Reflections on Developments in Health Promotion in the Past Quarter Century From Founding Members of the *American Journal of Health Promotion* Editorial Board

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From top left: Judd Allen, PhD; David R. Anderson, PhD, LP; Bill Baun, PED; Allan Best, PhD; Steven N. Blair, PED; Larry S. Chapman, MPH; Michael Eriksen, ScD; Jonathan Fielding, MPH MBA, MD; Barry A. Franklin, PhD; Ron Z. Goetzel, PhD; Lawrence W. Green, DrPH; Gil Omenn, MD, PhD; Dean Ornish, MD; Kenneth R. Pelletier, PhD[1]

In celebration of the 25th anniversary of the founding of the *American Journal of Health Promotion*, all 14 of the founding members of our editorial board who are still affiliated with the Journal submitted reflections on how the field of health promotion has evolved in the past quarter of a century. Comments from 10 of them are below. Comments by four of them (J. Allan Best, PhD, Ron Goetzel, PhD, Barry Franklin, PhD, and Lawrence Green, DrPH) and comments by me are published as separate articles in this issue. As I look at the photos of these 14 people at the top of this page, I see 14 talented scholars and practitioners, 14 kind souls, 14 friends, and 14 middle-aged (and plus) white men. They are middle-aged (and plus), because they have been with us for 25 years. They are white and male, because that was the nature of our field 25 years ago. I am pleased to say that 148 (52%) of the 285 members of our current editorial team, and three of our four Associate Editors in Chief, are women. I don't have an accurate racial breakdown of our current editorial team, but I do know that we are much more diverse than we were 25 years ago. These changes in gender and race are also a reflection of changes in the leadership of our field which I believe will help us better understand all populations and ultimately produce programs that will engage more people and produce even better outcomes.

Note from the Editor in Chief

Michael O'Donnell

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Judd Allen, PhD

I am grateful to the *American Journal of Health Promotion* for its role in advancing the art and science of promoting healthy lifestyles. For the premier issue (Summer 1986), my dad, Robert Allen, and I wrote a case study about our work with Coca-Cola and its newly acquired subsidiary, Minute Maid. We reported how the company and its employees were able to address racism, poverty, poor productivity, and unhealthy lifestyle practices by creating a healthier culture. Since that first issue, I have looked at the Journal and our field through a cultural lens. What follows are some observations. The *American Journal of Health Promotion* has consistently recognized the importance of supportive environments in achieving health promotion objectives. Benchmarking and best practice studies published in the Journal have consistently found that a supportive culture is important to success.

We know that low-risk individuals will become higher risk in a culture that does not support health. This is one of the lessons learned from the obesity epidemic.

Health promotion practice and research has yet to address the need for culture change. Key culture concepts, such as norms, are rarely incorporated into research or intervention design. As a result, we know quite a lot about what individuals can achieve when they are adequately motivated and given personalized instructions. Such an individual-focused approach to health promotion seems to yield small statistically significant but temporary changes in lifestyle practices. We do not yet have data on the incremental benefit of combining individual initiative, instruction, and culture change.

In the 1980s, I found that the vast majority of Americans attempted healthy lifestyle improvement goals on an annual basis. This was great wellness news and a tribute to our culture of self-improvement. Since that time, the evidence for the benefits of healthy lifestyles has become ubiquitous. Although most people and organizations have been discouraged as a result of failing to achieve their wellness goals, many are motivated to try again. If we would turn our attention to creating conditions that help people succeed in achieving lasting lifestyle improvements, we could make great progress in our field.

One of the great things about the *American Journal of Health Promotion* and our field is the spirit of friendship, learning, and cooperation. I am convinced that, when we pay attention to cultural influences such as social networks, peer support, norms, organizational policies, and the overall social climate, we can create dramatic and sustained results. Our work will become one of the great contributions to humankind.

Judd Allen, PhD is President, Human Resources Institute, LLC. In 1986 he was Senior Consultant, Human Resources Institute, and Senior Research Analyst at Memorial Sloan-Kettering Cancer Center.

David R. Anderson, PhD, LP

I was 6 years into my worksite health promotion career when the *American Journal of Health Promotion* began publication 25 years ago. I entered the field in 1979 by taking a position at Control Data, which had just begun developing the StayWell program and was testing it in its 50,000-employee U.S. workforce. Having recently completed a PhD program in social psychology, I was eager to apply my academic training to an important societal issue. Improving population health was a perfect fit!

