# Health Education: What Can It Look Like after Health Care Reform? 1993 SOPHE Presidential Address

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In the fall of 1993 the plans for the Health Security Act were unveiled: health education was referenced no fewer than 18 times. This 1993 SOPHE Presidential Address examines the role of health education under the plans for and principles of health care reform. As Bill Clinton stated, "an intensified health education system must be designed to educate and encourage the American people to change behavior that results in ill health and high costs." It is argued that health education has been demonstrated to be effective at reducing risk behaviors associated with each of the leading causes of death. Likewise health education should, can, and does play a role in each of the health goals and objectives for the year 2000. Health reform provides new opportunities to invest in prevention, public health and health education—not only in medical care settings—but in schools, at worksites, and in the community. Health education in these settings can help create supportive environments that make healthy choices the easy choices, ensuring that health reform can succeed.

## INTRODUCTION: THE NEED FOR REFORM

As the discussion about health care reform intensifies, it is essential to examine the role of health education in this debate. What is driving the reform movement is that health care costs currently consume one-seventh of every dollar, making health care costs in the United States (US) unrivaled by other nations. That translates to 14% of the gross domestic product (GDP), or a $912 billion dollar a year industry.[1] Health care costs have risen at a rate that far exceeds inflation and rises in other goods and services. For example, in 1992, the GDP rose 2.1%, whereas health care costs rose about 9%.[2]

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The latest projections place health care costs at $1.5 trillion, or 19% of the GDP by the year 2000.[3] (See Figure 1.) Yet an estimated 35 to 40 million Americans are uninsured, and an additional 22 million Americans are "underinsured."[4] The US is said to have the most advanced and best health care delivery system in the world, but for all our expenditures, our prevention system lags behind. Using such outcome measures as infant mortality, childhood immunizations, and life expectancy, the US does somewhat worse than other Western nations.[5]

For decades our leaders have struggled with this problem without success. More than 20 years ago, a report stated, "the fact is the nation does not have the resources, no matter how great a portion of the GNP is allocated for health, to provide sufficient services after the patient becomes ill."[6]

Responding to the situation, President Nixon created the President's Committee on Health Education. The resulting committee report recommended the creation of public and private organizations to stimulate, coordinate, and evaluate health education programs. The result was the Federal Bureau of Health Education at the Centers for Disease Control and the National Center for Health Education, which was formed as an independent organization from SOPHE's research arm, the Health Education Research Council. The administration believed that they could preserve the health of Americans, control escalating health care costs, and present a less costly alternative than national health insurance, which was being proposed at the time.[6]

A Presidential report at that time stated that, "it is in the interest of our entire country . . . to educate and encourage each of our citizens to develop sensible health practices. Yet we have given remarkably little attention to the health education of our people."[7]

Once again, it appears that health education is a high priority on the national agenda. In one of his first writings on health care reform, presidential candidate Bill Clinton stated that, "an intensified health education system must be designed to educate and encourage the American people to change behavior that results in ill health and high costs. The right to affordable health care—a right that is the cornerstone of my plan—must be accompanied by the responsibility to

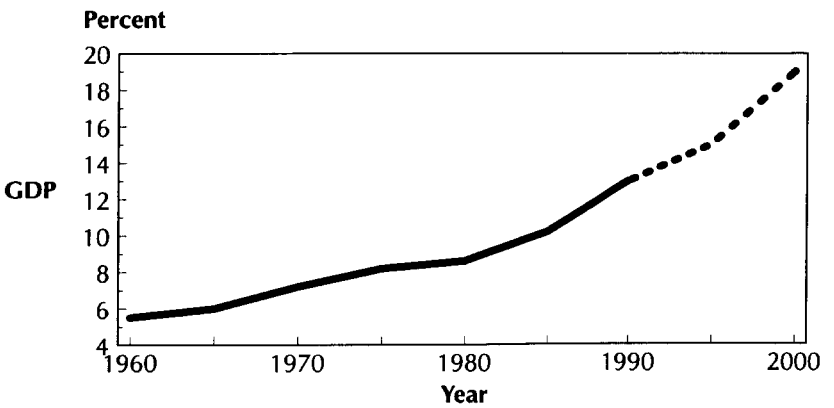


**Figure 1.** National health expenditures, 1960–2000.

maintain our own health and to use the system wisely . . . I believe we need a health care system that stresses preventive and primary care, including . . . health education."[4]

In the Fall of 1993, President Bill Clinton and First Lady Hillary Rodham Clinton unveiled their plans for the Health Security Act (HSA).[8] The plan has 30 different chapters, covering such diverse topics as ethical foundations of health reform, rural communities, public health initiatives, and financing. While much of the plan focuses on health care benefits, administration, and cost containment, health education is referenced no fewer than 18 times.

