in Prevention

Dr. Clement Bezold, President, Institute for Alternative Futures, Moderator: In this discussion we hope to look at the average time for innovation and focus in particular on, first, how we can change the current process of funding, reporting, and disseminating research results in cancer prevention to decrease the time it takes to get information on effective strategies into clinical practice and public awareness and, second, on what new research funding or shared funding initiatives are needed to increase the number of studies that apply rigorous scientific methods to evaluate dissemination strategies.

Dr. Ralph Coates, Associate Director for Science, CDC: In consultation with colleagues in the Cancer Division and other parts of CDC and with others we work with in research and in programs, I developed several ideas in response to the questions that were posed. First, we might change our applied research initiatives and the way that we write announcements to assure both a focus on dissemination and application of rigorous methods. We might increase funding for proposals that move community intervention research more explicitly into dissemination. We need to specifically fund more research that replicates successful interventions in populations and in community settings where those interventions have not been tested before and in particular with underserved and minority populations. In addition, we need to fund more research specifically for implementation of well evaluated and replicated interventions to find out how to implement them in public health settings and with community organizations and health care systems. Then, once there is more translation of community intervention research into practice, we need to conduct evaluations with those groups that are providing those new evidence-based services to determine if the interventions are ef-

fective in the ways that we had anticipated. As noted in the IOM report, there is less funding for this type of research than there is for developing new interventions. What we need is more focused research on how to get those new interventions into practice.

Second, we might explicitly bring the US Preventive Services Task Force and the US Task Force for Community Preventive Services into our research announcements. We should make better use of their recommendations, their evidence reviews, and their methods, by referencing and summarizing them in our announcements. The main benefits of this approach are to identify needs for more evaluations of community interventions and for replications of effective interventions in new populations and new settings and to guide research methodologically and to promote rigorous research.

With regard to publication and reporting, in the work the Division of Cancer Prevention and Control is doing with the NCI and others on the Community Guide, one of the challenges has been to adequately evaluate the published community intervention research and to summarize findings across studies because of the way information is reported. Frequently, information that would allow us to say how generalizable findings are in the different populations is missing. There is often missing information about the methods that are used in the studies, affecting the ability to do a rigorous evaluation. Findings are reported in ways that make it difficult to summarize them and to integrate the findings across studies.

So, a third suggestion has to do with developing guidelines or recommendations for publication of results from community intervention research, similar to guidelines that aid the work done by groups like the U. S. Preventive Services Task Force. The CONSORT statement provides recommendations from journal editors, trialists, and methodologists on how to summarize and present information from clinical trials (Moher et al., 2001). It would be helpful for a meeting like this to support the development of something like a CONSORT statement for community intervention research to assure that methods are more comprehensively presented and to help with issues of generalizability and with summarizing findings.

Dr. Jon Kerner, Assistant Deputy Director for Research Dissemination and Diffusion, NCI: If the statement from the agenda question is from the Balas article (Balas and Boren, 2000)—that it takes an average of 17 years for research to be translated to clinical innovation—there was a critical piece missing from that which is that it takes 17 years to turn a fraction of original research to the benefit of patient care. That is a pathetic commentary on how long it takes. Some would argue that a deliberative process is necessary to ensure that what emerges from research has implications for practice, but I think we could probably do better than 17 years to get a fraction (and that is in a primary care practice setting where there is an infrastructure). In terms of community settings it probably takes longer because the infrastruc-

ture isn't there. So, how can we change the current process of funding, reporting, and disseminating research results in cancer prevention to decrease the time it takes to get them into practice and public awareness?

We need to look at how we do discovery. Much of the intervention research we do doesn't necessarily involve in a proactive or partnership way either the communities being studied or the clinicians who are ultimately expected to adopt the approach. We need to replicate the CCOP (community clinical oncology program) model in primary care practice. We need researchers and clinicians working together. We need community partners and researchers working together to make sure that the initial intervention being developed has any dissemination potential at all, because it is too late to be addressing that question after you have done the efficacy trial. So, we need to change the way we do research. An interagency working group at NIH and DHHS is looking into this kind of participatory research. I think that is an important issue.

Dr. Coates spoke about development, that is, how we move from discovery into practice. I will not duplicate his remarks, but I will say that if we are going to work in partnership, we have to recognize that we can't all be doing everything. In fact, can we do anything that is evidence-based, because frankly on the federal level we are addicted to funding discovery? So, CDC has new de novo intervention research. NCI does. All these different agencies do, and we have all agreed that we need more dissemination research, replication research, and implementation research. So, we have to decide explicitly who is going to take the lead. Perhaps the American Cancer Society should be considering doing dissemination of research through the ACS divisions. I think CDC should take a leadership role in doing dissemination research through state health departments. The perfect example of this is the practice-based research network from the Agency for Healthcare Research and Quality. It would be encouraging if NCI could help to cofund testing cancer control interventions in primary care settings. That is where a lot of the action that is described in the IOM report is taking place as opposed to other things like chemoprevention which are often better tested in medical oncology centers.

How do we ensure that what we learn from the science influences practice? We have to start at home. Recently, the Health Subcommittee of the Research Coordinating Committee discussed a recommendation that no new demonstration program go out of the Department without evidence that the science-based agencies have been involved in developing the RFP, are involved in evaluating the applications, and perhaps are involved in helping to develop the evaluation plan. In the Steps for a Healthier US program, we were rushing to catch up. The science-based agencies came in late in the process, and it had some impact. We have a new health disparities initiative from CMS costing $25 million a year. I am hoping that we can have a con-

structive dialogue with CMS to make sure that the strategies they use to address cancer health disparities will be evidence-based, that the RFP will be based on the best available science, and that when the proposals come in, the science-based agencies will participate with the delivery agencies in trying to figure out what are the best approaches that have a reasonable chance of being adopted and implemented over the long haul.

The last question is about new funding initiatives. I think what we need to do is more dissemination of the research, and that should be a partnership, and we also need more research dissemination and diffusion which is slightly different. We have got some specifics; we have a new collaborative web portal with CDC, ACS, NCI, and SAMHSA (and soon AHRQ will be involved) called the cancer control planet. I invite you to take a look at cancercontrolplanet.cancer.gov. These are steps in the right direction for the kinds of partnerships that I think the report identifies.

Dr. Peter Greenwald, Director, Division of Cancer Prevention, NCI: How can we change the current process of funding, reporting and disseminating? I would first develop one or two or three priorities from a report such as this. Then I would drive toward that goal with persistence and milestones. If you have a huge laundry list, you won't get there. I stated what I would put as top priorities this morning. One was for CMS, Medicare and Medicaid, to include preventive services. The challenges are the cost and the need to examine things now covered that don't merit coverage. Given that it is treacherous because of all the vested interests, it would be a good place for an IOM analysis of what does merit coverage and what doesn't, including preventive interventions as well as others. The other action I propose is the inclusion of physical activity as part of regular elementary and middle or junior high school education so that every student gets it. It would be a huge step, and we have been going in the wrong direction.

What new research funding initiatives are needed in cancer prevention? There are two general approaches to cancer prevention, a public health approach and more recently, a medical approach. On the public health side, state health agencies could be funded to address this, but I am afraid that has collapsed in the past few years. I would endorse restoring that and seeing to encouraging a rigorous ability to address prevention research at the state level. I would also support basic nutritional science, and the reason is that one size fits all is no longer valid. We are learning more and more that there is individual variability. We need the epidemiological evidence complemented by understanding individual variability in response to activity.

On the medical side there is exciting and growing progress. For example, in the breast cancer prevention trial with tamoxifen, we have already demonstrated that we can reduce incidence by half in women who have the risk of a 60 year old. There were some adverse effects, so we are addressing that both by testing another agent and through genomics to see whether we

can predict which women are likely to benefit and which are likely to get the adverse effects. Then we can focus on the best candidates. These findings will affect the roughly 70 percent of breast cancer that is hormonally driven. The way to approach the other 30 percent is by testing agents that do not work through hormonal pathways, and that is in progress. So, the ultimate aim is for 90 percent reduction through medical approaches. It would be crudely equivalent to blood pressure or LDL cholesterol—find who is at risk and intervene with prevention.

