

## **15. HEALTH COMMUNICATION**

<b>Number</b>	<b>Objective</b>
1	Public access to health information
2	Centers for excellence
3	Evaluation of communication programs
4	Satisfaction with health information
5	Health literacy programs
6	Quality of health information
7	Health communication/media technology curricula



## **Health Communication**

### **Goal**

Improve the quality of health-related decisions through effective communication.

As we enter the “Information Age,” assurance of quality health information and communication will be vital to the success of Healthy People 2010. In many ways, it is the cornerstone of health promotion and disease prevention and a vital adjunct to sound health decisionmaking and optimum outcomes.

Many of the objectives in Healthy People 2000 and those proposed for 2010 are predicated in some way on positive changes in health behaviors or informed health decisions that require appropriate communication at the individual and population level. Some objectives are anchored in changes in the way clinicians and public health professionals communicate with patients, the public, and others. Some objectives require people to communicate more effectively with each other—in families and communities, in the doctor’s office, or online. Other objectives will hinge on changes in institutions, policies, and programs that can be promoted through effective advocacy communication. An analysis of over 300 objectives for the year 2000 identified 219 where health communication played a primary or secondary role in their accomplishment.

### **Terminology**

(A listing of all acronyms used in this publication appears on page 27 of the Introduction.)

The Centers for Disease Control and Prevention (CDC) defines health communication as “the crafting and delivery of messages and strategies, based on consumer research, to promote the health of individuals and communities.” Within the academic community, it is often interpreted more broadly as, for example, “the art and technique of informing, influencing and motivating individual, institutional, and public audiences about important health issues. Its scope includes disease prevention, health promotion, health care policy, and business, as well as enhancement of the quality of life and health of individuals within the community.”<sup>1</sup>

Health communication encompasses a range of activities that often overlap or build upon each other. Some are population based, addressing entire communities or specific population groups. Others focus on individuals. In addition, health communication can be used to promote structural changes among institutions that impact social norms and health.

Frequently mentioned health communication activities include:

- *Health education*, which seeks to promote healthy behaviors by informing and educating individuals through the use of materials and structured activities.
- *Social marketing*, which promotes or sustains positive behavior change by applying marketing principles to community interventions, usually involving mass media.
- *Advocacy*, which uses the mass media to promote policies, regulations, and programs to improve health.
- *Risk communication*, which engages communities in discussions about environmental and other health

1 risks and alternative approaches to dealing with them. Also, there is a growing field of individual  
2 counseling about genetic risks and consequent choices.

- 3
- 4 • *Patient communication*, which includes information for individuals with health conditions about  
5 maximizing recovery, maintaining therapeutic regimens, and understanding alternative approaches. It  
6 includes educational resources, provider-patient communications, and, increasingly, peer-to-peer  
7 communications.
- 8
- 9 • *Consumer health information*, which helps individuals understand their health and make health-related  
10 decisions for themselves and their families, encompassing choice of plans and providers, health  
11 insurance benefits, prevention and wellness, self-care and self-management, treatment options, and  
12 long-term care.
- 13

14 In addition, new information technologies such as the Internet and World Wide Web combine the  
15 attributes of both mass and interpersonal communication. They are spurring the growth of technology-  
16 based health communication concepts. These include:

- 17
- 18 1. *Telehealth*: the application of telecommunications and computer technologies to the broad spectrum  
19 of public health and medicine;
- 20
- 21 2. *Interactive health communication*: the interaction of an individual—consumer, patient, caregiver, or  
22 professional—with an electronic device or communication technology to access or transmit health  
23 information or to receive guidance on a health-related issue;
- 24
- 25 3. *Consumer health informatics*: interactive health communication focusing on consumers; and
- 26
- 27 4. *Telemedicine*: the application of telecommunications and computer technologies specifically for  
28 clinical care.
- 29

30 New media that are commonly used in the above applications include Web sites (accessed through  
31 computers, TV, kiosks, or other new media), online services, video conferencing, CD-ROM/DVD and  
32 other information storage formats, and video games.

## 33 **Overview**

34  
35  
36 Information and education play vital roles in promoting health; preventing, managing, and coping with  
37 disease; and supporting appropriate decisions across the spectrum of health care. For individuals, effective  
38 health communication can help raise awareness of health risks, provide motivation and skills to reduce  
39 them, bring helpful connections to others in similar situations, and offer information about difficult  
40 choices, such as health plans and providers, treatments, and long-term care. For the wider community,  
41 health communication can set the public and social agenda, advocate for healthy policies and programs,  
42 promote positive changes in the socioeconomic environment and health infrastructure, and encourage  
43 social norms that benefit health and quality of life.