The predominant notion in the worksite health promotion field at that time was that improving health was a matter of educating employees about their health risks and how to change them. Armed with adequate knowledge and skills, the general belief was that employees would adopt healthier behaviors. Accordingly, programs offered health risk appraisals using biometric screening and self-report data to inform participants of their mortality risk from various causes and how much they could reduce their mortality risk through lifestyle changes. Once employees became aware of their risks, it was assumed they would enroll in educational programs to change their lifestyle behaviors and reduce their risk.

Practitioners quickly discovered that this knowledge → beliefs → behavior model of change fell short. Although many employees completed health risk appraisals, probably because of their novelty and the opportunity for free and convenient screenings, very few enrolled in behavior change programs, and even fewer were successful in making long-term changes. There were two exceptions to this generally bleak picture. The first was when practitioners proactively invited employees to participate in individual counseling on the basis of their health risk appraisal results. The second was at worksites where onsite staff worked to make changes in policies (e.g., smoking) and the physical and social environment and to organize group activities often lead by enthusiastic employee volunteers. The first exception yielded roughly five times as many employees completing counseling programs and more participants making changes; the second yielded measurable health improvements at the population level.

These early experiences gave rise to three fundamental changes in the art and science of worksite health promotion. The first was to harness the power of proactive, targeted engagement strategies; rather than waiting for employees to

come to us, we would reach out with tailored invitations to participate in our programs. The second change rose from the superiority of personalized counseling over general health education. This focused the health promotion professionals on gaining a better understanding of how people change, which leads us to embrace evidence-based behavior change models like the Transtheoretical (stages of change) model, social cognitive theory, and self-determination theory in designing our lifestyle change strategies and interventions. Our ability to implement these individualized engagement and intervention strategies cost-effectively depends on technologies that did not exist in the 1980s, and technological innovations will undoubtedly continue to enhance our ability to target, engage, and support employees in improving their health.

The third change in worksite health promotion, and I believe the most important, is a distinctly low-tech, ''back to the future'' focus on worksite culture. Despite our best efforts to help individuals change using targeted, tailored strategies powered by increasingly sophisticated technologies, the opposing tobacco and weight trends throughout the past 25 years clearly illustrate the truth of the adage that, when it comes to individual behavior, ''culture always wins.'' Until recently, this trend and the early cultural successes of the 1980s were largely ignored in favor of risk-targeted individual approaches, especially those powered by new technologies. I am very encouraged that employers and the health promotion field have rediscovered the need to create a worksite culture where the healthy choice is the easy choice. However, because employees live most of their lives at home and in their communities, it is also important for employers to extend their culture strategies beyond the worksite. Social networking technologies may play an important role in culture change, but much of the cultural opportunity focuses on policy, benefit design, leadership engagement, and worksite environment and management practices.

Despite these and other fundamental changes in the art and science of worksite health promotion throughout the years, one aspect of our work remains relatively unchanged—the passion and collegiality of worksite health promotion leaders and practitioners. Although many of us are now competitors in commercial enterprises, most who have been in the health promotion field throughout this period of tremendous market growth remain friends who work cooperatively in pursuit of our singular passion for improving the health of the populations we serve.

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William B. Baun, EPD, CWP, FAWHP