Another example in colorectal cancer, involves Dr. Ahlquist at the Mayo Clinic (Ahlquist, D.A., 2002). He has a method of looking at DNA in the stool. Cells are sloughed from the normal colon, colon polyps, and colon cancer all the time. Through DNA analysis their origin can be determined. DNA patterns should enable screening these as preliminary data. The discovery of a non-invasive colon cancer screening test that is accurate, sensitive, and specific, even if it only decreased colonoscopy by 70 or 80 percent, would be a huge step forward because diffusion would be far easier. I think we have enough of a lead to support research funding of non-invasive screening to complement colonoscopy even while we promote more colorectal screening.

I would say the biggest area that needs support with funding is training. Nobody is trained to do what we do in cancer prevention. We need to develop physicians and other scientists able to do prevention, and we need to provide incentives for our leading research institutions to make that a major focus.

Dr. Robert Graham, Acting Deputy Director, AHRQ: I came at this a little bit differently than the previous three speakers. As I looked at the first question and the question of priorities in investment, it seemed to me that it needed to be broken down. The question is preceded by the statement that we have evidence that it will take 17 years for translation or diffusion of only a fraction of findings into primary care practice. I am skeptical about that; I come from an environment prior to going back into government where I was dealing with practicing physicians every day. The impact of drug marketing is such that you go from approval to 30 percent market share in 6 months. What are the lessons there that may be applied to what we try to do in clinical medicine in terms of social marketing, in terms of targeting? How is that done? That is a behavioral change that we see every day, 6 months, 18 months, a real difference in terms of market share, in terms of physician prescribing behavior. That is not 17 years.

There are four nodes of the translation process that we need to keep in mind. We must deal differentially with the interface between these nodes as we try to accelerate translation. The nodes are: is it known?—the knowledge development; then: do they know it?—does the practitioner know it? So, there's an interface between what is known, what is regarded as state-of-the-

art, and what the practitioner actually knows. Next: did they do it? There is a lot of evidence that a practitioner will know the right intervention but not do it all the time; and then: does it have the anticipated or desired effect? I knew it. I did it. Did what was supposed to happen really happen? Actually I think that last is very important, because it is a feedback loop to the first one - is it known.

We have the presumption that our challenge is to get people to do the right thing and good things will result. Well, yes, you can look at one knowledge loop, at beta blockers, and say that that works. However, there is another knowledge loop, hormone replacement therapy, where we thought we knew where we were on translation and were driving towards one particular clinical outcome, and then when we found that we didn't get the anticipated or desired effect, we needed to work our way back and try to re-educate people and change their practice behavior.

So, in response to the first question, we have to look at what interface we are dealing with in terms of the translation cascade. Different interventions, I think, are necessary to translate knowledge to knowingness than may be necessary to translate a practitioner's fund of knowledge to behavior. Even when we get to the point of having the practitioners behave the way that we think is appropriate, we need clinical skepticism about whether the outcomes are exactly what the design predicted.

The 17-year cycle is subject to critical appraisal and to the influence of non-clinical procedures as we break this cascade down. I am not a drug marketing executive, but I have had a lot of experience looking at the impact on clinical practice of how effective that marketing is. How can we apply that experience to changing clinical behaviors outside of that field? Is it all driven by marketing? Is it driven by repetition? Do we have to have the social marketing and the detail people? Is that effective? If it is effective, should we be using it?

Dr. Jon Kerner: I heard the drug company model as an example of how things move very swiftly. The report focuses on things like smoking cessation, diet, and physical activity counseling, the delivery or the recommendation for screening interventions. There is not much profit in those, and, of course, profit drives what the drug companies are doing to get the adoption of a product. So, it is not clear that social marketing and product marketing can be transposed with each other in the absence of profit. I am curious whether or not you think it is fair to compare them, as we look at persuading primary care practitioners to adopt practices without special reimbursement or other incentives.

Dr. Robert Graham: I agree that the dynamics may not be the same. That is the research question. Doctors change their behavior. Primary care physicians change their behavior on a whole series of matters from which they derive no direct profit. How are they doing that? The research question

is whether or not those principles and strategies are adaptable to what our objectives are clinically.

Dr. Peter Greenwald: The drug companies have moved toward public marketing to create demand even for prescription drugs, and they presumably have sales evidence that has encouraged them to go in that direction. So, that may well be something that we could do in prevention.

Dr. Jon Kerner: Right, although it is profit that drives the investment in the public marketing. Our profit is the public good not a private good, and do we have the resources to do the marketing? One other comment about that, Dr. Curry; this morning you talked about making prevention a standard of care in health care systems. A lot of the report focuses on training for that. But a survey of primary care practitioners and ob-gyns that we did at Sloan-Kettering in the mid-1980s showed that the number one predictor of counseling in smoking cessation was whether the doctor had quit smoking. The number one predictor on counseling in physical activity was whether doctors had changed their physical activity, and the number one predictor on counseling on nutrition was whether they had changed their diets to lose weight.

So, regarding training on adopting evidence-based programs, if it is a push/pull model, maybe the pull has something to do with what the doctors' own personal health behaviors are. Maybe we should focus some on changing their behaviors as well as the systems approach to using the evidence.

Dr. Peter Greenwald: There is an old study from Boston, I think, of obese physicians and obese low SES people who were put into a program to lose weight. The low SES people did best. The explanation put forward was that physicians who could have responded to the message already had the message and so you had the hard core left. So, your suggestion is going to be a hard thing to carry off.

Dr. Susan Curry: We know that in recommending screening for colorectal cancer, physicians are much more likely to push that after one of their patients has been detected with cancer, and this tends to fade somewhat over time. So, providers might be encouraged by contact with some of these screening successes. I was intrigued by the notion of looking at what works in the diffusion of new medications. This might speak to the importance of involving the end users in the design and conduct of the research that you are doing, because pharmaceutical companies can be very innovative in doing what are called seeding studies. They know that if you can get providers to do something six or seven times, like prescribing a new medication, you are going to start to change their practice patterns.

They will design studies where they recruit very large numbers of practices who are charged with and paid for enrolling very small numbers of patients in these "randomized clinical trials." They have got all the right language and the protocols for science, but what they are really trying to do is get these doctors to prescribe their drug enough times that it becomes a regu-

lar practice. So, a research question that could be included in studies that actually involve front line providers is the extent to which participation in these studies translates into a change in practice patterns once the study has ended.

Dr. Peter Greenwald: Yes, that is exactly right in clinical oncology, and it could be done in public health. What we did was we had 52 locales, community practices with their hospitals, taking part in clinical trials. Part of the result is the information, like the recent prostate prevention trial, but another part is the motivation for cancer control. Since these doctors and their staffs were taking part in the trials, they saw them as their trials. The rigor of taking part in the clinical trial was a continuing education experience, and since the trials were theirs, they bought into the results quickly. The results had quick credibility. So, the adoption and diffusion of what was learned was greatly accelerated by having this whole network take part in the trial development and implementation.

Dr. Jon Kerner: And I think that is the same hypothesis in the practice-based research networks at AHRQ. By getting primary care practitioners involved in the trials from the beginning, if the trial works, there is an early adoption network for evidence-based results out there ready to go.

Dr. Clement Bezold, Moderator: I heard earlier about the pharmacoeconomics of nutrition as an issue. It relates to the future of study design; how long before we know either pharmacogenomics of drugs or nutrition that will allow us to focus our designs, that is, the first aspect – what is known, and then how long before we have the infrastructure that allows a clinician to use that information? How will that then affect the clinician's involvement in studies like this?

Dr. Peter Greenwald: First if you want to say nutrigenomics, fine, although the foods were there before the drugs, working through all those pathways as they were developed. However, you are correct in the sense that we need to know in nutrition the same thing that has been studied in pharmacology; what are the pathways and how do you influence them and can you predict based on the genetics of the individual or group. It's a very, very complex issue in nutrition, so there are a lot of questions, and it is complicated to get projects designed and peer reviewed.

Right now our food supply is very rapidly changing. It is different than it was 10 years ago, and 60 percent of the foods in the supermarket today have engineered components, sometimes genetically engineered largely due to corn and soy involvement. The technology is driving the change, marketing, and production, and suppressing pests, and all of these things, but not health so much, except to the extent that consumer behavior is affected. We think we need a leading edge of very intensive nutritional science that can help to see that the changes will lead to better health. Without it, health is

not one of the major considerations in the change, and we may be in for some unpleasant surprises.

Ms. Eastman, *Oncology Times*: Relating to the hormone replacement therapy trial, I wonder what effect, perhaps a chilling effect on prevention, results like that have on clinicians who were using HRT and believed they were getting a certain clinical prevention result which is now shown not to be the case.