44  
45 However, communication alone cannot empower the public to overcome systemic problems such as  
46 poverty and lack of access to medical care. It can clarify the choices shaped by genetic inheritance; it  
47 cannot eliminate them. No communication effort can reduce disease or morbidity across the population  
48 unless it is supported by appropriate behavioral, biological, and socioeconomic environmental factors.  
49 Even when communication can be appropriate and effective, many barriers must be overcome. The  
50 science base is rapidly evolving, making it difficult to craft clear and sustained health messages. People

1 are often overwhelmed by the sheer scope and speed of new information or confused by competing  
2 messages from vested commercial interests, popular culture, and conflicting research. There are also  
3 misunderstandings—ranging from cynically dismissive to naively optimistic—about the purpose, potential,  
4 and requirements of communication activities.

5  
6 Sometimes decisionmakers reject any health communication interventions on the misguided assumption  
7 that communication achievements are only ephemeral or superficial. Other times they mandate one-  
8 dimensional activities, such as a mass media campaign, clearinghouse, or Web site, despite ample research  
9 showing that communication should be multifaceted. There is often a lack of support for evaluation  
10 combining appropriate formative, process, and outcome measures, often due to assumptions—not always  
11 valid—about the time or costs involved. In addition, many health communication interventions lack  
12 sustained funding, which is critical to realize intended outcomes.

13  
14 The diversity of audiences poses additional challenges. Communication must be sensitive to differences in  
15 gender, age, educational level, ethnic and cultural beliefs, language ability, and disability status of target  
16 audiences. It must be tailored to preferred communication channels and formats. All too often, people  
17 with the heaviest health burdens also have the least access to information, health care, or supporting social  
18 services, raising obstacles to both communication and health.

### 19 *Effective Health Communication*

20  
21  
22 The attributes of effective health communication have been identified through research that spans over a  
23 quarter century since the NIH-supported Stanford Three Cities Project first began. They include:

- 24  
25 • *Availability:* The content (whether targeted message or other information) must be delivered or placed  
26 where the audience can access it. This varies according to audience and purpose, from billboards and  
27 mass transit signs to prime time TV or radio, public kiosks (print or electronic), and the Internet.
- 28  
29 • *Repetition:* The delivery of/access to the content must be continued or repeated over time, both to  
30 reinforce the impact with a given audience and to reach new generations.
- 31  
32 • *Accuracy:* The content must be valid and presented accurately.
- 33  
34 • *Reliability:* The source of the content must be credible and the content itself must be up-to-date and  
35 regularly updated.
- 36  
37 • *Reach:* The content must get to or be available to the largest possible number of people in the target  
38 population.
- 39  
40 • *Consistency:* The content must remain consistent and also should be consistent with information from  
41 other sources (the latter is a problem when other widely available content is not accurate or  
42 appropriate).
- 43  
44 • *Timeliness:* The content is provided or available when the audience is most receptive or in need of  
45 specific information.
- 46  
47 • *Balance:* Where appropriate, the content presents the benefits and risks of potential actions or  
48 recognizes different but valid perspectives on the issue.
- 49

## *Healthy People 2010 Objectives: Draft for Public Comment*

- 1 • *Culturally sensitive:* The design or implementation process addresses special issues for specific  
2 population groups (ethnic and racial, linguistic) and also educational levels and disability.  
3
- 4 • *Understandability:* The reading or language level and format (including multimedia) are appropriate  
5 for the specific audience.  
6
- 7 • *Evidence-based:* The content and strategies are based on formative or previous evaluation with the  
8 intended audience and on applicable findings from previous communication research.  
9

10 *Multidimensionality* is another hallmark of effective communication. Research shows that a variety of  
11 communication activities, integrated with noncommunication activities such as programs, policies, and  
12 services, will be most successful. This implies that interagency or public-private partnerships can not only  
13 leverage resources but also strengthen the impact. Such collaboration can have the added benefits of  
14 reducing message clutter and targeting issues that cannot be fully addressed by public resources or market  
15 incentives alone.

16  
17 For health communication to be effective, it must also pass through channels that are appropriate to the  
18 audience and purpose. Mass media and targeted media include broadcast, print, audiovisual, and  
19 electronic media. They may be used proactively to deliver content to an audience or passively to make  
20 content available for the audience to access when needed. Interpersonal channels include peers,  
21 professionals, families, and individuals in a close community. They may entail a face-to-face exchange or  
22 pass through audio, video, or other electronic channels.  
23

### *Evaluation*

24  
25

26 Effective health communication strategies are built on sound evaluation research that addresses many  
27 points along the continuum from design and planning to implementation to outcome assessment.  
28 *Formative* evaluation, which may be qualitative or quantitative, is used to assess the nature of the problem  
29 and the needs of the target audience with a focus on informing and improving communication design  
30 before implementation. This is conducted prior to or during early program development and commonly  
31 consists of literature reviews, reviews of existing programs, surveys, and interviews or focus groups of  
32 members of the target audience. Formative evaluation seeks answers to fundamental questions: Who is  
33 the audience? What do we want them to know or do? Why? When and where should we reach them? and  
34 (in some cases), How do we motivate or persuade them to adopt a healthier behavior? *Process* evaluation  
35 is used to monitor the administrative, organizational, or other operational characteristics of an intervention.  
36 This may include testing the functionality of an interactive health communication application. *Outcome*  
37 evaluation is used to examine the results of a communication intervention, including changed awareness,  
38 attitudes, beliefs, or actions. It may also measure an interactive application's ability to achieve its intended  
39 results.  
40