## THE HEALTH SECURITY ACT

Under the First Lady's plan, there are six basic principles:

1) Security: Guaranteed, comprehensive benefits
2) Savings: Controlling health care costs
3) Quality: Making the world's best care better
4) Choice: Preserving and increasing consumer options
5) Simplicity: Streamlining the system and reducing paperwork
6) Responsibility: Making everyone responsible for health care

The following examines each principle and discusses the role of health education.

### Security of Guaranteed, Comprehensive Benefits

The first principle under the Clinton plan is security of guaranteed, comprehensive benefits. Responding to the fact that one out of every four individuals will lose health coverage for some time, coverage is guaranteed even if a person switches or loses his or her job. It makes it illegal for insurance companies to raise premiums, drop individuals, or deny coverage because of pre-existing conditions. Under the plan, preventive services, such as pap smears and immunizations, would now be routinely covered. In addition, the benefits package includes "health education classes."

According to the plan, "participating health plans are permitted to cover health education or training for patients that encourage the reduction of behavioral risk factors and promote health activities. Such courses may include smoking cessation, nutritional counseling, stress management, skin cancer prevention, and physical training classes."[8]

In defining services, the plan defines services of physicians and other health professionals as: "Include(s) inpatient and outpatient medical and surgical professional services, including consultations, delivered by a health professional in home, office, other ambulatory care settings, and in institutional settings."[8] A health professional is defined as "someone who is licensed or otherwise authorized by the State to deliver health services . . ."[8]

What is not clear is in which setting these classes will be offered and reimbursed. Nor is it clear who will be allowed to teach these classes. The narrowest

interpretation of this passage presumes that nurses, nutritionists, and others currently licensed by states would be covered when they are part of medical practice, Health Maintenance Organization (HMO), or other medical institution.

Compared to other health professions, health education is relatively new to professional certification and credentialing.[9-10] But if we want to be included as reimbursable health professionals, we need to ensure that health educators are designated as appropriate providers. This might be obtained through state authorization, legislation, or from approval by the state alliances—actions we should all work towards. And we should campaign for health education to be mandated, not just permitted, and for payment to cover more than just "classes."

## Health Care Costs That Are under Control

The second principle under the Clinton plan is cost-containment. The Health Security Act proposes to control health care costs in six broad areas: limiting how much insurance companies can raise premiums; streamlining the system by such measures as requiring all plans to adopt a single, standard claim form; introducing competition to the health care marketplace; cracking down on fraud; reducing waste and inefficiency of Medicaid and Medicare; and lastly, asking pharmaceutical companies to voluntarily control prices.

There seems little question that the Clinton plan has identified key problems and has proposed needed solutions. Yet perhaps one of the biggest ways to reduce health care costs is not even mentioned—reducing the need and demand for medical services.[11] If there were no illness or injuries, then society's health care costs would theoretically be zero. For example, heart disease accounts for approximately 760,000 annual deaths and $28 billion in direct medical expenses.[3] Almost 300,000 coronary by-pass procedures are performed annually, each at a cost of $30–$50,000.[12-13] Theoretically, preventing these procedures alone would save over ten billion dollars—half the annual federal expenditures for public health.

Unfortunately, public health, and health education as a fundamental component of public health, have received minimal attention and funding throughout the years. What is also unfortunate is that the figure has changed little over the years. Twenty years ago, about 92% of the federal health care dollar was spent for medical treatment, 4 to 5% was spent for biomedical research, 2 to 2 1/2% for preventive health measures, and less than 1/2% for health education.[6] While there are no data that permit comparison of national expenditures for health education, federal public health expenditures have grown from 1.5% of the 1960 budget (or $400 million) to 3.3% (or $22 billion) of the 1990 budget. (See Figure 2.) Assuming expenditures on health education grew proportionately, we can estimate that they have risen from 4/10th of a percent to 7/10th of a percent.[14]

Despite the relatively low amount of expenditures for prevention and public health, as a nation we have improved our health. The life expectancy in the US has increased from less than 50 years in 1900 to a record high of 75 years in 1992.[15] Death rates and infant mortality rates are declining. Yet much of these improvements in health status are attributable to public health activities (e.g.,

