

Comprehensive Prevention: Improving Health Outcomes through Practice

Larry Cohen, MSW, Rachel Davis, MSW, and Leslie Mikkelsen, MPH

*This article appeared in **Minority Health Today** (March/April 2000;1:38-41), a publication of the Minority Health Professions Foundation.*

Every year thousands of people needlessly face illness, injury, or premature death from preventable conditions, including chronic disease, traffic crashes, firearm incidents, and infectious diseases. Because the understanding of underlying risk and resiliency factors that influence health has grown, communities no longer have to accept current patterns of illness and injury as inevitable.

Surgeon General David Satcher recently emphasized the significant shift in the nation's health priorities from *reducing* health disparities to *eliminating* them, as he released the Healthy People 2010 health objectives. Prevention has a central role to play in this effort by offering a systematic means to both encourage individual behavior change and to address the systems issues that negatively influence health.

Over the last few decades, there have been inspiring examples of the effectiveness of prevention: in California and other states, tobacco control programs have led to significant decreases in smoking rates; across the United States, multifaceted strategies have led to reductions in traffic-related deaths; and internationally, the World Health Organization has declared the eradication of small pox. Drawing on these and similar successes, a field of prevention is emerging to offer health practitioners and communities more sophisticated ways of addressing complex and ever-changing societal needs. As leaders in the health field, health professionals have an important role to play in expanding the depth and breadth of prevention efforts across the United States.

Prevention is a systematic process that promotes healthy behaviors and reduces the likelihood or frequency of an incident, condition, or illness. Ideally, prevention addresses health problems *before* they occur, rather than after people have shown signs of disease or injury.

Unnecessary Illness and Injury

An estimated 50% of deaths in the United States due to the ten leading causes can be *prevented*, according to a landmark paper by Dr. J. Michael McGinnis, former U.S. Deputy Assistant Secretary of Health, Disease Prevention and Health Promotion, and Dr. William Foege, formerly of the Carter Presidential Center.¹ Their research looked at the underlying causes of premature death and identified nine primary contributors: tobacco, diet, physical activity patterns, alcohol, microbial and toxic agents, firearms, sexual behavior, motor vehicles, and illicit use of drugs. Each of these factors can be directly addressed through prevention.

Limited attention to prevention is felt even more strongly among people of color and in lower-income communities. Until age 44, African Americans, Latinos, and Native Americans have, on average, higher mortality rates than whites.² Infant mortality rates are twice as high among African American infants as whites and Latinos.² In a recent survey, more than 30% of low-

income individuals of all races rated their health as fair or poor.² The weight of racism, oppression, and economic disparity not only has direct negative effects on health, but it also affects numerous risk factors for ill health, such as higher likelihood of exposure to toxins in the workplace and at home; less access to fresh, nutritious food; fewer opportunities for physical activity; and substandard housing conditions.

While lack of health care and inadequate quality of care are clear contributors to differences in mortality, medical care is only part of the answer to improving health outcomes and eliminating health disparities. The most common health problems of today, such as heart disease, diabetes, stroke, asthma, and emphysema, are rarely, if ever, cured. Therefore it is extremely important to do all that can be done to prevent them from occurring in the first place. This also generally holds true for serious acute problems, such as traffic injuries, violence, or contagious diseases. While medical care can help some people recover from these conditions, they would be far better often never experiencing them.

The Power of Prevention

A prevention-oriented approach can have a dramatic impact. Reduced lead levels in the environment, particularly due to changing standards for gasoline and paint, have resulted in a nearly 80% decline in elevated blood-lead levels in children ages 1 to 5 in the United States from 1976 to 1991.³ Increases in immunization saved the lives of more than 20 million children in developing countries during the past decade. Safety belts saved 90,400 lives from 1975 to 1996, and 3,300 children's lives were saved by child restraint use from 1982 to 1996.⁴ Motorcycle helmet laws saved more than 7,400 lives from 1984 to 1995 in the United States.⁵

Beyond saved lives, even more individuals enjoy a greater quality of life as a result of reduced disease and injury rates. Further, prevention has the potential to yield a tremendous savings in costs to the public. For example, research has shown that every dollar invested in prenatal nutrition through WIC (Supplemental Food Program for Women, Infants, and Children) produces an average of \$3.50 in health- and education-related savings.⁶ In contrast, by not investing earlier in smoking prevention, Medicare will spend an estimated \$800 billion over the next 20 years caring for people with smoking-related illnesses.⁷

Forging an Effective Prevention Strategy

Despite these examples of success, only 5% of our health care dollars are spent on prevention.² No one has a deeper sense of the human suffering and devastation behind the lack of attention to prevention than health practitioners. On the front lines, it is the health practitioner who breaks the news that complications from diabetes necessitate an amputation, or sees uncontrolled high blood pressure lead to a fatal stroke, or who diagnoses oral cancer in a chronic smoker. These cases are all the more heartbreaking because they could have been prevented.