Dr. Robert Graham: I am not sure that I would focus that specifically on the prevention aspect. I think it was the latest example of the nature of medical science and the changes that can occur as we find evidence that invalidates what we thought we knew and results of interventions that we thought we could count on. When new knowledge comes along, we have to be flexible enough to adapt and change. Something like the HRT trial that affected so many people gets a lot of publicity, but similar events play out every day in other areas of clinical medicine at a much smaller level.

Dr. Peter Greenwald: I would add that the clinical trial is the gold standard of evidence in therapeutics and prevention where it is applicable. This is an instance where trials were never done, when HRT started in the early 1960s. The rationale for it did not derive from a randomized well-conducted clinical trial, and that was why Bernadine Healy when she was head of NIH felt that we needed such a trial. The lesson is that it is a very good investment to have the best of evidence-based research before we make national health policies.

Dr. Ralph Coates: In reading through the report I noticed that it said that there is convincing evidence that alcohol consumption is a breast cancer risk factor. I know that Health Canada says that there is a possible relationship, and the World Cancer Research Fund says that there is a probable relationship. What is confusing for people doing comprehensive cancer control planning or wanting to do community interventions on risk factors is identification of what those risk factors are.

The U.S. Preventive Services Task Force does a good job for chemoprevention. They now have recommendations for tamoxifen for primary prevention, and we have a lot of different groups issuing lists of risk factors, doing their own evidence reviews, and assembling groups of experts to make judgments. One thing that would be helpful could be assembly of a group to address making better sense of the observational studies, or identifying risk factors, or at least that there are non-harmful factors.

Dr. Peter Greenwald: It is easier to have criteria for evidence when you have a preventive effect that can be tested in a clinical trial. When you have an adverse event, like alcohol causing breast cancer, you obviously can't do a clinical trial, and anyway you have a fairly low relative risk. The surprise is how much consistency there is in the epidemiology that alcohol is a risk factor. It surprised me. I have never trusted the evidence on amount

because when questionnaires are done asking how much women or people in general drink, the results are nowhere near the total amount of alcohol sold in the United States. I think rigorous criteria for evidence with a balanced expert group is probably the best you can do.

Dr. Jon Kerner: If we take diffusion of innovation theory and the "is it known" question, you could say, "Is it known by the early adopters or when is it known; is it known by that sort of middle group?" The theory calls them laggards which I find a little pejorative. I would call them the last adopters. Do they actually care? What motivates physicians to change practice? If we focus only on what is known, and we don't systematically involve our audiences, not only in the research itself, but in helping develop the programs and products that are ultimately trying to get the information out, we are probably going to miss the boat.

So, having shipped out to every state legislature in America, the summary of the report on states reducing tobacco use, I would venture to guess 95 percent of them went into the circular file because they just didn't care. Also, a lot of what we do in the Federal Government is to make the assumption that if we get it out there it is known. Maybe it is but if recipients never read it and observed it, the fact that we sent it made no difference.

So, a fundamental dilemma is that we need to do more audience research. With regard to what Dr. Graham was talking about in the pharmaceutical industry, I can assure you they do really good audience research. We need to do more of that. Our hands are somewhat tied at the federal government level though because we have this little problem called OMB clearance which makes it very difficult for us to survey and figure out what our audiences want. That is actually where a public-private partnership would be quite helpful.

The Robert Wood Johnson Foundation and the American Cancer Society and a lot of other agencies could go out and do some of that audience work for us and with us so that we have a better idea, and we can stop assuming that simply because we produced something that summarized the evidence anybody actually cared to look at it, read it, and then presumably did something about it.

Dr. Bob Vollinger, Division of Cancer Control and Population Sciences, NCI: Your idea about getting the right messenger in your earlier comments about behavior patterns in providers predicting their practice got me thinking about social epidemics, connectors, and people who have disproportionately strong influences. I'm wondering whether we can determine the characteristics or patterns of providers who have disproportionate effect over their patients in tobacco control advice or certainly in obesity and can we identify those people and focus on them rather than using a kind of scatter-shot approach.

Dr. Jon Kerner: I would say that that is equally true for public health departments and state health departments. Who are the critical people whose opinions and behaviors might influence others? If we really want to understand how evidence-based innovation is adopted, we need to understand how those critical actors play a role. There is a lot of opinion out there about what works, and often it isn't based on any evidence. In fact, I would argue that the biggest barrier to the adoption of evidence-based interventions is the addictive quality of making stuff up on your own, sort of this desire to innovate. Many local foundations which support community-based activity at the delivery end fund novelty only. If it isn't new they don't want to see it. And so all these systems that promote novelty may work against all of these systems that are trying to promote adoption of evidence-based approaches. They often don't talk with each other and sort that out.

The third piece of the puzzle is definition. We have best practices. We have evidence-based. These terms are used as if they were interchangeable, but I don't think they are. "Best practices" is often a collection of anecdotes describing the best we have got. Then, there is "evidence-based" which has been tested in a research study and shown to be efficacious. They are used as if they are one and the same thing. So, we have a definitional problem. We don't know necessarily the systems and the system leaders, and there are forces working against taking up evidence-based approaches that we don't fully understand. All three of those things bear more research.

Ms. Susan Dimock, Office of Senator Jack Reed: I heard a couple of times today that legislators don't care or don't want the information. Maybe that is true, but the staff genuinely does care and is interested in finding new information, which then gets transmitted to the legislator. However, the thing that has surprised me most about working on the Hill is the lack of time staff has to look at anything. They love to go to talks, and they love to get material. If you give them something, and then make a little noise about it, the ones that are interested will pay attention. I don't know if that also works in the House or at the state level, but in the Senate most of them I know want to do good. In health there are lots of hearings with government agencies, or there are fellows who come out of the medical world or the academic world who want to do something on issues.

Dr. Jon Kerner: That is a really good point. I think I was the one who commented earlier about them not caring. In fact, it is not a question of them not caring, if they have time to think about it. It is competing priorities. How much attention can you devote to any particular health issue at any moment? NCI has this thing called a cancer progress report that was sent to the staff on all the health committees, and not a single individual ever got back to us about whether they liked it or not. Why? I suspect that they didn't have time to look at it. As a result, we are trying to talk to former staffers to understand what would be the best way to disseminate. This would be a question for the

IOM. What would be the best way to disseminate the findings of this report so that it would be maximally useful to Senate staffers?

Dr. Clement Bezold, moderator: Great. My group has been running seminars for congressional staff for 25 years and there are tricks to it. One is knowing who are the ones, the mavens, among the staffers who will get the other folks there.

Group Discussion IV
Prevention Through Education and Primary Care

Dr. Len Lichtenfeld, Moderator: In this discussion, we hope to explore who is accountable for ensuring education in prevention and early detection, what leverage points there are for monitoring delivery of evidence-based prevention interventions, and how state health departments and federal agencies, like CMS, can advance prevention as a priority

Dr. Hal Sox, Editor, Annals of Internal Medicine:, I am going to try to point out some obvious leverage points for patients and for the Centers for Medicare and Medicaid Services. The problem is poor physician performance. In a study in a New Hampshire primary care practice, 14 percent of patients who were interviewed after seeing a physician said they had had a sigmoidoscopy according to usual practice guidelines, 45 percent had had a fecal occult blood test, 65 percent of women under age 60 had had Pap smears, and 66 percent had had a mammogram if they were over 50 (Sox et al., 1997). Now, is that good or is that bad? Some of it is obviously bad; some of it isn't too bad.

The focus here is on physician education, but I am going to argue that the situation is really a lot more complicated than simply education. Focusing for the moment on physician education, internal medicine has a competency-based resident curriculum (Ende et al., 1997) which makes it possible to evaluate the ability of a physician by measuring skill in specific competencies in the patient care setting. The Residency Review Commission for Internal Medicine is planning to evaluate residency programs by measuring how well their residents achieved certain clinical competencies.

Passing certification and recertification examinations involves preparation, which means reading education materials, like the Medical Knowledge Self Assessment Program (MKSAP) of the American College of Physicians and educational programs created by the American Board of Internal Medicine. Here is another opportunity for physicians to learn and keep up their skills.