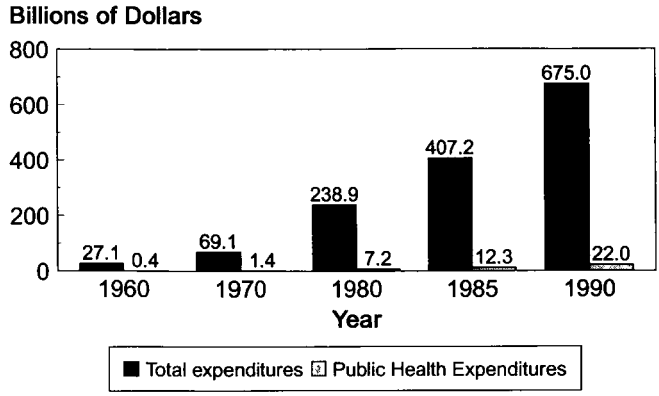


**Figure 2.** National health expenditures, 1960–1990.

the provision of safe water, sewage disposal, and the control of infectious diseases through immunizations), not medical care.[16-17]

In spite of these improvements, there is much work to be done. About half of the 2.2 million deaths which occur in the US every year are potentially preventable.[3] In looking at the leading causes of death, health education has been demonstrated to be effective at reducing risk behaviors associated with each of them.[18] (See Table 1.)

Likewise with the three health goals for the year 2000—1) increase the span of health life for Americans, 2) reduce health disparities among Americans, and 3) achieve access to preventive services for all Americans—health education should, can, and does play a role in each of the goals.[13,19] And in each of the 22 priority areas, health education plays a major role in 13 of the 22, a minor role in 8, and one could argue that Chapter 8, "Educational and Community-Based Programs," is health education. (See Table 2.) Thus, Chapter 8 recognizes the critical function of health education and health promotion in building the

Table 1. Top Ten Leading Causes of Death

| Health Issue | Behavioral Component | Domain of Health Education |
|---|---|---|
| Heart diseases | Smoking, Exercise, Nutrition | Yes |
| Cancers | Smoking, Exercise, Nutrition | Yes |
| Stroke | Smoking, Exercise, Nutrition | Yes |
| Chronic obstructive pulmonary disease | Smoking | Yes |
| Unintentional Injuries | Alcohol & other drug abuse | Yes |
| Pneumonia and flu | Getting immunizations | Yes |
| Diabetes mellitus | Nutrition | Yes |
| Suicide | Alcohol and other drug abuse | Yes |
| AIDS | Unprotected sexual behaviors injecting drug use | Yes |
| Homicide | Alcohol and other drug abuse | Yes |

Table 2. Role of Health Education in the Priority Areas of the Year 2000 Objectives

| | Role of health education |
|---|---|
| **Preventive Services** | |
| ● Maternal and infant health | |
| ● Heart disease and stroke | |
| ● Diabetes and chronic disabling conditions | |
| ● Cancer | |
| ● Human Immunodeficiency Virus and AIDS | |
| • Sexually transmitted diseases | |
| • Immunization and infectious diseases | |
| • Clinical preventive services | |
| **Health Protection** | |
| ● Unintentional injuries | |
| ● Occupational safety and health | |
| ● Environmental health | |
| • Food and drug safety | |
| • Oral health | |
| **Health Promotion** | |
| ● Physical activity and fitness | |
| ● Nutrition | |
| ● Tobacco | |
| ● Alcohol and other drugs | |
| ● Family planning | |
| • Mental health and mental disorders | |
| • Violent and abusive behavior | |
| ★ Educational and community-based programs | |

public health infrastructure to achieve the year 2000 objectives. Continued progress, however, requires resources. We must advocate for this support, for it is these expenditures that may be the most cost-saving.

## Improved Quality of Care

The third principle of the new Health Security Act is to improve the quality of health care. It creates standards and guidelines, reorienting quality assurance programs to measure outcomes rather than regulation; provides consumers with information about the quality and costs of health care plans; increases the national commitment to medical research, primary and preventive care; invests in public health, and enhances opportunities for non-physician providers.

Specifically, the plan addresses eight points:

1) Health plans are to be held accountable for delivering appropriate, quality care.
2) Regular surveys of consumer satisfaction will be used to measure health plans.

3) Useful and easily understood information about quality and cost will be published regularly to allow consumers to make informed choices among health plans.
4) A special funding mechanism will be developed in order to strengthen the role of academic health centers in research, training, and specialized care.
5) There will be increased investments in medical research in order to advance medical knowledge.
6) New incentives will be developed to encourage physicians to choose primary care as the focus of their training.
7) Expanded funds will be available for education and new federal action will help remove artificial barriers that hinder the practice of nurses and other professionals.
8) There will be increased investments in public health and medical research, which will improve health protection for all Americans.

Nearly all of these points provide an opportunity for health education. Not only can health education specialists educate consumers about what is appropriate and quality care, our training and emphasis on "knowing our audience" makes us ideal researchers about consumer satisfaction.[20] The new plan calls for technical assistance and training on quality assurance—another responsibility familiar to health educators. Likewise, there is an excellent opportunity for the profession to develop and disseminate health education materials about the quality and cost of health plans. And we have extensive expertise in SOPHE, as reflected by the many years of experience of our members, some of whom are leaders in this field.