As health practitioners treat one person at a time, the conditions that contributed to their patients' ill health continue. According to public health expert George Albee, "No mass disorder afflicting mankind is ever brought under control or eliminated by attempts at treating the individual."⁸ The lessons of successful prevention efforts have shown that effective prevention

initiatives must affect the institutions, policies, and norms that influence behavior. Dr. Leonard Syme, professor emeritus at the University of California at Berkeley School of Public Health, noted the failure of numerous national and local initiatives to change dietary and smoking habits through information dissemination and counseling. Such programs are unable to significantly impact the distribution of disease in society because they “do not address the forces in society that caused the problem in the first place.”⁹

Health practitioners have experienced this problem directly. Even if they consistently encourage patients to adopt healthy behaviors, changing habits is not easy. Even though health care providers are widely respected sources of health information, information alone is insufficient. People need to be motivated to change. Further, there are often systemic issues, beyond the direct control of the patient, that stand in their way. For instance, how can parents serve more fresh fruits and vegetables to their children when all that is available in their neighborhood store is wilted lettuce, onions, and a few potatoes? How can children understand the consequences of violence when they are constantly exposed to violent images through the news and entertainment media?

The answers to these motivational and structural questions are not simple. A key tenet of prevention strategy is that complex problems require comprehensive solutions. Prevention efforts that achieved significant outcomes all required going beyond education and using a multifaceted approach. This approach can seem a daunting task, but there are resources available to help.

One tool that might assist practitioners in developing comprehensive, multifaceted prevention initiatives is the *Spectrum of Prevention*, developed by Larry Cohen.¹⁰ The *Spectrum* outlines six levels of intervention: strengthening individual knowledge and skills, promoting community education, educating providers, fostering coalitions and networks, changing organizational practices, and influencing policy and legislation. By working at all six levels, prevention initiatives can achieve greater impact. *Spectrum* strategies have been applied in locales throughout the nation to issues ranging from traffic safety to nutrition and physical activity promotion to violence prevention.

What Can Health Practitioners Do?

Although the broader structural issues are beyond the scope of clinical practice, they are important determinants of health. Therefore, health practitioners, as respected community leaders, have the power to focus public attention on the consequences of those issues and lead the movement for change. The following examples illustrate how health practitioners can contribute at each level of the *Spectrum of Prevention*:

1) Strengthening Individual Knowledge and Skills

Motivating individuals to change their lifestyles involves empowering them with the information they need to make choices and develop skills that lead to healthy behaviors. The advice of physicians, in fact, has been associated with reductions in morbidity, mortality, risk behaviors, and risk factors, as well as an increase in healthy behaviors.¹¹

- Give advice to your patients. Remind them to drink only in moderation, floss regularly, and wear helmets when they are riding their bikes.
- Screen patients for clinical risk factors.

2) Promoting Community Education

Community education can provide large groups of people with information and resources for improving health. The media is a particularly powerful mechanism for community education. Mass media campaigns have been shown to increase awareness, change attitudes, and provide a context in which other strategies can succeed, such as public policy change.¹² As respected experts on health issues, health practitioners are in a position to influence the media.

- Promote the message that many major health problems are preventable.
- Shape, support, and reinforce prevention messages in the media.

3) Educating Providers

Providers wield influence within their fields of expertise, and they can create opportunities to motivate and teach patients, clients, students, and colleagues. It is essential, therefore, that they receive education to improve their own understanding of prevention.

- Provide prevention training for professionals in non-health care settings, e.g., teachers and child care workers.
- Advocate for prevention training for staff within your own health care setting.

4) Fostering Coalitions and Networks

Fostering collaborative approaches brings together the participants necessary to assure an initiative's success. Coalitions increase the critical mass behind a community effort, help group members trust one another, and reduce the likelihood of resource squandering through unnecessary competition among groups.¹³

- Join existing coalitions that address critical issues such as infant mortality, traffic safety, and hunger to lend your expertise and promote preventive approaches.
- Organize a network of health professionals to promote community-wide prevention.

5) Changing Organizational Practices

Changing the practices within organizations, such as law enforcement agencies, health departments, and schools, has the potential for positive impact on members. This is usually the least understood and most frequently ignored component of the *Spectrum*. By changing internal regulations and practices, institutions can help change norms that have an influence in the broader community.

- Make health care settings a model for healthy behavior. For example, ensure that all food served at staff functions includes healthy options and that vending machines contain nutritious snacks.
- Encourage your alma mater to incorporate more prevention practices into its curriculum.

6) Influencing Policy and Legislation

Changes in local, state, and national laws, as well as the adoption of formal policies by boards and commissions, fall under the umbrella of policy and legislation. Influencing policy usually presents the opportunity for the broadest improvement in health outcomes. Both institutional and legal policies affect large numbers of people.

- Testify at hearings and write letters to your elected officials to support prevention-oriented legislation and funding.
- Take legislative issues to professional associations for endorsement.

The above examples illustrate a range of activities promoted in the *Spectrum*. When developing a prevention strategy, it is critical to identify actions at each level that build on one another to ensure maximum synergy. For example, a patient is more likely to follow a physician's advice to exercise regularly when there are opportunities within a community to do so. A coalition making testimony to a board of supervisors can be a powerful tool in creating such opportunities. Between doctor visits, the patient should be reminded of the message through community education activities.