Other factors affect the physician’s skills in day-to-day practice. One is ongoing evaluation of practice. As the paying for quality concept gains mo-

mentum and as the Health Plan Employer Data and Information Set (HEDIS) has a stronger and stronger position of leverage with individual health plans and practices, a physician's ongoing daily practice is going to undergo continuing scrutiny. Another factor is point-of-care decision support. Increasingly, we are going to see medical decision support systems become an integral part of the practice of medicine. To the extent that those contain evidence-based practice guidelines for cancer screening, physicians will learn how to practice in accord with current practice norms. Finally, as I will argue later on, patients will affect what doctors do. We hope that all of these educational inputs for the physician are generally going to be framed around evidence-based practice guidelines, such as those of the U.S. Preventive Services Task Force.

Patients are a major force for change. I have learned, as a journal editor, something about the public's insatiable appetite for information about how to improve their health and how to increase their chances of living to be old and healthy. The public media play an enormous role in educating people about research results in major journals, such as *JAMA*, *Annals of Internal Medicine*, and the *New England Journal* and other journals, which are provided through the newspapers, through the television, and through magazines, the latter especially magazines whose principal audience is women. Our journal summarizes the results of research articles in lay language for patients. I hope that other journals will adopt this approach to educating the public.

Staff and system supports play an important role in assuring the public that physicians, nurse practitioners, and other providers make the right decisions about cancer screening. Educational programs should target staff, not only providing the cognitive knowledge required to screen for cancer, but also teaching them how to change practice and how to monitor successfully the effects of efforts to change. Physicians generally want to do the right thing. They will generally do what they are told to do, as long as it doesn't threaten patient health; and they need a supportive staff that will remind them what to do and be sure that they carry through.

Payers are an important influence on physicians. Medicare pays for a number of screening services, which sets the standard for most of the other payers in the country. In the study done in New Hampshire, the single factor that best predicted practice compliance with cancer screening guidelines was the scheduling of an annual examination to focus simply on screening and nothing else (Sox et al., 1997). Unfortunately, CMS does not pay for an annual health promotion visit. They should, especially as patients stay in the Medicare system for life, whereas other payers don't have strong incentives to cover screening activities simply because patients move from payer to payer, so that any individual payer is rarely in a position to reap any cost savings from risk reduction and early detection. Finally, anything that CMS

can do to align payment with good medical practice will eventually provide more time for physicians to spend with their patients.

Dr. Ron Davis, Trustee American Medical Association, Director, Center for Health Promotion and Disease Prevention, Henry Ford Health System: One of my favorite cartoons shows a patient asking her physician, "Hundreds of years of medical progress, and all you can tell me to do is eat less?" I think that is part of the challenge we face in this day of tertiary care and high-tech medicine. Sometimes it is hard to get people to pay attention to and take seriously these important behavioral issues. When they do take it seriously, they want a quick fix—another cartoon I use shows a man at the counter of a pharmacy telling his pharmacist, "I'll have an ounce of prevention"—but unfortunately it is not that easy.

Let me address the questions posed to us for this panel discussion: first, who is responsible for ensuring that graduate curricula and continuing education programs include adequate coverage of cancer prevention and early detection; and second how can we encourage professional organizations and academic medical centers to make this an educational priority. Undergraduate medical education is controlled by the Liaison Committee on Medical Education, which is operated jointly by the AMA and the AAMC, the Association of American Medical Colleges. So that is obviously a leverage point for influencing the curricula in medical schools. ACGME (Accreditation Council for Graduate Medical Education), and the individual residency review committees (RRCs) are the bodies that accredit graduate medical education, so those are additional points at which we can influence national educational policies. Beyond that, we can work with individual medical schools, with individual residency programs, to try to ensure that they address cancer prevention and early detection.

A third area for leverage, the first being accreditation organizations, the second being individual residency programs, is through the certification boards (the American Board of Internal Medicine, the American Board of Surgery, and so forth), because they write the exams people take. If you put into the exams questions on cancer prevention and early detection that will encourage residency programs to teach their trainees to master the content of those exams. So, we need to get appropriate questions in those exams.

A fourth area of focus is the medical societies. If the American Academy of Family Physicians says that family practice residencies ought to teach something, then the RRC for family medicine will be more likely to put that into accreditation requirements, and the individual programs will teach it. So getting the medical societies on board will be helpful for their policy development as well as the content of their continuing medical education conferences.

Next, what leverage points are there for monitoring the performance not only of health care providers, but also systems of health care delivery to in-

sure infrastructure and accountability for delivery of prevention interventions? First, obviously again accreditation. One of the other hats I wear is being on the board of the JCAHO as an AMA representative. When the IOM report on patient safety and medical errors came out, JCAHO took that seriously and very quickly put rules on patient safety into its accreditation standards. The IOM report on cancer prevention and early detection didn't get anywhere near the attention that the one on medical errors did. The impact of the patient safety report (and the publicity surrounding it) is what we ought to be striving to achieve.

Through its ORYX (www.jcaho.org/accredited+organizations/ hospitals/oryx/index.htm) process, JCAHO is moving towards more outcomes-oriented accreditation standards. ORYX is a series of outcomes measures on which hospitals are examined. Two ORYX measures assess whether smokers hospitalized for myocardial infarction or community-acquired pneumonia receive smoking cessation advice or counseling. In 2002, JCAHO-accredited hospitals began to collect data on standardized (or "core") ORYX measures, including those on inpatient smoking cessation counseling. This is an example of how our issues can be incorporated into accreditation guidelines.

NCQA, the National Committee for Quality Assurance, which accredits HMOs in this country, includes many preventive services as quality indicators in the HEDIS "report card"—mammography; childhood, adolescent, and adult immunization; treatment for tobacco use and dependence; Pap tests, among others. There are probably six or eight preventive services in HEDIS.

We also can leverage change in the health care delivery system through coverage and financial incentives. As one example of a progressive policy, Blue Cross Blue Shield of Minnesota is now paying physicians for putting down the ICD-9 code (305.1) for tobacco dependence on claims forms (Manley, 2001). If physicians record that on a claims form, regardless of whether they offer an intervention or treatment, they get a payment. This is an example of a positive incentive. The concern on the part of some people was that doctors would abuse that. That is not happening.

Finally, how can state health departments and federal agencies, such as CMS, advance this priority? I'll make three points in this regard, all pertaining to Medicaid. One is ensuring Medicaid coverage of cancer prevention and early detection. Secondly, related to that is managed care contracting. As you all know, most Medicaid programs are substantially capitated or fully capitated. Through managed care contracting, you can very effectively leverage performance in a particular area. Thirdly, Medicaid can support training and education. In Michigan, for example, our Medicaid program has given a grant to a preventive medicine residency program administered by the University of Michigan School of Public Health. This is part of a Medi-

caid initiative a few years ago to fund innovations in medical education. The idea is to fund projects that bring benefits to Medicaid beneficiaries. We argued that this program would train more preventive medicine physicians, many of whom would stay in Michigan and treat indigent patients on Medicaid. That is an example of Medicaid support for training and education, which I think is worth pursuing elsewhere, although given the financial constraints at the state level, which are attributable in large part to Medicaid economics, it is going to be hard to sell.

Dr. Robert Smith, Director of Cancer Screening, American Cancer Society: As I looked at this report, I thought, we've got this critical need for undergraduate and graduate medical education. The report also emphasizes that quite a few clinicians didn't have the benefit of exposure to this kind of material. They were already out in practice. So the entire burden of training has rested on CME.

By what elective means could this material be included, or not, in education? With mammography, the way training began to take place in residencies was that radiologists got questions on mammography on the radiology boards. Accordingly, it became part of residency training. I note that repeated, heated calls for changing undergraduate medical education to include appropriate and enhanced preventive content have been routinely ignored. The real challenge is how you leverage the importance of training on the key issues that account for five or six of the leading causes of preventive mortality in this country. It seems self evident that it requires considerable leverage with the AAMC.

The other thing that offers real potential is the recognition that much of CME in its present form is broken. The common lecture format is largely ineffective, and this is increasingly acknowledged. Also, it isn't clear what drives the content of a CME course, but some topics are clearly esoteric, and others may be included because they address ways to be more efficient, for example, to reduce office costs or add additional billing. As I review primary care CME, I find it is generally weak in the area of cancer compared with other areas.

The important question is whether there should be key content that ought to be included. In lots of areas were we rely on competency, key content is well defined. The FAA, for example, requires commercial pilots to demonstrate competency in key areas of knowledge and proficiency, and these competencies largely define the regular training schedules required by airlines. Could we say that for certain kinds of CME, certain key content, coverage of key topics that affect public health, is required? Then how do we build in incentives for applying this knowledge to preventive care? There has to be an incentive for the physician to assimilate and use the CME knowledge in practice. The incentive to get engaged in smoking cessation, for example, is reimbursement.