When Michael took the bold step to initiate the *American Journal of Health Promotion* in 1986, I was 38 years old and in my third year of managing the health and fitness program at Tenneco. Tenneco was one of the largest diversified companies in the world; 1000+ employees exercised in the corporate fitness center each day, and Wally Ball ruled that year, with 44 teams. My supervisor, Dr. Edward Bernacki, MD, MPH, had the book, *Health Promotion in the Workplace*[1] by O'Donnell and Ainsworth, which served as our road map. These were difficult times for a conglomerate, and evaluation was critical to maintain senior management support. Our initial studies focused on exercise adherence and its relationship to job performance,[2] absenteeism and healthcare cost,[3] and injury prevalence.[4] As the program received national recognition, other Tenneco companies requested programming support, and the findings from our program evaluations[5] began to challenge my fitness center mindset. In many of these companies, building fitness centers was unrealistic, but programs supporting employees and healthy work environments made sense. Chapman[6] acknowledged this shift away from fitness and into a wellness management era in which we moved toward lifestyle programming. The work of Robert F. Allen and his son Judd[7] helped all of us understand the power of climate/culture and community change. My passion was adherence, but as my programming skills grew through the 1980s and 1990s, the world view was shifting to behavior and organizational change. In my 33 years in worksite health promotion, I have always worked in the trenches as a practitioner and program manager. Practitioner organizations like the International Association of Worksite Health Promotion, National Wellness Institute, and Wellness Councils of America became my networks for information, tools to grow my career, and sources of lifelong friendships. Many forces fueled the growth of worksite health promotion in the 1990s through today. My practitioner's view[8]: women workers demanding healthier work environments, aging high-cost employees forcing companies to look for health/productivity solutions, and senior managers recognizing employees as their most valuable asset. Today we use population health models, incentives, and sophisticated tracking. We have better trained staff, too many journals to read, and too many conference choices, and we are experiencing a seller's market. Are our programs more effective? I get concerned in our high-tech/high-touch programming world that practitioners have gotten lazy. We copy evidence-based programs or buy them without checking fit, and when they fail, we blame the developer. O'Donnell[9] defined our business as the art and science of worksite health promotion, and I feel that many practitioners have stopped practicing the art. Recent work by Edington[10] suggests the need to maximize multiple touch points, and entrepreneurs have developed programs that build on social networking

concepts. It's an exciting time to be a practitioner; I just wish we had better mentoring opportunities for our inexperienced programmers. With our recent publication in Harvard Business Review,[11] it feels like we have broken the glass ceiling and that the concept of a culture of health just might have a chance to become a reality.

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Steven N. Blair, PED

One of the major developments in the past 25 years has been the expansion of behavioral science theories, models, and applications for promoting lifestyle change. Many of these approaches developed earlier for smoking cessation applications, but, more recently, the methods have been expanded to physical activity, diet, and other areas. We have made a lot of progress through large, randomized trials of behavioral applications. The challenge for the future is to develop ways to deliver these applications to large numbers of individuals in a cost-effective way. I believe that modern technologies, such as PDAs, smart phones, and the Internet, offer huge opportunities to get many more people following healthful lifestyles.

A second area has been the great expansion of research on the health benefits of physical activity and the application of these findings into numerous initiatives and programs. This work has been in biological science, epidemiology, and interventions. In 1992, the American Heart Association (AHA) listed physical inactivity as a risk factor for coronary heart disease, joining hypertension, lipid abnormalities, and smoking. AHA established a strategic planning committee to develop ideas on how the new risk factor would be incorporated into public health and clinical practice. This report stimulated the U.S. Surgeon General's Report on Physical Activity and Health, the National Institutes of Health Consensus Conference on Physical Activity and Cardiovascular Disease, and other initiatives. Most recently, we have seen the publication of the first, official Department of Health and Human Services 2008 Physical Activity Guidelines, and, on May 3, 2010, the first National Physical Activity Plan was released.

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Larry S. Chapman, MPH

There are five noteworthy changes in the past 25 years that seem particularly significant to me. These include the following:

From Concept-Selling to Program-Selling: In the early days of the field, I spent a great deal of time selling the concept of health promotion and wellness and very little time selling actual programs and services. I believe that much of this phenomenon reflected the general lack of knowledge about the field and the validity of its core value proposition. Now the concepts seem generally understood, at least in their fundamentals, if not in their fullness, so the focus has definitely shifted to the selling and implementation of programming.

From Work Time to Your Time: In the 1980s and 1990s, it seems to me that the predominant approach to health promotion programming was to place it on work time and limit it primarily to employees in the worksite. A corollary of this particular change was also an early heavy reliance on group educational activities, whereas now I see much greater reliance on individually initiated interventions on the employee's time rather than the employer's.

From Face-to-Face to Virtual: In the early days, most programming was person-to-person in nature, whether through lunch-and-learn events, walking clubs, fitness centers, biometric screening, recreation programs, or corporate games. It seems that a large segment of programming is now virtual in nature, such as eHealth portal use, telephonic coaching, e-mail messaging, and computer tracking of behavior.

