

INTRODUCTION

How can the public fully benefit from advances in health knowledge, given health information that is increasingly complex, health professionals who are increasingly specialized and busy and health care that is increasingly effective but chaotic?

Knowledge of health and disease grows daily:

- More than 800 health science articles are added to the Medline database each day.
- The Physician's Desk Reference (PDR) has grown from 77 pages in 1942 to more than 3,000 pages in 2008.
- About 100 medical-process patents are issued a month—double the number in the 1980s.
- Health websites report continued explosive growth.

In the United States, billions of dollars of biomedical research are distilled into knowledge, procedures and drugs to create strategies to prevent and treat diseases—strategies that cost thousands of dollars to implement for a single disease in a single patient.

But the success of the enterprise depends ultimately on individual behavior. People must obtain their flu shots, colonoscopies and mammograms. They must identify good, affordable doctors and hospitals. They must seek health care when they are ill, show up for treatment and follow their doctors' recommendations. They must take their drugs as prescribed. And of course, they must stop smoking, eat a moderate diet and remain physically active.

Their behavior matters.

Without the active engagement of individuals, the value of this sophisticated and complex health enterprise is muted. But participation isn't easy for anyone and is particularly difficult for some in our society.

For example, 47 million Americans do not have health insurance, posing a considerable barrier to their timely participation in the health care they need. Another example: The presence of health information online is seen by many as the single most important factor in helping people act wisely with regard to their health;

indeed, about 70 percent of the population now uses the Internet and of those, about 58 percent search for health information. However, many lack the skills to search for answers to their questions about health. Fourteen percent of Americans have limited literacy skills and 36 percent—or 77 million adults—are limited in their abilities to understand health information and directives. Consider also that the racial, cultural, religious and ethnic diversity of an immigrant population of around 55 million poses a challenge, as new immigrants learn new norms and traditions, overturn cultural taboos and struggle with the demands of technical medical jargon in order to participate in their health care. And 13 percent of the nation lives in poverty, where access to information and services is limited and the community norms do not support healthy lifestyles.

There are thousands of steps between the discovery of a new disease mechanism and the application of that finding to contribute to improved health. The Center for the Advancement of Health focuses its efforts on one critical step in that sequence: health behavior.

Here is a brief account of how the Center's work to raise the visibility and priority of behavior in relations to health has developed over the past fifteen years.

The Center's mission is to *"create an America where everyone is prepared to live a healthy life and make effective choices about their health care."* Increasing the quality and years of healthy life and eliminating health disparities is only possible if people have the knowledge, confidence and skills to make informed decisions and interact productively with health care providers.

The Center for the Advancement of Health was founded in 1992 with the explicit mission to recognize the role of behavior in health: how individuals' actions contribute to the onset of some diseases, the progression of many, and the management of nearly all—and that this behavior is powerfully influenced by the communities where they live and work, how they are educated, what they eat, how they play, and the resources available to them.

During the first five years after its founding, the Center focused on achieving its mission by *raising the credibility and visibility of the role of behavior in health.*

In 1992, there was scant recognition of the non-biological factors that influence health among scientists, health professionals or the public. Research support from the National Institutes of Health (NIH) was directed toward exploring the biological aspects of disease and barely recognized the influence of behavior in health and illness. To strengthen the credibility of scientific findings relevant to health-related behavior, the Center worked closely with research societies, such as the American Psychological Association, the Society of Behavioral Medicine, the Society for Public Health Education and others to encourage Congress and the NIH to increase research support for social and behavioral research on health. Together, they also worked to increase support for training behavioral and social scientists to conduct research on health problems that require multiple disciplines to solve, such as tobacco addiction, obesity and diabetes management. As a result of these working relationships, the Center was asked to convene the Health Behavior Alliance, composed of 28 professional societies representing more than 250,000 scientists, to

work toward improving the quality and reducing the redundancy of their research and increasing multidisciplinary collaboration.

In the early 90s, the news media had no particular health focus and health topics were covered either from a business perspective (i.e., the cost of health care, changes in the pharmaceutical industry) or a scientific perspective, (i.e., the discovery of disease mechanisms and technological advances). To address this bias, the Center established the Health Behavior News Service (HBNS) in 1995 to increase news coverage of new research findings about behavioral, social, environmental and economic influences on health. Like Reuters (although requiring no fees from journalists), HBNS regularly reports on important new findings and distributes those news stories to the news media for international dissemination.