This CME opportunity arises because the Council of Medical Specialty Societies and the American Board of Medical Specialties have acknowledged that CME is not working and needs to be revamped. They have called for a new design including a commitment to life long learning, periodic self assessment, and demonstrated competence in patient care, communication skills, and medical knowledge. They stress the need to get away from passive lecture-based learning, greater emphasis on self assessment, focused instruction, interactive versus passive learning, and constant feedback. We now need to bring the content of this report to these boards and urge that this content be integrated into the CME structure of each specialty board including primary care. We have an opportunity to build in cancer prevention and detection as part of routine primary care.

Dr. Nancy Lee: I'm glad the effectiveness of CME was brought up because that has been my concern. I think people choose it for odd reasons. What is the evidence of the effectiveness of continuing education programs for medical providers? The way it is structured right now, my understanding is that we don't have a lot of evidence that it is having the effect we want, whether it be in cancer prevention, new treatment for hypertension, or knee surgery. The lecture-based thing in the morning and time off in the afternoon is questionable.

I have been depressed in our efforts to train our providers in the cancer screening program on some basic issues about clinical and programmatic policies. We have done a series of telephone in-depth focus groups that sample across the country from our program. We find that our providers don't really pay much attention to some evidence-based guidelines. That is just an example of how we are not doing a good job in keeping our providers up to date, giving them the tools to move forward and abandon old techniques and move towards new ones in general. Then, how do we get them to help on smoking cessation and diet and exercise? Those are both very difficult areas, and it is something that we really need to take charge of.

Dr. Robert Smith: Do you think that the doctors don't have the cognitive knowledge related to the role they might play in cancer control, or that it simply isn't applied consistently in the practice setting?

Dr. Nancy Lee: I don't think we physicians have been given lots of skills on how to help people stop smoking and help people to lose weight. Maybe we are not the people to do this. Maybe other health care providers are needed, but in many settings they are not available, and it would be another visit for the patient. We don't even know how to continually work with patients to get them to the point where they accept going to smoking cessation classes. I don't think appropriate training is routinely available to many providers, and I don't think we can get adequate reimbursement either for that kind of work. It's not a procedure.

Dr. Robert Smith: That's the thing about the Pap smear, for example, it's a procedure and it's a paid office visit. One of the problems with asking people to practice evidence-based medicine is that, is some instances, there is a disincentive for their practice to start doing that. We ideally would have something to replace it with. Also, the office usually isn't even set up to do it efficiently. Clearly a lot of counseling doesn't have to be done by the physician.

Participant: So how does the physician get the patient to those ancillary services?

Dr. Len Lichtenfeld: Is the actionable item to change or influence the paradigm of care so that the physician and the healthcare system find other ways of empowering other people in the system to engage in this process, to help make it a reality? Is that going to be part of the solution, instead of the doctor having to do everything all the time?

Dr. Ron Davis: I would agree with that. I think the strategy will be different, depending on what kind of medical practice you are talking about. The solo practitioner is in a different situation than a 400-physician group practice. More doctors are becoming part of group practices, and we have potentially much more leverage with them than with individual practitioners.

For example, when I got to Henry Ford Health System in 1995, we had an 800-member Henry Ford Medical Group. At that time they got bonus pay determined by various performance indicators. Those indicators were mostly financial, like hospitalization rate and length of stay, and there were no quality-of-care indicators, much less preventive services indicators. I was pushing for those, and fairly soon we ended up having some, at least for pediatricians and family physicians. There was one for pediatric immunization rate, for example. With medical groups, if we can get these indicators into performance measurement, then people will pay attention to them. Physicians will often find someone else in the office to implement a preventive service. That's easier with a large group practice, but with the solo practitioner, or with two or three docs in small offices, it is much more difficult to get these things done.

Participant: You mentioned NCQA and HEDIS earlier. What opportunities do we have to partner with managed care organizations? What are they doing now in anticipation of HEDIS and colon cancer screening down the road in 2004?

Dr. Ron Davis: I think there is a lot of truth to that—what gets measured, gets done. I have seen that in my own institution, and I have heard it from others. If a new measure is added to HEDIS and others rotated out, then that determines the priorities in the quality improvement program. So, there is a lot of opportunity, when you see a HEDIS measure like that one coming down the pike, to partner with managed care organizations in a par-

ticular community or at the national level with a large health plan such as UnitedHealth, which invests a lot of money in quality improvement.

Dr. Sandra Reed: In our four-physician practice, for the last six months we have had a weight loss program that is performed by our two nurse practitioners. We identify patients and refer them to our nurses. They have more time than we do to spend on the counseling sessions and follow-up visits with these patients. So, I think physicians are willing to implement these things, but I don't think we have done a good job in educating them in how to do it.

Dr. Hal Sox: It is relatively easier to change a big practice like Henry Ford, because it can afford the support personnel to implement system change and the information systems to monitor practice. A small practice can't afford any of these necessities of 21st century medicine. I see helping the small practice to make system changes as one of the great challenges for medicine.

Dr. Sandra Reed: I think the biggest obstacle is helping them to identify the systems that need to be implemented and helping them to have a way to implement these systems. A lot of small practices are not computerized. Although they are going in that direction, they have not yet made the investment because it is costly. Our practice is undergoing right now a $250,000 upgrade in our computer system. We were able to do some of these things, but that was a big chunk of change for us. In five years the system will probably be antiquated. It is just extremely costly for small practices to be able to establish the kind of infrastructure within their practice to handle these data.

Dr. Len Lichtenfeld: Let me share a personal observation, having been an oncologist and a primary care internist, in reverse. I had a little piece of paper on my chart. It cost me maybe a penny or two to Xerox the thing, and I would check off what I thought somebody should be having over time. Some of my patients had many pieces of paper. I knew when they had their Pap smear, their sigmoidoscopy, or when they had whatever exam they needed to have on a preventive basis over time.

I think that every patient chart could have that piece of paper in there, checked off, and updated. Every time that person walks in the office, they should be checked. The problem is the people that don't walk in the office, that is where we fail.

We were not delivering preventive services then that we knew people should have. Reminder systems can get built in; I think there is that opportunity. But, right now, as things have transformed, there is no time. Time has become a very precious commodity. I commented this morning that 7.4 hours a day of a provider's time would be taken to deliver all the preventive services that we think people should have. It is overwhelming.

Dr. Joseph Lipscomb, NCI: I think there was some mention this morning of evolution towards a consensus statement on preventive activity. I think I heard it involved the ACS, the American Diabetes Association and maybe the American Heart Association. How is that consensus going to be arrived at? Are you thinking about this as a small concise set of guideline statements that people can take in quickly and support the provider's decision making process in the practice, and be time efficient? I assume that is what this is guiding us toward.

Dr. Robert Smith: When you look at commonly recommended preventive health behaviors and guidance related to physical activity, maintaining a healthy weight, and nutrition, these recommendations are associated with lower risk for a number of chronic conditions, and therefore organizations focused on cancer, heart disease, and diabetes clearly have an opportunity to promote a broader benefit than may be apparent to the public if we focus on just one disease at a time. Also, each of these organizations represents conditions for which periodic testing for early signs of disease is recommended. I think the three organizations have come together, recognizing that they have common interests, and they ought not to be competing for physician and individual's time and attention. They should have a simple message to the public about maintaining healthy weight, engaging in physical activity, and getting various tests for early detection of chronic conditions at whatever periodicity the evidence justifies.

That seems pretty straightforward, but on the other hand, there is going to be a demand for the underlying evidence-based logic for what happens in those encounters with physicians, their periodicity, and, most important, evidence of cost-effectiveness. Therefore, we are pulling a group together to work through the literature on recommended preventive health measures and model age-specific periodicity and potential findings that could support a return to a model for periodic checkups, since we abandoned the every-year check-up, and haven't replaced it with anything. Right now, it's pretty much what we and the doctor decide, so some people get regular checkups and other people never get checkups. I believe that it is likely that encounters for the purpose of preventive medicine could be supported at some age and gender-specific periodicity, but it is important to determine whether or not there is evidence to support an alternative model for periodic health encounters.

Dr. Joseph Lipscomb: What's the time frame for this evidence review?