Health research initiatives focus on two areas, prevention and health services research—both areas within our expertise and training. It appears that research opportunities will exist in: health behavior, information processing, health care utilization, and patient treatment choices. In addition, the plan calls for improved "behavioral and social approaches" to prevention and treatment; research on cultural and other barriers to health care access; and increased understanding of reaching urban, rural, and other underserved or disadvantaged populations.[8]

The plan also states that there will be new investments in order to support training for "other health professionals," and proposes federal action to help remove artificial barriers to practice that hinder nurses, social workers, and other "non-physician providers." As health education specialists, we need to be seen, and reimbursed, as one of these "non-physician providers."

## Increased Choice for Consumers

The next part of the Health Security Act focuses on administration of the system and the options offered to consumers. It holds to the principle of preserving and increasing choices of health care plans. This part of the plan addresses the individual right to choose health care providers; increases choices of health plans; brings competition to health care; and increases options for long-term care. In addition to the practice and research opportunities already discussed,

health education specialists can play a key role in helping consumers make informed decisions regarding their selection of health care plans.

## Less Paperwork and a Simpler System

The fifth principle of the Health Security Act, which has little implication for health education, is streamlining the system. This part of the plan gives everyone a Health Security card; requires a single claim form; ensures a comprehensive benefits package; streamlines reimbursement to health care providers and organizations; and simplifies obtaining and negotiating for insurance.

## Responsibility from Everyone

The last principle of the Health Security Act is responsibility. This part of the plan asks everyone to contribute. It proposes new standards and penalties against fraud and abuse. It asks pharmaceutical companies to voluntarily control prices; emphasizes preventive care; and reforms malpractice. While the plan clearly proposes system-wide changes, it also asks each individual and each family to be responsible for protecting and promoting health and contributing to the cost of care.

Responsibility should be a fundamental component of health care reform. At the same time, we must guard against the tendency for blaming the individual. This can be a way of absolving the health care system of any responsibility, as well as closing off other levels of intervention, such as social, political, and economic changes. Holding the individual responsible for the cause and cure of health problems also allows policy-makers to ignore the more difficult, but arguably more significant issue of the social environment. It is this environment which both creates some lifestyles and inhibits adoptions of others.

Health is as much an individual responsibility, as a medical, and social responsibility. We must recognize that most influences on health lie beyond the reach of the health care system. Public health has the potential to promote actions towards improving aspects of daily life that are the real precursors to health. Yet only one of 30 sections of the HSA focuses on core public health functions—the remainder focus directly or indirectly on medical care. A system that ensures health care for all persons cannot succeed unless it addresses health in a comprehensive fashion. Health care reform needs to be integrated with public health reform, resulting in what has been called "health reform."[21] As such, health reform must focus and attempt to alter the broader economic, political, and structural components of society that produce poor health.[22]

The health system must be developed and financed so that the structure outside of the clinical care system can be successful. Support for core public health functions, including health education, should be integrated into these new reforms, and support for these services should be given the same kind of attention received by our health care system. The responsibility for health should be shared by all segments of society, not only by the health care industry, but our schools, our places of work, and especially in our communities. Public health and health

education can and should be part of what needs to be a multi-sectoral approach that looks at the social, economic, and environment issues that impact health.

## HEALTH EDUCATION

Health education has often been unfairly stereotyped as a pedagogical model in which information flows from the teacher to the recipient. This is even evident in the fact that the plan calls for health education "classes." If health education ever followed a pedagogical model, it is not manifested in previous or contemporary definitions. Twenty years ago, the major professional organizations defined health education in SOPHE's *Health Education Monographs* as a "process with intellectual, psychological, and social dimensions relating to activities which empower people to exercise more control over their personal, community, and environmental health and well-being."[23]

A more recent description of our profession is as follows: ". . . health education has evolved, not only to reflect changing patterns of health, but also to reflect our growing understanding of the social and environmental factors that influence health. In this context, health education is concerned not only with the health behavior of population groups, but also with the living and working conditions that influence their health. Thus, health education is an indispensable means for every society to assure that its people develop the personal and collective understanding and skills they need to attain healthy lifestyles, healthy public policies, and healthy communities."[24]

As health education specialists, we practice in multiple settings. Some of these settings are explicitly and implicitly referenced in the Health Security Act. I would like to conclude by examining why health education in all segments of society are important in health reform.