From Employee Only to Employee and Spouse: Early on, almost all programs focused on employees only, and it was rare to find spouses served by a worksite health promotion or wellness program. Now, it is much more typical to find spouses served by a program, particularly with the virtual kinds of programming modalities.

From Incentive-Poor to Incentive-Rich: Early on, few employers used incentives; if they did, it was usually a very nominal or trinket-oriented approach to incentives. Few early employers used more than $50 of value in their incentive approaches. Now, it is not unusual to find employers using $600 to $1200 of value in incentives for health promotion and wellness.

Larry S. Chapman, MPH, is President and CEO, Chapman Institute. In 1986, he was President, Corporate Health Designs.

Michael Eriksen, ScD

The silver anniversary of the *American Journal of Health Promotion* marks a time for personal and professional reflection. Twenty-five years ago, I was Director of Health Promotion for Pacific Bell, the largest private employer in the state of California. I was one of the first public health people to be hired by the private sector with the goal of establishing health promotion and risk reduction programs, thereby reducing health care costs and improving employee well-being. As it turned out, I was fired from this position (the only time this has happened!) because of my work on employee AIDS education efforts that turned out to be too progressive and visible for a large, regulated industry.

The Pacific Bell experience provided valuable insights on the need to do the right thing but at the risk of paying a price. Surviving the trauma of termination for having done what needed to be done reinforced the cost-benefit metric that exists in professional decisions and helped provide me with the patience and persistence necessary to have a rewarding public health career.

More broadly, in terms of the state of health promotion and public health today, I am reminded of the opening lines of Dickens' *A Tale of Two Cities*….

''It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us….''

It was the best of times…. In 1986, who among us would have envisioned that prevention and wellness would play such a prominent role in health care reform, that hundreds of millions of dollars would be invested in community prevention and health promotion programs through Communities Putting Prevention to Work, and that the tobacco industry would be successfully sued and be paying states billions of dollars a year to compensate for the harm caused by their product?

It was the worst of times…. At the same time, who would have envisioned the scope and harm caused by HIV, that in the 1990s we would be confronted with a new epidemic of obesity, and that the recently passed health care reform legislation would try to be overturned on the basis that is was a job-killer?

Today, although we have made incredible progress in mainstreaming health promotion and incorporating prevention into models for health care delivery, we are threatened with unprecedented disdain for government involvement in health behavior, accusations that public health workers are nannies, and an absolute revulsion of taxes to finance social programs or to discourage unhealthy behaviors.

Hopefully, the season of Light will illuminate the season of Darkness, and we will be able to continue our incredible strides to save lives and prevent illness. The *American Journal of Health Promotion* has played no small role in the effort to illuminate, and I am proud to have been part of it.

Michael Eriksen, ScD, is Professor and Director, Institute of Public Health, Georgia State University. In 1986, he was Director of Health Promotion, Pacific Bell…then Director of Behavioral Research, Department of Cancer Prevention, M.D. Anderson Cancer Center.

Change? What change?

Nothing has changed in the past 25 years. And why should it? We are still the strongest manufacturing nation, with high levels of productivity supported by the world's best medical care system. The economic downturn is causing only a short-term blip in unemployment. And our public education system remains the envy of residents of all other countries.

If you believe this, you have been in hibernation for several decades or have trouble differentiating between aspirations and reality. America has declined despite our continued superpower status. Although we remain first in defense spending,[1] our productivity has suffered severe declines, and only about 12% of our gross domestic product derives from manufacturing.[2] We spend roughly twice as much per capita for medical care as other developed economies,[3] yet we are 24th in life expectancy.[4] The disappointing value we receive for our investment in medical care translates into lost productivity that erodes our economic competitiveness. Unless we can improve health without additionally increasing investment in medical care, we stand to fall further behind our trading partners and reduce our standard of living.