Dr. Robert Smith: The game plan right now is to try to get going as quickly as possible, making calls to the experts in the field that have been thinking about his issue, in particular some representatives from the USPSTF. Rather than come out and say this is the right thing to do, we would say here is the evidence for what is the most cost-effective thing to do, provided, of course, that the evidence is there. In the discussion this morning, people frequently talked about helping people to lose weight. But

normally you don't get counseled about obesity until you are obese. We first need to have those messages when you're a young adult and have gained five pounds beyond your weight when you graduated from high school.

Participant: I spent the last four years building a suite of software programs ready to use in the physician's office, or for that matter in the corporate environment, which empower the individual to retrain and also provide the physician with a quick way of directing someone into a program that they can follow and which could be individually modified. Furthermore, the programs incorporate tracking systems so you can remotely monitor whether a person has been using a program, what their weight is doing, on a graphic display. They allow for the empowerment of both the patient and the physician and permit a continued exchange so you could follow whether patients are doing what's been assigned. If they are making progress, they could be encouraged or if not, challenged in some other way. I think the use of the internet to interact with the patient in ways much of which are automated, is something interesting, and something I've thought a lot about over the last four years.

Dr. Ron Davis: Dentists and veterinarians have done a better job than we have in medicine in utilizing recall and reminder notices, although in some instances, like childhood immunization, we are starting to improve. Our goal should be to do recall for all those who miss an appointment and to send reminders to patients for all upcoming appointments. But short of that, whenever patients contact the health care system, we ought to check to see what they are due for or what they are overdue for.

Here is where informatics strategies are key. If someone calls the doctor's office because he or she has abdominal pain, or if a patient goes to the emergency room, at that point the provider ought to pull up the patient's medical record on the computer which will use software intelligence to indicate whether the patient hasn't had a mammogram in so many years or is due for this or that check. Some health systems are moving toward that, but we still have a long way to go. That is something we should work toward.

Dr. Robert Smith: I agree. Also, it seems to me there is the additional problem of role ambivalence. We talked a lot this morning about patient demand. Maybe in many settings physicians are waiting for patients to ask for something; in other settings—in almost all settings perhaps—the patients look to physicians to advise them what to do and what not to do. What we want to do is create a model for what each group can expect from the other.

The demand side can really bring about a lot of change. We have very good examples of that. So the more patients start asking for something, the more physicians are revising their standard of care, the more they start initiating care they perceive patients desire. We are seeing this in colorectal cancer, a very good example. The likelihood that an individual has been screened is highly associated with having had a checkup. If patients haven't

been screened, it's usually not for a lot of personal reasons; it's just because their doctor hasn't brought it up.

Dr. Hal Sox: I would note the research opportunity. I don't remember seeing a study in which somebody asked patients right after they left the doctor's office, did you ask the doctor about doing a breast cancer screening? Did the doctor bring up the subject of screening? If not, did you ask about it? It is clear that the public is intensely interested in screening policy. But I don't think we have a good handle on just how truly activated they are, how willing they are to go and say to a doctor—what about a Pap test?

Dr. William Dietz: I'd like to come back to counseling for nutrition and physical activity. I think there are four critical elements in the disease care system—effectiveness, efficacy, bias, and system change. We don't have proven effective strategies in primary care to counsel on nutrition, physical activity, and some other clinical preventive services. So we can't very well expect a physician to do something without proven effectiveness, and we can't expect a physician to do something that that physician doesn't feel will be effective; there is no self-efficacy.

Another problem, once somebody becomes overweight, is that in many quarters obesity is still considered a personal failing. The patients are responsible for this problem, let them solve it. I think that is a pervasive bias throughout society. Finally there is the issue of systems. How can physicians provide sensible nutrition advice? I'm not sure I see that as the physician's role. I think the role of physicians in obesity care is to initiate and oversee it, but not to deliver it, for all the reasons that we've discussed, reimbursement, time, and so on. For example, I don't even know whether the recommendation for smoking cessation is being commonly implemented in physicians' offices, and whose responsibility it is and how often it is done. That might be a useful model to think about as an indicator for how far we go to start something for which there is evidence of efficacy and effectiveness, as opposed to obesity, for which we have none.

Dr. Nancy Lee: I spend most of my time promoting screening, but I would like to go on record as saying that the really hard work is in primary prevention. Our problem with cervical cancer screening is that at the population level, we may actually over screen. We are getting pretty good at mammography screening. There are disparities, but we are getting there. Colorectal cancer screening, we have a long way to go, but we know what to do. We have got a lot further to go in the tobacco, nutrition and physical activity. I think that should be something that the IOM could spend a lot of time on, rather than tweaking around the edges of something we already know something about, like screening. We need to improve on that, but we actually know those systems, and I think we have a lot more that we don't know about.

Dr. Len Lichtenfeld: I don't think we do anywhere near the job we should be doing in colorectal cancer screening, given the potential return on investment we have, which is literally right in front of us.

Dr. Nancy Lee: We know how to do it, because we have done it. To me, those systems are not too much different than what we have already got in place for breast and cervical cancer screening, but we've got really different systems that you are going to need for primary prevention.

Dr. Len Lichtenfeld: What is the role of medical schools, what is the role of medical organizations, how do you get the information out there, how do you change the pattern, how do you provide the backup? The IOM report, while perhaps not an indictment, is clearly not an endorsement of our medical educational system. Who fixes it? How does it happen?

Dr. Hal Sox: Well, part of the problem is acquiring knowledge, but I would argue that that is probably the smaller part. The larger part is figuring out how to institute system changes in your own workplace, so that the right actions are taken with every patient.

Dr. Sandra Reed: I talk to my patients about stopping smoking. They see me once a year and walk out the door, and the next year they come back, and they are still smoking. We need some type of implementable system that can start the ball rolling in your office when you have got them there. Then somebody else has got to do the legwork and follow-up, because I don't have time. I've got the smoke line, the number. You give it to them, and they come back the next year, and they are still smoking. First of all, the patient has to want to stop smoking. We can tell them they need to, but if they are not ready internally, we can send them out the door every year with that 1-800 number, and it is going to go in the trash can.

So you've got to get the patient ready, and then have the information and the system set up so they can access it and have success. I have written prescriptions for Zyban, and they come back next year, and they are still smoking. It’s the same thing with weight loss. I have talked to my patients over and over about weight loss. We are starting a program now in our office; we have a dietician there who counsels the patient on diet and exercise. But that patient has to be ready to make a lifestyle change. Our environment does not allow that very easily. Our lifestyle—everybody's lifestyle—is counterproductive to weight loss. It is a bigger thing than just bringing the patients in and getting them set up in a system. When they go into the real world, they have to fight to do the right thing with diet and exercise and activity, because the American lifestyle is not set up for that.

Dr. Len Lichtenfeld: So, you would like to see more emphasis on what we discussed earlier, public education, mass media approaches to try to set the stage to make it happen.

Dr. Hal Sox: I think Dr. Reed is also talking about implementing effective systems for supporting smoking cessation in a small practice. For exam-

ple, one person in the practice should have the job of talking with a patient who has decided to quit smoking and setting in place a reasonable treatment program and arranging for follow-up care.

Dr. Sandra Reed: We need an inplementable plan for follow-up, whether that's calling every two weeks to ask how is the smoking cessation going, what can we do to help you, or have you used the 1-800 number. We need something that works, that is proven to work, or we are wasting our time, and it's expensive to have our staff call the patients, especially if you're not getting reimbursed for it.

Dr. Ron Davis: I think accountability gives us the best chance to effect change, but it has to be realistic. We can't ask for accountability to administer all the services recommended by the U.S. Preventive Services Task Force guidelines, because that could take seven hours a day of a physician's time (Yarnell et al., 2003). So pick the most important ones from the Partnership for Prevention, working with CDC and others, where they rank the three or four most important preventive services (Coffield et al., 2001), and then hold people accountable for those.

Dr. Robert Smith: NCI, CDC, and ACS are working on a book about lessons learned from screening which would define a range of interventions of varying intensity. A practice could decide what's the least that could be done to improve delivery of preventive care, and what benefits could they expect from the implementation of that new policy or tool.

4

Wrap-Up Session

Dr. Tim Byers: I'm going to hit the high points of the discussion of the tobacco and obesity group and then ask a couple of specific questions for some final discussion. The group felt that we're not serious about public health education in either tobacco or nutrition, given the size of the budgets for the efforts that we need. It's said that nutrition education doesn't work. Well, we have never really tried it, so maybe it works, maybe it doesn't. To adequately fund marketing of a new product, we spend tens and tens of millions of dollars. To adequately fund nutrition, or tobacco education for that matter, it is going to be at least that much. So, that was an important point. Along those lines, we were urged, even during an economic downturn for public support for things like this, to continue to be very assertive and not apologetic about advocating for resources in these areas.