### Health Education in Medical Care Settings

Health maintenance organizations (HMOs) may have been among the first health care organizations to employ health educators.[25–27] Their previous and still current responsibilities include a long list of activities that can improve overall quality and efficiency of any health care reform strategy. For example, health educators can: educate members about the plan's procedures, operations, and services; create activities and incentives to encourage use of services by high-risk members; educate patients about medical procedures and therapeutic regimes; conduct inservice training and consultations for other providers about behavioral, cultural or social barriers to health; promote more self-care; develop activities to improve participation in the clinical process (e.g., adherence to preventive and therapeutic regimens, appropriate treatment choices); encourage member participation and involvement in advisory, policymaking, and other voluntary service roles; and educate the members to protect, promote or maintain good health, and reduce risk behaviors.[27–30]

Health education can contribute to health care reform goals either separately or as an integral part of other services. Benefits of integrating health education

into the new health care system may include: appropriate use of preventive and health care services; decreased overuse and under use of the system; adoption or maintenance of protective health practices that reduce demand on health services; enhanced member participation, satisfaction, and enrollment; improved communication and cooperation of various providers of health services.[27,31–33]

The US Preventive Services Task Force found that counseling and patient education addressing personal health practices are among the most effective interventions available for reducing the incidence and severity of the leading causes of disease and disability in the US.[34] Yet many physicians may be uncomfortable with counseling and educating patients about prevention and motivating behavior change.[35] And in an era in which costs are being scrutinized, these services can be expensive. Health care reform calls for using non-physician providers. As health education specialists, we need to be included as part of the health care team.

## Health Education in Schools

School-age children constitute some 25% of the American population and the vast majority are currently enrolled in school. Thus, schools offer an excellent access point to some 46 million youth.[36–37] Unfortunately, all too often school health education is considered non-essential, receiving little, if any, attention in the school curricula. Currently, many school-age youth are at risk for sexually transmitted diseases, unintended pregnancy, and serious injury. Many more are adopting behaviors such as tobacco use and high fat diets that will contribute to chronic diseases and premature death in adulthood.[38–39] As the youth of today will be the parents, citizens, and leaders of tomorrow, they must be educated about health in order to ensure their own well-being, as well as the future well-being of their families and communities.

Recent research shows that our youth lack sufficient health knowledge and decision making skills in key areas such as AIDS, injury prevention, violence, suicide, substance abuse, STDs, consumer health, and nutrition. Unfortunately, the study's findings were similar to findings from the School Health Education Study in the 1960s suggesting that little progress has been made in nearly three decades.[40–41]

Yet research on school health education programs clearly shows that planned and sustained school health education programs do make a lasting impact on attitudes and behaviors. Comprehensive health education programs are designed to directly influence those health risk behaviors (e.g., tobacco use, alcohol and other drug use, sexual behaviors related to HIV, other STDs and pregnancy, behaviors related to intentional and unintentional injuries, nutrition and physical activity) that cause the greatest morbidity and mortality.[42–45]

The Clinton plan specifically addresses the delivery of clinical services through school-based or school-linked sites and "comprehensive health education in high-risk schools."[8] While commendable, we need to call for funding for comprehensive health education in all schools.

## Health Education at the Worksite

Some 120 million people make up the American workforce. Most spend a major part of their day, 30 to 50% of their waking hours, at work.[13] Over the years, the cost of health insurance for businesses has increased steadily, and now consumes up to 30% of after-tax profits. Yet up to 30% of all employee-paid health care costs are estimated to be due to unhealthy lifestyle habits. The workplace can be a logical and convenient site for health promotion programs for many reasons: health promotion programs are already widely distributed throughout America's business community; sponsorship by the employer can encourage participation and affect perceptions of quality; larger workplaces permit economy of scale with lower cost per individual; and the worksite provides a convenient setting for education, support, and health promoting facilities and services.[46-47]

Worksite health promotion activities typically include such activities as: health risk assessment; hypertension control; smoking cessation; nutrition education, healthy eating and weight control; stress management; physical fitness programs; substance abuse education; and various screening programs.[46] In a 1992 national survey of businesses with 50 or more employees, 81% have at least one of these activities.[48] The news is encouraging, as we have already achieved worksite related objectives addressing physical activity and fitness, alcohol and drug policies, and occupant protection policies. Yet, this most recent survey shows progress needs to be made in the remaining six areas.[18]

Evaluation of worksite health promotion programs has shown many positive outcomes, including improved health status (e.g., blood pressure control, cholesterol and smoking reduction, obesity control), reduced health care costs, reduced insurance premiums, more appropriate health care utilization, and decreased work absenteeism.[49-55]

There is concern however, that businesses will no longer offer health promotion activities. In the past, incentives have included lower rates on insurance premiums. Health care reform should ensure that this channel for promoting healthy lifestyles is neither undermined or diminished. Health promotion at the worksite must be sustained—if not strengthened—to ensure that health care reform succeeds. As recommended by the Association for Worksite Health Promotion, the Clinton team should be urged to consider providing tax incentives to businesses with health promotion activities.[56]

## Health Education in the Community

The Alma Ata Declaration stated that "people have the right and duty to participate individually and collectively in the planning and implementation of their health care . . . that real community participation implies a sharing of power and responsibility . . . not simply telling people to do what health and social service professionals felt they ought to do."[57] This in essence is community health education.