Yet, there are hopeful signs. Many in business have grasped that employee health and productivity are inextricably linked. Corporate wellness programs and benefit design that incentivizes use of evidence-based preventive services are on the rise. Tobacco use is among the lowest in the world.[5] National health objectives have been developed and refined. We have made great progress in determining what interventions are effective in reducing preventable burdens from many diseases and from injuries. The Affordable Care Act has mandated that this important work to identify the best evidence for clinical and population-oriented preventive services continue. Through a combination of more effective prevention, screening, and treatment, the toll of many chronic diseases, especially cardiovascular disease, has significantly diminished.[6,7] Age-adjusted death rate for all diseases of the heart dropped from 266.5 per 100,000 in 1999 to 200.2 per 100,000[8] in 2006. In 1984, cardiovascular disease accounted for 48% of deaths in the United States but for only 36% in 2004.[9] Injury rates are down, both in motor vehicles[10] and in occupational settings.[11] Although obesity has emerged as a troubling epidemic, we are starting to make progress in addressing the drivers—dysnutrition and sedentary behavior—in schools, worksites, homes, restaurants, stores, and communities.

One major advance during the past 25 years has been greater recognition that we can't have a healthier nation, and we can't substantially address gaping disparities in health among different population subgroups, without paying more attention to the underlying societal determinants of health found in our social, economic, and physical environments. Health can't be separated from poverty rates, educational attainment, from transportation and housing policy, or from our agricultural subsidy choices.

This journal has made an important contribution to new knowledge in how to promote health and prevent disease. It has consistently focused on practical applications of behavior and economic theory. In so doing, it has helped to catalyze the change we need to better balance the promotion of better health with the treatment of disease.

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Gilbert S. Omenn, MD, PhD

Warm congratulations to the *American Journal of Health Promotion* and its founder and editor, Michael O'Donnell, on this landmark anniversary. The Journal has tracked and enhanced the emergence of disease prevention and health promotion during the past quarter century, and the annual conference has provided an effective forum.

For several decades, the medical model had so overtaken public health in terms of public attention and academic and corporate efforts that prevention received only pennies of the health care dollar, and less healthful behaviors became ever more prevalent. In the 1960s and 1970s, evidence rapidly accumulated that the behaviorally driven, diet-mediated risk factors of high blood pressure, high cholesterol, and overweight status played a very large, but reversible and preventable, role in coronary heart disease and stroke. In the late 1970s to early 1980s, the National Cancer Institute (NCI) committed to establish up to five Cancer Prevention Research Units; however, only one—at the Fred Hutchinson Cancer Research Center and University of Washington SPH—passed muster on the criteria for funding in 1982 and has become a national leader. Later the NCI, the American Association of Cancer Research's (AACR) *Cancer Epidemiology Biomarkers and Prevention*, and the cancer prevention research community stepped up the pace.

More broadly, Surgeon General/Assistant Secretary for Health Julius Richmond launched the Surgeon General's Report on Health Promotion and Disease Prevention, with comprehensive goals and implementation actions that were captured in *Healthy People 1990*. Endorsed by all Department of Health and Human Services Secretaries and led by Michael McGinnis, we have had a series of decanal Healthy People reports and substantial progress. Also, the *Annual Review of Public Health,* now issuing its 32nd volume under successive editors Lester Breslow, Gil Omenn, and Jonathan Fielding, has provided outstanding content for our shared mission. As Annual Reviews of Public Health (ARPH) showed with special symposia in 2000 and 2010, we have an opportunity to establish the public health sciences as critical to capitalizing on the genomic revolution.

The Association of Schools of Public Health (ASPH), led by Bill Bridgers, Bob Day, and others in the early 1980s, persuaded Congress to create the Prevention Research Centers at the Centers for Disease Control and Prevention (CDC), which began with three centers in 1986 and are now a national force in the field, and proposed a Medicare Trust Fund line for Prevention. Also, ASPH has been an active member of the Partnership for Prevention, which has mobilized multisectoral initiatives through policy actions in Washington, D.C.

Thanks to all of these efforts, we have a big agenda now and a critical need to protect the goals and financing in the Affordable Care Act for health promotion and disease prevention. We also have a great challenge to define metrics and assays for wellness, as well as disease diagnostics, as part of the emerging P4 Medicine (i.e., personal, predictive, preventive, and participatory).

Kudos to all involved in the development of the *American Journal of Health Promotion.*

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Dean Ornish, MD

It has been gratifying to view the changes in health promotion that have occurred in the past 25 years. So many people have made important contributions to the field; in this essay, I was asked to focus on the work that my colleagues and I have done and what's changed during that time.

I began conducting research in 1977, as a second-year medical student, using high-tech, state-of-the-art medical technology to prove the power of low-cost and low-tech interventions of comprehensive lifestyle changes.