In practice, it is important that data and evaluation inform all levels of *Spectrum* strategies. To develop a successful approach, health practitioners must first review the data and determine an appropriate set of objectives. During implementation, ongoing evaluation of the overall approach and the individual activities at each level of the *Spectrum* will provide information necessary for making ongoing adjustments.

Conclusion

A greater investment in prevention is needed to dramatically alter the pattern of today's health and social problems. To reduce needless suffering, injury, and death, prevention must be moved from the sidelines to the forefront of health and social policy. The health care community must reaffirm its commitment to prevention. Health practitioners can contribute greatly by sharing their knowledge of community health issues, encouraging a prioritization of prevention practices, and leading communities through the development and implementation of comprehensive prevention strategies.

The Spectrum of Prevention

| Level of Spectrum | Definition of Level |
|---|---|
| Influencing Policy and Legislation | Developing strategies to change laws and policies to influence outcomes. |
| Changing Organizational Practices | Adopting regulations and shaping norms to improve health and safety |
| Fostering Coalitions and Networks | Bringing together groups and individuals for broader goals and greater impact |
| Educating Providers | Informing providers who will transmit skills and knowledge to others |
| Promoting Community Education | Reaching groups of people with information and resources to promote health and safety |
| Strengthening Individual Knowledge and Skills | Enhancing an individual's capability of preventing injury or illness and promoting safety |

Twelve Actions Health Care Providers Can Take to Promote Prevention

| | |
|---|--|
| Influence Policy and Legislation | <ol style="list-style-type: none"> 1. Write letters and testify in support of prevention funding and legislation 2. Endorse prevention through professional affiliations |
| Change Organizational Practices | <ol style="list-style-type: none"> 3. Serve healthy food at work functions 4. Encourage your alma mater to incorporate more prevention in its curriculum |
| Foster Coalitions and Networks | <ol style="list-style-type: none"> 5. Join a coalition that could benefit from health expertise 6. Create a network to promote community-wide prevention |
| Educate Providers | <ol style="list-style-type: none"> 7. Train school teachers so they can train students 8. Advocate for training on prevention at work |
| Promote Community Education | <ol style="list-style-type: none"> 9. Spread the word: many major health problems are preventable 10. Support prevention messages in the media |
| Strengthen Individual Knowledge & Skills | <ol style="list-style-type: none"> 11. Offer advice about healthy behaviors 12. Screen patients regularly |

Acknowledgments

Larry Cohen, Rachel Davis, and Leslie Mikkelsen are on staff at Prevention Institute, a nonprofit organization committed to advancing and advocating for prevention nationwide. The Institute develops methodology and strategy to strengthen and expand primary prevention practice.

Citation information: Cohen L, Davis R, Mikkelsen L. Comprehensive prevention: improving health outcomes through practice. *Minority Health Today*. March/April 2000;1:38-41.

For permission to reprint or distribute this article, please contact Prevention Institute:

Prevention Institute
265 29th Street
Oakland, CA 94611
(510) 444-7738
prevent@preventioninstitute.org

References

- ¹ McGinnis JM, Foege WH. Actual causes of death in the United States. *JAMA*. 1993;270:2207-2212.
- ² The Henry J. Kaiser Family Foundation. *Key Facts: Racial and Ethnic Disparities in Medical Care*. Menlo Park, Calif: Kaiser Family Foundation; 1999.
- ³ *Factsheets: Poisoning*. National Safe Kids Campaign Online. Available at: www.safekids.com. Accessed September 19, 1997.
- ⁴ *Overview: Traffic Safety Facts 1996*. Washington, DC: National Center for Statistics and Analysis, US Dept of Transportation, National Highway Traffic Safety Administration; 1996.
- ⁵ *Motorcycle Helmets: The Facts of Life*. Washington, DC: US Dept of Transportation; 1996. NHTSA (DOT hs 807 603).
- ⁶ *Early Intervention: Federal Investments Like WIC Can Produce Savings*. Washington, DC: US General Accounting Office; 1992.
- ⁷ *The Cost of Substance Abuse to America's Health Care System, Report 2: Medicare Hospital Costs*. New York, NY: Columbia University Center on Addiction and Substance Abuse; 1994.
- ⁸ Albee GW. Psychopathology, prevention, and the just society. *J Primary Prev*. 1983;4:5-40.
- ⁹ Syme L. in *1997 Wellness Lectures*. The California Wellness Foundation and University of California Wellness Lectures Program. Berkeley, Calif: Regents of the University of California; 1997.
- ¹⁰ Cohen L, Swift S. The spectrum of prevention: developing a comprehensive approach to injury prevention. *Inj Prev*. 1999;5:203-207.
- ¹¹ Gruninger UJ. Patient education: an example of one-to-one communication. *J Hum Hypertens* 1995;9:15-25.
- ¹² Jernigan DH, Wright PA. Media advocacy: lessons from community experiences. *J Public Health Policy*. 1996;17:306-330.
- ¹³ Richmond R, Kehoe L, Heather N, Wodak A, Webster I. General practitioners' promotion of healthy life styles: what patients think. *Aust N Z J Public Health*. 1996;20:195-200.