Community health education is an approach where the community identifies its own problems and needs, draws upon its own problem-solving ability and mobilizes its own resources to develop and implement strategies for ameliorating the situation.[58] Inherent to the approach are empowerment, participation, community organization, and coalition building.[20] Collective action is stimulated by establishing networks and partnerships with the broadest possible spectrum of public and private organizations and interest groups (e.g., churches, businesses, social service, and community-based organizations). The community's material and human resources (e.g., personnel, time, money, goods, services) are harnessed and channelled into an array of interpersonal, group, and mass communication strategies aimed at attaining the goals identified by the community. Because individuals and community have an investment in the outcome, community health education generates a strong sense of empowerment, ownership, and continued responsibility for the program, which is often matched with success. In fact, this is the backbone of what community health, and most of SOPHE's members, have to offer.

In a society that has come to expect and maybe even demand "instant" cures and answers, the relatively slow process of community health education may go unnoticed, or worse, unsupported. Yet community health education can have powerful and lasting effects. Controlled, long-term, large scale community health projects (e.g., the North Karelia Project, the Stanford Three Community Project, the Minnesota Heart Health Program, and the Pawtucket Project) has shown that risk factors can be changed, and morbidity and mortality can be reduced.[59–63] Furthermore, community health education can promote a community's problem-solving abilities and lead to a decline in its social problems (e.g., homelessness, suicide, alcoholism)—the very problems that contributed to the community's ill health. The professional health educator working with the community, can be an important change agent, empowering people to make a difference in their own lives, and improving their quality of life.[24,64]

Community health education is only tangentially addressed in the Clinton plan, and the responsibility appears to fall to state and local governments. In giving them the responsibility, there must be concurrent fiscal and philosophical commitment to build the infrastructure to support these programs.

## CONCLUSION

In conclusion, we must find ways to contain and even reduce the ever-increasing portion of our resources that we spend to treat preventable injuries and illness. Without such an effort, the cost of health care in the county will continue to overwhelm us. Health reform provides new opportunities to invest in prevention, public health, and health education. This is preferable to paying the much greater economic and social costs of disease and injury.

As President Clinton stated, "prevention saves money and improves people's health."[4] What I'd like to assert is that prevention includes health education—not only in medical care settings, but in schools, at worksites, and in the community. And health education in these settings can help create supportive environments that make "healthy choices" the "easy choices."[65]

The International Union for Health Education and World Health Organization's position paper on health education states: ". . . the few things we can do today and in the future to promote and protect health have more to offer than health education; this holds true in every part of the world. To realize this potential, each country must assure that its population has access to effective health education: well-conceived, robust programmes, designed with the participation of the people served, carried out by trained persons in health and other sectors, and reinforced by supportive public policy."[24]

I hope the Clinton health care reform team will agree. SOPHE, as the only autonomous organization representing health education, has made a commitment to find ways to influence the role of health education in health reform. The health challenges we face, the interventions required to deal with them, and the social reform before us, all point to health education as part of the solution. We need to seize this opportunity.

## References


1. Burner ST, Waldo DR, McKusick DR: National health expenditures projections through 2030. *Health Care Finance Rev* 14:1–29, 1992.
2. Wellstone PD, Shaffer ER: The American health security act: A single payer proposal. *N Engl J Med* 328:1489–1493, 1993.
3. Sullivan LW: Health promotion and disease prevention. *Med Educ* 26:175–277, 1992.
4. Clinton B: The Clinton Health Care Plan. *N Engl J Med* 327:804–807, 1992.
5. Angell M: How much will health care reform cost? *N Engl J Med* 328:1778–1779, 1993.
6. Guinta MA, Allegrante JP: The President's Committee on Health Education: A 20-year retrospective on its politics and policy impact. *Am J Public Health,* 82:1033–1041, 1992.
7. Nixon RM: National health insurance: Message from the President of the United States. *Congressional Record* 117:2741–4082, February 18, 1971.
8. White House Domestic Policy Council. The President's Health Security Plan: Working Group Draft—September 7, 1993. Unpublished manuscript.
9. Donatelle RJ, Schima M, Champeau D, Malkin-Washeim DL: Professional credentialing: At what cost? *Health Educ* 24:288–295, 1993.
10. Cleary MJ: Credentialing and vendorship: Are we ready? *Health Educ* 24:285–287, 1993.
11. Fries JF, Koop CE, Beadle CE, Cooper PP, England MJ, Greaves RF, Sokolov JJ, Wright D: Health project consortium. Reducing health care costs by reducing the need and demand for medical services. *N Engl J Med* 329:321–325, 1993.
12. Leaf A: Preventive medicine for our ailing health care system. *J Am Med Assoc* 269:616–618, 1993.
13. US Department of Health and Human Services. *Healthy People 2000: National Health Promotion and Disease Prevention Objectives.* Washington, DC, US DHHS, 1990.
14. Letsch SW: National health care spending in 1991. *Health Affairs,* 12:94–110, 1993.
15. National Center for Health Statistics. Health United States 1992 and Prevention Profile (Provisional Data), US Department of Health and Human Services, Hyattsville, MD, 1993.
16. Wright RA: Community-oriented primary care: The cornerstone of health care reform. *J Am Med Assoc* 269:2544–2547, 1993.