Another comment was that there is really not a single entity or organization empowered or resourced to do the job of primary prevention for tobacco and obesity and improved nutrition. There are scattered resources across disease specific centers and Institutes in the government. Different agencies have missions, either overlapping or not, leaving gaps between them. That is a problem that we allude to in the report, and that is a problem that I'd like to ask a pointed question about. Those of you who are at NCI and those of you who are at CDC, is there a hole between these two agencies when it comes to getting the job done on tobacco control and nutrition?

Dr. Peter Greenwald: I don't think there is a hole between the agencies. Some people say NCI does research, and CDC does applications, but I don't feel that way. I feel that if NCI doesn't do some applications for NIH, we don't keep our eye on the ball, and if CDC doesn't do some research, they are behind the times, so we both have to do both. But one does more of one than the other. The problem in nutrition is what you pointed out first; there is

not a serious intensive effort where the resource allocation is anywhere near the level needed to address the obesity and physical activity problem. There is individual variability, there is a lot of interest in bioactive food compounds, and there are a lot of other things besides obesity and fitness that fall under nutrition. So, it is a matter of the scope of the effort that is not up to the scope of the problem.

Dr. William Dietz: I wouldn't say there is a gap. There is a lack of a coordinated approach. Nutrition is scattered across several different Institutes. So, internally at NIH there is not coherency, and that interferes with coherency between what we try to do and what NIH tries to do. Physical activity is even weaker, because there is no home for physical activity at NIH. It has been a neglected area for research investment. As a result, we have ended up funding some of these programs, but because we are so resource limited, we don't have the data that we need to effectively translate into state programs.

Dr. Tim Byers: To move on another highlight was that the paradigm for dealing with the tobacco problem falls apart a little bit in dealing with the obesity problem. There was a lot of discussion about lack of analogies, the risk of demonization of the food industry versus cooperation, stigmatization of the obese, and so forth, so that the solution for tobacco probably will not work well for obesity.

The final big point was that there was a continuing need for a clear national strategy, not only for the obesity problem as we pointed out in the report, but even still for tobacco. There is a national plan for tobacco which has been held up in departmental review within our government, but some feel such a plan cannot be considered a consensus strategy. So, lack of a clear strategic plan for these two is an ongoing problem.

Dr. Bob Vollinger, NCI: I came to NCI in 1996 to work on the ASSIST project. I would say at that time there was as much competition with CDC and OSH (Office on Smoking and Health, CDC) as there was cooperation. We were funding 17 states that were competitively awarded, and CDC was funding the other states, and we had much more money to do it than they did, so there was tension around the way that was happening.

But that was a long time ago. Since then, a lot of people have changed, and our respective organizations have gotten a lot more proactively collaborative. It started happening around the transition when ASSIST was ending and CDC was beginning the national tobacco control program. We worked very collaboratively with them to make sure that the lessons from ASSIST were going to be put into practice with this new national RFA that was funding all the states.

Since that time, we have done different things. We have a monthly meeting on video conference, where our group and OSH get together and

strategize about things. We make sure that there is pretty good cooperation there. I sat on an external advisory board on those that were putting out their new RFAs to fund the states. So I think things have come a long way over the last few years.

Dr. Susan Curry: I'll quickly summarize the two groups that I sat in on, and then you can have the last word, Tim. I want to talk about the payer-provider managed care issues, and just summarize some of the key points. In terms of the payers, the point was made that they know they are paying for a lot of care that isn't effective. There are opportunities for reallocation of resources. But in order to do that, they need to be guided by very short, crisp messages about what works and how, and those messages need to be very specific. There is a general tuning out of people in the payer groups at the generic use of the term prevention, so I think we need to be very strategic about it. A couple of people have expressed some good ideas about what are the low-hanging fruit that we can pick to move prevention forward.

We also talked a lot about Medicare and the idea that right now it is a defined benefit. It is a defined benefit for services that are reasonable and necessary for the diagnosis and treatment of illness and injury. There is consensus that that language is outdated. It was crafted in 1964. It focuses on acute and episodic care, but it is statutory language, and that means that you literally need an act of Congress to change it. Why not set that as a goal, and keep our eyes open for opportunities to get there?

The biggest bang for the buck lies in being concise in picking an issue that we can move, and that appears to be the smoking cessation benefit. There was talk about the fact that medical nutrition therapy has been added in recent years to Medicare. The process that was used in order to move that through this messy legal process might serve as a model for what we could do with smoking cessation. There was also talk about the idea of adding to Medicare flexible spending accounts for preventive services.

In terms of private insurance, we touched on two possible leverage points. One was expanding options for pretax medical spending plans; people participate in them, but they don't know that they could spend them for help with smoking cessation, with dietary change, and so forth. Consumer directed health care benefits were also discussed—where you actually get an allocation of dollars for health care and spend it; there was some interest in knowing exactly what people do with these. So, that was the payer-managed care-insurer piece.

In the applied research meeting, there were lots of interesting ideas, including some concrete suggestions about more funding for dissemination research, and some very specific ideas on what that might mean. For one thing, maybe we should be investing some resources in funding replications of successful interventions in new populations and new settings. Sometimes

those kinds of studies have been pejoratively referred to as turning the screw one little notch; we're going to take this thing that worked there, and we're going to apply it over here. However, there is some value in doing that, and also in funding research that looks at different methods for implementing successful interventions.

We discussed better use of the task forces, the U.S. Preventive Services Task Force and the U.S. Task Force for Community Preventive Services. Using those task forces, their deliberation processes, the information that they glean from really drilling down in the extant literature, in research and funding announcements, so that they can provide some direction on where we want to go.

There was also talk about publication and dissemination. There is a CONSORT statement which provides guidelines for the reporting of the methods and results from randomized clinical trials. Certainly we could come up with, and I think we would need, a parallel set of guidelines for reporting community intervention research. The methods are not often randomized clinical trials, but that doesn't mean that you can't have rigor and consistency in how the results and methods are reported. A common theme is if we are going to be doing more dissemination research, we need to identify leaders and owners of that. We have talked about the American Cancer Society, about CDC. I think the person who was saying this was from NCI, but there are other agencies that would be involved.

Then a final suggestion was the importance of involving science-based agencies in new dissemination initiatives that come out of other departments, like DHHS, or others. There have been some recent investments on the part of DHHS in these national programs to get people more active and more healthy. They are going to be funding state and community level initiatives, but it would be important to have the science-based agencies that have provided the evidence base for this at the table when these initiatives are developed, and even more so, when the proposals for these new initiatives come in and are evaluated.

Dr. Tim Byers: The education and primary care group discussion was largely on primary care itself, not so much on public education, although some of the discussion was about the age-old problem of how you get doctors to do something. There was also a recognition that doctors are really heavily burdened, and that a lot of prevention is going to have to be borne by systems in addition to physicians.

A couple of ideas emerged. If you fund it, they will do it, and if you measure it, it will get done. So carrot and the stick, obviously. We didn't explore too much new options in those areas, but there were some examples of things happening with accreditation bodies and HEDIS that have had beneficial influences on provider behavior. The realization of the difficulty

of adding clinical preventive services in small practices, as opposed to large groups, was new to me.

The Partnership for Prevention has recently come up with three or four priority clinical preventive services that were suggested as areas of emphasis, smoking cessation, obesity/nutrition, for example. So, in the spirit of summary, I flagged a couple of things that stuck in my mind as interesting ideas. It was suggested that Medicare might be extended to provide clinical preventive services for the age group 50 to 64. This national or federalized clinical preventive services program would allow private insurers to offload these, and give the Medicare program, that would benefit most from healthier beneficiaries at entry, the responsibility of providing those services that would make for a healthier population.

Another interesting thought was raised on a sticking point between individual choice in behaviors and policy options. This is seen by many as being either/or, the big hand of government telling us what to eat or what to smoke, versus individual freedom, individual choice. So as we think about policy changes as a way to advance prevention, we need to be aware that there is a view of policy as heavy handed, in contradiction to individual liberty and individual choice.

Dr. Len Lichtenfeld: In closing we'd like to thank Sue Curry, Tim Byers, and the IOM for sponsoring the report and for the use of their facilities, the invited speakers and all the participants for their wonderful contributions, and to thank the NCI and the ACS for their support of this symposium.