The second phase of the Center's development began in 1997, when achieving the Center's mission evolved to include *preparing the evidence for effective intervention to change behavior*.

With growing support for research on topics related to health behavior at NIH and the demand for HBNS articles on health behavior from the news media and the Internet, the Center recognized that the next challenge it faced required that the expanding body of behavioral and social science health research be transformed into useful knowledge for guiding changes in practice and policy. Hundreds of studies suggested that changing certain behaviors like smoking, medication compliance and diet could make a difference in the nation's health. However, those findings did not easily point to the most effective methods of intervening to help people change those behaviors. Which community policies would influence the behaviors of the public—such as excise taxes for tobacco products, enforcement of youth drinking laws and zoning for more parks and recreational areas—most effectively? What were the best ways to spark motivation in individuals to change long-held habits? There was a clear need for a systematic synthesis of findings into useful, practical tools and to understand how to get those tools used.

To meet this need, the Center conducted reviews. It reported to the public, researchers, public health planners and health care providers what was known about chronic disease prevention and management and developed performance measures for use in health plans. And it conducted exploratory research to understand the barriers to be overcome in making use of this knowledge by surveying health plan medical directors and public and private payers.

During this time, the Center recognized the importance of building the capacity of young scientists to conduct high quality research on interdisciplinary topics related to public policies that influence health behavior at the population level. In 2001 the Center established a postdoctoral training program, the Kellogg Scholars in Health Disparities, to support young minority investigators at Harvard University, the University of Michigan and Morgan State University to train and mentor these scholars and to refine their skills to conduct research with a particular focus on ensuring their work's relevance to the development of policies to reduce inequalities in health.

By 2003, health professionals and health plans had begun to recognize the role of patients in their own health and began to seek guidance about how they might effectively address behavior in preventing and managing illness. This development led the Center to work on achieving its mission by *transforming evidence into action*.

Employers and health plans realized the expense and unnecessary suffering caused by people's struggles to master complicated symptom and lifestyle regimens in order to live with diseases such as asthma, diabetes, arthritis and heart disease. What could be done to lessen these burdens and increase their employees' and members' abilities to live active lives despite their diseases? The Center worked to provide these audiences with solid evidence of what works to help people change behavior, whether those interventions were directed toward the general public through a national media campaign, toward a particular community, toward individuals through their health care providers or to individuals themselves. The Center collaborated with organizations such as the American Academy of Family Physicians, the National Committee for Quality Assurance, the National Cancer Institute and the Group Health Cooperative of Puget Sound to identify how knowledge about behavior, social and economic factors could shape the delivery of services and development of policies that would help people fully benefit from advances in health knowledge and practice.

The early 2000s also marked another important trend: Media coverage of health had changed considerably, due in part to the Center's efforts, but influenced powerfully by the growing popularity of health information on the Internet. Because information is necessary (though not sufficient) to change people's behavior, the Center became concerned with the public confusion resulting from indiscriminant media coverage of new scientific findings. As a result, the Center redirected the HBNS to cover a neglected body of health science that is critical in guiding the individual's decisions about their health and health care: systematic reviews that are relevant to people's health decisions. In a media (broadcast, print and Web-based) dominated by breathless coverage of studies of questionable importance, systematic reviews represent the best guide for action because they are based on a careful examination of all relevant research on a given question. In 2002, however, such reviews received almost no attention from the news media. Most reviews are proprietary, and they are undervalued by editors because the findings are often equivocal and present a barrier to quick reporting for journalists. The Center established relationships with the producers of proprietary systematic reviews, such as the Cochrane Collaboration and ECRI, and began publishing and disseminating news stories based on their work under the auspices of the HBNS.