17. Foege WH: Preventive medicine and public health. *J Am Med Assoc* 270:251–252, 1993.
18. McGinnis JM, Richmond JB, Brandt EN, Windom RE, Mason JO: Health progress in the United States: Results of the 1990 objectives for the nation. *J Am Med Assoc* 268:2545–2552, 1992.
19. McGinnis JM: Health objectives for the nation. *Am Psychol* 46:520–524, 1991.
20. Green LW: The theory of participation: A qualitative analysis of its expression in national and international health policies. *Adv Health Educ Prom* 1:211–236, 1986.
21. Centers for Disease Control and Prevention. Public Health in the New American Health System: A Discussion Paper. Centers for Disease Control and Prevention, Atlanta, GA, 1993.
22. Becker MH: A medical sociologist looks at health promotion. *J Health Soc Behav* 34:1–6, 1993.
23. Society for Public Health Education. New definitions: Report of the 1972–1973 joint committee on health education terminology. *Health Educ Monographs* 6:85, 1973.
24. International Union for Health Education, World Health Organization. Meeting global health challenges: A position paper on health education. *Hygie,* Spec Suppl, 1991.
25. Kemper DW: Self-care education: Impact on HMO costs. *Med. Care* 20:710–718, 1982.
26. Deeds SG: Overivew: The HMO environment in the eighties and related issues in health education. *Health Educ Q* 8:281–291, 1981.
27. Mullen PD, Zapka JG: Health education and health promotion in HMO's: The recent experience, *Health Educ Q* 8:292–315, 1981.
28. Roberts CR, Imrey PB, Turner JD, Hosokawa MC, Alster JM: Reducing physician visits for colds through consumer education. *J Am Med Assoc* 250:1986–1989, 1983.
29. Vickery DM, Kalmer H, Lowery D, Constatine M, Wright E, Loren W: Effects of a self-care education program on medical visits. *J Am Med Assoc* 250:2952–2956, 1983.
30. Morisky DE, DeMuth NM, Field-Fass M, Green LW, Levine DM: Evaluation of family health education to build social support for long-term control of high blood pressure. *Health Educ Q* 12:35–50, 1985.
31. Lorig KR, Mazonson DP, Holman HR: Evidence suggesting that health education for self-management in patients with chronic arthritis has sustained health benefits while reducing health care costs. *Arthritis and Rheum* 36(4):439–446, 1993.
32. Shapiro IS: HMOs and health education. *Am J Public Health* 65:469–473, 1975.
33. Ershoff DH, Aaronson NK, Danaher BG, Wasserman FW: Behavioral, health, and cost outcomes of an HMO-based prenatal health education program. *Public Health Rep* 96:526–547, 1983.
34. US Preventive Services Task Force, *Guide to Clinical Preventive Services: An Assessment of the Effectiveness of 169 Interventions.* Baltimore, MD, Williams and Wilkins, 1989.
35. McPhee SJ, Schroeder SA: Promoting preventive care: Changing reimbursement is not enough. *Am J Public Health,* 77:780–781, 1987.
36. National Education Goals Panel. Measuring progress toward the national education goals: Potential indicators and measurement strategies—Discussion Document. US Department of Education, Washington DC, 1991.
37. Bureau of Statistics. *Statistical Abstract of the United States.* Bureau of Statistics, Treasury Department. Washington, DC: Government Printing Office, 1989.
38. US Department of Health and Human Services. *Chronic Disease and Health Promotion MMWR Reprints: 1990–1991 Youth Risk Behavior Surveillance System.* US Department of Health and Human Services, Centers for Disease Control and Prevention, undated.