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Appendix

Fulfilling the Potential of Cancer Prevention and Early Detection
Institute of Medicine and
American Cancer Society Symposium
June 30, 2003,
National Academy of Sciences,
2100 C Street, N.W.
Washington, D.C., 20418

8:30 – 9:00	Continental Breakfast in the Great Hall
9:00 – 9:05	**Plenary Session--The Lecture Room** Introduction of Symposium and Dr. von Eschenbach Harvey Fineberg, M.D., Ph.D., President, Institute of Medicine
9:05 – 9:25	"Cancer Prevention and Early Detection: Key Strategies for Challenge Goal 2015" Andrew von Eschenbach, M.D., Director, National Cancer Institute
9:25 – 9:45	"View from the ACS: Fulfillment of the Potential of Cancer Prevention" John Seffrin, Ph.D., CEO, American Cancer Society, President, UICC

9:45 – 9:55	"How Many Lives Can Be Saved?" Tim Byers, M.D., M.P.H., IOM report co-editor Professor of Preventive Medicine and Associate Director University of Colorado Comprehensive Cancer Center
9:55 – 10:05	"Harnessing the Power of Cancer Prevention and Early Detection" Susan Curry, Ph.D., IOM report co-editor Director, Health Research and Policy Centers Professor, University of Illinois, Chicago
10:05 – 10:45	Q&A
10:45 – 11:00	BREAK
11:00 – 11:20	"Reducing Disparities in Cancer" Harold Freeman, M.D., Department of Surgery, North General Hospital, New York Director, Center to Reduce Cancer Health Disparities National Cancer Institute
11:20 – 11:40	"Delivering Quality Cancer Prevention" Hugh Straley, M.D., Medical Director for Quality and Research Group Health Cooperative
11:40 – 12:00	"Private Sector Perspectives on Cancer Prevention and Early Detection" Lew Sandy, M.D., Executive Vice President for Clinical Strategies and Policy UnitedHealthCare
12:00 – 12:30	Q&A
12:30 – 1:15	LUNCH in the Great Hall Speakers and Attendees
1:15 – 2:30	**Simultaneous group discussions with invited speakers** Facilitators – Clement Bezold, Ph.D., Institute for Alternative Futures, Len Lichtenfeld, M.D., American Cancer Society, Reporters – Susan Curry, Ph.D., University of Illinois, Chicago, Tim Byers, M.D., University of Colorado Comprehensive Cancer Center.

Group Discussion I

Policy in Tobacco and Obesity (Lecture Room)

Tobacco use and obesity are major contributors to the cancer burden. Initiatives to increase the adoption, reach, and impact of evidence-based cancer prevention interventions need to occur at multiple levels across multiple behavioral targets. The policy recommendations in the IOM National Cancer Policy Board report reflect similarities and differences in the state of the science for tobacco compared to obesity interventions. Progress in both areas will be enhanced when all states have comprehensive cancer control plans that include public and private partnerships for community-based programs (Recommendation #3). There is sufficient evidence to recommend enactment and enforcement of federal and state initiatives that reduce tobacco use (e.g., increased excise taxes, clean indoor air acts—Recommendation #1). Still needed is a coordinated, national strategy to address obesity, unhealthy diet, and physical inactivity (Recommendation #2). In light of these similarities and differences, group discussion topics include:

- What opportunities are there to link and create synergies between policy initiatives for tobacco and obesity? Particularly important is avoiding competition between the two targets, as would happen if we concluded that we've fixed tobacco and need now to turn to obesity.
- Where and how can tobacco policy successes pave the way for timelier implementation of obesity-related policies as new evidence emerges?
- What policy initiatives have the greatest potential to address and help eliminate health disparities related to tobacco and obesity?

Harvey Fineberg, M.D., Ph.D., President Institute of Medicine

Bob Croyle, Ph.D., Acting Director, Division of Cancer Control and Population Sciences, National Cancer Institute

Bill Corr, J.D., Executive Director, National Center for Tobacco-Free Kids

Bill Dietz, M.D., Ph.D., Director, Division of Nutrition and Physical Activity, Centers for Disease Control and Prevention

Group Discussion II

Payer/Provider/Managed Care Issues (Board Room)

A vital role of the health care system in filling the gap between what we know and what we do for cancer prevention and early detection is to ensure universal access to evidence-based prevention interventions. The IOM National Cancer Policy Board recommends: that public and private insurers consider such evidence-based services as essential benefits (Recommendation #4); that support be increased for programs that provide primary care to uninsured and low income people (Recommendation #5); that existing national programs such as CDC's National Breast and Cervical Cancer Early Detection Program receive adequate support and be expanded for colorectal cancer screening (Recommendation #6); and that the USDHHS conduct a comprehensive review to assess whether evidence-based preventive services are being offered and successfully delivered in federal health programs (Recommendation #7). umping off from these recommendations, group discussion topics include:

- What are the optimal leverage points for improving access to proven prevention interventions? Of the recommendations noted by the IOM, what opportunities are there for timely and early successes in their implementation?
- What types of decision making strategies and benefit policies may be needed with regard to access to, and coverage for, cancer prevention interventions that generate high demand, but have uncertain or even unproven evidence to support them?
- What policy initiatives have the greatest potential to address and help eliminate cancer-related health disparities?

Lew Sandy, M.D., Executive Vice President for Clinical Strategies and Policy UnitedHealthCare

Sean Tunis, M.D., M.Sc., Chief Medical Officer

Centers for Medicare and Medicaid Services

Helen Darling, M.A., President, Washington Business Group on Health

2:30 – 2:45 BREAK

2:45 – 4:00 **Simultaneous group discussions with invited speakers**
Facilitators—Clement Bezold, Ph.D., Institute of Alternative Futures, Len Lichtenfeld, M.D., American Cancer Society. Reporters—Susan Curry, Ph.D., University of Illinois, Chicago, Tim Byers, M.D., University of Colorado Comprehensive Cancer Center

Group Discussion III
Applied Research (Lecture Room)

Estimates are that it takes an average 17 years for a clinical innovation to move from research into practice. Strategies to minimize this lag include timely assessment and synthesis of emerging evidence and rapid dissemination of the resulting evidence-based recommendations (Recommendation #9) as well as increased attention to building the evidence base for effective strategies to disseminate evidence-based prevention interventions (Recommendation #12). Discussion of these recommendations by the group can focus on the following issues:

- How can we change the current process of funding, reporting, and disseminating research results in cancer prevention to decrease the time it takes to get information on effective cancer prevention strategies into clinical practice and public awareness?
- What new research funding initiatives are needed to increase the number of studies that apply rigorous scientific methods to evaluate dissemination strategies, and what opportunities are there for shared funding of such research across NIH and other federal agencies, as well as through government-private funding partnerships?

Ralph Coates, Ph.D., Associate Director for Science, Division of Cancer Prevention and Control, Centers for Disease Control and Prevention

Jon Kerner, Ph.D., Assistant Deputy Director for Research Dissemination & Diffusion, Division of Cancer Control and Population Sciences, National Cancer Institute

Peter Greenwald, M.D., Dr.P.H., Director, Division of Cancer Prevention, National Cancer Institute

Bob Graham, M.D., Acting Deputy Director, Agency for Healthcare Research and Quality

Group Discussion IV
Prevention Through Education and Primary Care (Board Room)

Primary care providers in health care settings are effective agents of behavioral change. However, maximizing their effectiveness requires programs to improve education and training, monitor adherence to evidence-based guidelines, and enhance practice environments to support provision of cancer prevention and early detection services (Recommendation #8). Key discussion issues for this group include:

- Who is accountable for ensuring that graduate curricula and continuing education programs include adequate coverage of cancer prevention and early detection? How can professional organizations and academic medical centers be encouraged to have this as an educational priority?
- What leverage points are there for monitoring the performance not only of health care providers but also of the systems of health care delivery, to ensure infrastructure and accountabilities for delivering evidence-based prevention interventions?
- How can state health departments and federal agencies such as CMS advance this priority?

Ron Davis, M.D., Trustee, American Medical Association, Director, Center for Health Promotion & Disease Prevention, Henry Ford Health System

Robert Smith, Ph.D., Director of Cancer Screening, American Cancer Society

Hal Sox, M.D., Editor, Annals of Internal Medicine

4:00 – 4:30	Summary of sessions and wrap-up with reporters, Susan Curry and Tim Byers
4:30	Adjourn