Meanwhile, the Center greatly expanded its efforts to strengthen the skills of minority behavioral and social scientists to conduct research that would help shape the policies to reduce health disparities. In 2005, the Center established the H. Jack Geiger Congressional Health Policy Fellowship Program to support young scholars in contributing to the health disparities work of members of Congress and assumed administration of the W. K. Kellogg Foundation Health Policy Fellows Program, which supported a total of 30 predoctoral students at seven university sites—Heller

Graduate School at Brandeis; Mailman School of Public Health at Columbia; Harvard School of Public Health; Johns Hopkins Bloomberg School of Public Health; UCLA School of Public Health; University of Michigan School of Public Health; and the RAND Graduate School.

The W.K. Kellogg Foundation also linked the successful Scholars in Health Disparities Program with the Community Health Scholars Program to create a new Kellogg Health Scholars program building on the achievements of the two legacy programs. In addition to the three original sites, the linked program now supports sites at the University of California at San Francisco and Berkeley, the University of Pittsburgh, the University of North Carolina at Chapel Hill, Johns Hopkins University and the University of Texas' MD Anderson Cancer Center. In addition to the 15 current scholars, the Center is expecting to support 40 more postdoctoral scholars over the next five years.

The Center's role in achieving its mission in this complex, information-dominated age turns, in 2007, to *ensuring that people can take effective action to live as well and for as long as they can.*

Individuals possess a range of skills, abilities and motivations to make good use of what is known about health and disease. Consider the fact that a Google search for "breast cancer" produces 72 million hits. This illustrates both the strengths and limitations of the information-dominated environment. It is positive in that most people have access to a tremendous amount of health information. It is challenging, in that even the most highly skilled people have difficulty finding personally relevant information and assessing its accuracy. Doing so requires motivation, access to a computer, search skills, time, education and practice, as well as sufficient knowledge to judge the quality of the information, to personalize it and to place it in a broader context.

Over the past 15 years, there has been an exponential increase in the evidence describing the critical role that individuals play in their health and a growing awareness that their behavior is powerfully influenced by their location, education and occupation, as well as their age, race and sex. Effective strategies—which include changes in public policies at the national level, in states and in local communities, as well as in businesses, hospitals, and community agencies and organizations—have been developed to help people act to improve their health and manage their illnesses. Such strategies ensure that people have the information and skills they need to make good decisions. These include the implementation of professional standards and practices, incentives, measurement and public reporting on effectiveness.

In its next phase, the Center's program will respond to the demands of changes in knowledge and practice—in public health and in medicine—and will build on its accomplishments and the relationships it has built over its tenure. The Center will:

- Define best practices to increase people's engagement in their health and health care and work with policy-makers, communities, professionals and individuals to implement these strategies.

- Advocate the use of research to guide policies and practices that will ensure that people safely and competently make use of good information to guide their health decisions.
- Communicate with the public via the media about the risks and requirements people face in finding and using good health information and care.

As we embark on this next phase of the its evolution, it seems like a good time to both look back to see how far the Center has come, but also to chronicle the challenges it has worked to overcome during the past fifteen years with the aim of raising the visibility and priority of behavior as an important asset in efforts to prevent, treat and manage disease. Since communicating with the general public has not been an integrated part of the Center's mission, we hope these essays will benefit all those who share our commitment to producing better health outcomes: students, researchers, health administrators, health professionals and government officials. These essays chart the costs of ignoring this perspective and describe the imperative for acting to make it operational. They provide an inside look at the difficulties of translating behavioral and social science research into policies and practices to support changing behavior. And in the process, they demonstrate what it takes to hold fast to a goal that challenges conventional wisdom and current practice, is quickly dismissed as nice but not necessary but which I believe—and which solid scientific evidence shows—is truly fundamental to giving everybody the best shot at better health.

It has been my privilege to serve as the President and Executive Director of the Center for the Advancement of Health since its founding 15 years ago. These essays document my efforts to persuade a wide spectrum of individuals who have a stake in the nation's health that the public's behavior is critical in the formulation and administration of health policies—and the growing body of evidence demonstrating its importance cannot be ignored.

The publication of these essays gives me yet another chance to thank the dedicated staff and Board of Trustees at the Center; the visionary foundation staff of the John D. and Catherine T. MacArthur Foundation and the Nathan Cummings Foundation who provided the idea and initial funding for the Center; the many other foundations and individuals who have contributed support to the Center over the years; and of course, to the hundreds of gifted and generous colleagues who have made the activities—and the success—of the Center possible.