By 1986, my colleagues and I had published the first two pilot studies[1,2] showing that comprehensive lifestyle changes could markedly improve angina, improve blood flow to the heart, and help normalize the heart's ability to pump blood—all within a few weeks.

However, the concept that comprehensive lifestyle changes could reverse the progression of heart disease was still not accepted by most health professionals and was considered radical and extreme by many.

In 1990, we published the 1-year findings of the Lifestyle Heart Trial,[3] showing, for the first time in a randomized, controlled trial, that intensive lifestyle changes could stop or reverse the progression of even severe coronary atherosclerosis, without drugs or surgery.

On the basis of these findings, we received funding from the National Heart, Lung, and Blood Institute of the National Institutes of Health to extend the study for 4 more years. In 1998, we published the findings showing more regression of coronary atherosclerosis after 5 years than after 1 year in the experimental group but more progression (worsening) of atherosclerosis in the control group after 5 years than after 1 year.[4] PET scan findings (also published in *JAMA*) validated these findings.[5]

I thought that these studies might have a meaningful effect on the practice of mainstream cardiology, but I was mistaken. I realized that reimbursement is a much more powerful determinant of medical practice than research.

So, beginning in 1993, my colleagues and I at the nonprofit Preventive Medicine Research Institute began training hospitals in our program of comprehensive lifestyle changes. We approached Medicare in 1994 and asked them to begin covering lifestyle changes for reversing heart disease.

I'm pleased to report that in September 2010, after 16 years of discussions, evaluations, demonstration projects, a Medicare Coverage Advisory Commission hearing, and two national coverage determinations, the Centers for Medicare and Medicaid Services agreed to cover our program of reversing heart disease. Also, in November 2010, they agreed to increase the amount of reimbursement from an average of $37/hour (at which hospitals lost money) to $68/hour (which enables hospitals to be financially viable).

I remain hopeful that Medicare will broaden coverage to include lifestyle modification as treatments for other chronic diseases, including type 2 diabetes. My colleagues and I published a randomized, controlled trial in 2005 showing that comprehensive lifestyle changes may slow, stop, or even reverse the progression of early-stage prostate cancer.

We are beginning to document some of the mechanisms by which comprehensive lifestyle changes may affect the progression of chronic diseases and how dynamic they are. Two years ago, we published a study showing that changing lifestyle changed gene expression in 501 genes in only 3 months, upregulating (turning on) disease-preventing genes and downregulating (turning off) oncogenes that promote breast cancer and prostate cancer as well as genes that promote inflammation and oxidative stress.[6]

We also published a study showing that comprehensive lifestyle changes increased telomerase by almost 30% in only 3 months.[7] Telomerase is an enzyme that repairs and lengthens damaged telomeres, the ends of our chromosomes that control aging. Telomerase was discovered by Dr. Elizabeth Blackburn, who received the Nobel Prize in Medicine last year for her discovery and who collaborated with us on this study.

So many forces are converging—the limitations of high-tech medicine are becoming clearer; for example, angioplasties and stents don't prolong life or prevent heart attacks in stable patients who receive them, the costs of these approaches are unsustainable (e.g., $60 billion last year for stents), the population is aging, and the power of comprehensive lifestyle changes is becoming increasingly well-documented as being both medically effective and cost-effective.

The field of health promotion, including lifestyle medicine, has come a long way in the past 25 years. There is much more to be done, but I'm cautiously optimistic, grateful, and even a little thrilled by the progress that's been made so far.

Dean Ornish, MD, is Founder and President, Preventive Medicine Research Institute and Clinical Professor of Medicine, University of California, San Francisco. He held the same position in 1986.

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Reflecting on the last 25 years, it is clear that both health promotion and disease management have become cornerstones in worksite/corporate environments. There was very little data in the early 1980s, but the data have grown to more than 200 research trials of comprehensive programs attesting to the clinical and cost outcomes (i.e., returns on investment) of such programs. Additionally, the impact is beyond medical cost issues and now includes absenteeism, presenteeism, retention, recruitment, productivity, and overall financial performance of companies of all sizes. With such positive impacts on active employees, dependents, and retirees, these programs are providing the foundation of a true health care system.

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