39. Measuring the health behavior of adolescents: The youth risk behavior surveillance system and recent reports on high-risk adolescents. *Public Health Rep* 108: Supplement 1, 1993.
40. Pigg, RM: The Contribution of school health programs to the broader goals of public health: The American experience. *J Sch Health* 29:25–30, 1989.
41. American School Health Association. National Adolescent Student Health Survey. Kent, Ohio, 1989.
42. Flay B: Psychosocial approaches to smoking prevention: A review of findings. *Health Psychol* 4:449–488, 1985.
43. Rundall TG, Bruvold WH: A meta-analysis of school-based smoking and alcohol use prevention programs. *Health Educ Q* 15:317–334, 1988.
44. Kirby D: The effectiveness of educational programs to help prevent school-age youth from contracting HIV: A review of relevant research. Center for Population Options, Washington, D.C., March 1988.
45. Errecart MT, Walberg HJ, Ross JG, Gold RS, Fiedler JL, Kolbe LJ: Effectiveness of teenage health teaching modules. *J of Sch Health*, Spec Suppl, 61(1), 1991.
46. O'Donnell MP, Ainsworth TH: *Health Promotion in the Workplace.* New York, John Wiley and Sons, Inc., 1984.
47. Warner KE: Wellness at the worksite. *Health Aff* 9:63–97, 1990.
48. US Department of Health and Human Services. 1992 national survey of worksite health promotion activities: Summary. *Am J Health Prom* 7:452–464, 1993.
49. Fries JF, Fries ST, Parcell CL, Harrington H: Health risk changes with a low-cost individualized health promotion program: Effects at up to 30 months. *Am J Health Prom* 6:364–371, 1992.
50. Blair SN, Smith M, Collingwood TR, Reynolds R, Prentice MC, Sterling C: Health promotion for educators: Impact on absenteeism. *Prev Med* 15:166–175, 1986.
51. Lorig K, Kraines RG, Brown BW, Richardson N: A worksite health education program that reduces outpatient visits. *Medical Care* 23:1044–1054, 1985.
52. Bertera RL: The effects of workplace health promotion on absenteeism and employment costs in a large industrial population. *Am J Public Health* 80:1101–1105, 1990.
53. Bly JL, Jones RC, Richardson JE: Impact of worksite health promotion on health care costs and utilization: Evaluation of Johnson and Johnson's Live for Life Program. *J Am Med Assoc* 256:3235–3240, 1986.
54. Fielding JE: Effectiveness of employee health improvement programs. *J Occup Med* 24:907–916, 1982.
55. Gibbs JO, Mulvaney D, Henes C, Reed R. Worksite health promotion—Five year trends in employee health care costs. *J Occup Med* 27:826–830.
56. Worksite Health Promotion Alliance. Worksite Health Promotion in Health Care Reform: A Position Statement. June 1993.
57. World Health Organization, United Nations Children's Fund. Alma Ata 1978: Primary Health Care: Report on the International Conference on Primary Health Care. Alma Ata, USSR, WHO/UNICEF, Geneva, 1978.
58. Minkler, M: Improving health through community organization. In, Glanz K, Lewis FM, Rimer BK (eds.) *Health Behavior and Health Education Theory Research and Practice.* San Francisco, CA, Jossey-Bass Publishers, 1990, pp. 253–287.
59. Puska P, Nissinen A, Tuomilehto J, Salonen JT, Koskela K, McAlister A, Kottke TE, Maccoby N, Farquhar JW: The community-based strategy to prevent coronary health disease: Conclusions from the ten years of the North Karelia project. *Ann Rev Public Health* 6:147–193, 1985.
60. Fortmann SP, Winkleby MA, Flora JA, Haskell WL, Barr-Taylor C: Effect of long-term community health education on blood pressure control: The Stanford Five-City Project. *Am J Epidemiol* 132:629–645, 1990.

61. Luepker RV, Jacobs DR, Gillum RF, Folsom AR, Prineas RJ, Blackburn H: Population risk of cardiovascular disease: The Minnesota Health Survey. *J Chron Diseases* 38:671–682, 1985.
62. Lefebre RC, Peterson GS, McGraw SA, Lasater TM, Sennett L, Kendall L, Carleton RA: Community intervention to lower blood cholesterol: The 'Know Your Cholesterol Campaign' in Pawtucket, Rhode Island. *Health Educ Q* 13:117–129, 1986.
63. Carlaw RW, Mittlemark MB, Bracht N, Leupker R: Organization for a community cardiovascular health program: Experiences from the Minnesota Heart Health Program. *Health Educ Q* 11:243–252, 1984.
64. Fincham S: Community health promotion program. *Soc Sci Med* 35:239–249, 1992.
65. McBeath WH: Health for all: A public health vision. *Am J Public Health* 81:1560–1565, 1991.