### *New Media*

41  
42

43 Advances in information and communication technology are changing the delivery of health information  
44 and health care services and are likely to have a growing impact on individual and public health. New  
45 media such as the World Wide Web, CD-ROMs, and DVD can expand the approaches to health  
46 communication. The impact of interactivity, customization, and enhanced multimedia is just beginning to  
47 be explored. With the convergence of technologies (e.g., computers, TV, telephones, fax machines,  
48 kiosks, wireless devices, and who-knows-what-next), a nearly ubiquitous communication infrastructure is  
49 emerging. This can support user-initiated searching for information and interpersonal support and extend  
50 the reach of targeted communication.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37

**Challenges**

For health communication to improve individual and community health over the next decade, we must identify crucial opportunities regarding specific health problems, strengthen health communication infrastructure and quality, and promote a critical understanding of effective health communication. Communication research can provide information about optimal strategies (including type of media) for reaching different purposes and audiences. Disparate agencies and organizations that target similar issues or audiences should grasp opportunities to share resources and responsibilities. Standards for quality health communication can be promoted. Evaluation tools and approaches that recognize the different needs and environments of stakeholders and the rapid evolution of technology should be identified. We must sharpen the capacity of individuals and communities to recognize and use sound health communication. Finally, two challenges will confront public policy specifically: to ensure that all health communication that includes the exchange of personal health information remains private and confidential and that the benefits of health communication—including access to information—are shared equitably by all.

**Draft 2010 Objectives**

Four strategic areas offer the greatest opportunities for improving and extending health communication: effective infrastructure; quality standards; capacity/ability of health consumer/audience to access, understand, and use communication; and capacity/ability of health communicators to be effective. The first area encompasses technical, institutional, and interpersonal communication capacity within a community or across the Nation. Emerging technologies will play a role here. These infrastructures are prerequisites for the creation and delivery of effective health communication. The second area addresses the need to establish and disseminate quality standards, establish mechanisms to ensure quality, and support research and evaluation. Health communication is a relatively young field; the knowledge base for both refining practice and assessing value needs to be built up. The third strategic area focuses on strengthening the audience. Specific opportunities here include strengthening knowledge of and access to content, channels, and mechanisms for consumers; improving their capacity to discern the quality of health information and messages; promoting critical thinking skills; and improving media and health literacy. The fourth area seeks to strengthen health communication professionals through improved training; better knowledge of and access to content, channels, and mechanisms for professionals; and increased awareness of the potential communication role played by a wide array of health professionals. Progress must be made in all four strategic areas if the contributions of health communication to improved health are to be realized.

1 A limited number of specific objectives have been identified for tracking in these areas.

2  
3 ***Effective Infrastructure***

- 4  
5 **1. (Developmental) Increase to \_\_ percent the proportion of cities and counties that have a**  
6 **publicly or privately funded program or activity to promote and enhance public access to health**  
7 **information for underserved populations.**

8  
9 **Potential Data Sources:** National Association of County and City Health Officials, National  
10 Association of Counties, U.S. Conference of Mayors.

11  
12 In the context of this objective, “underserved” populations may include those who traditionally have not  
13 had access to health services (e.g., low-income, specific ethnic and racial groups) and those who are  
14 “technologically disadvantaged.” Additional research is needed to better define which groups fall within  
15 the latter population. Those who are most likely to have disproportionate burdens of morbidity and  
16 mortality are also most likely to lack access to the information that could help promote healthy behaviors  
17 and improve followup for medical conditions. Barriers include non-English language, low health literacy,  
18 cultural preferences, lack of health insurance, and economic disadvantages. Over the next decade, health  
19 information will be increasingly delivered through technology. New media technologies may help reduce  
20 health disparities through their potential for “tailoring” information to individuals based upon their level of  
21 literacy, health or disability status, and other sociocultural factors. Hence, access to such technologies can  
22 facilitate self-care and the adoption of healthy behaviors. They also enable access to peer and emotional  
23 support in a manner consistent with the user’s needs. Populations that are “technologically disadvantaged”  
24 may face additional barriers to health information, including costs of communication technologies, lack of  
25 appropriate telecommunications infrastructure in the area, and lack of training and skills in using  
26 technology or understanding health information.

27  
28 Until all these barriers are addressed and affordable access is available to all in their homes, publicly or  
29 privately funded programs to expand public access for underserved populations will be needed. Because  
30 of the cost of ensuring universal access to health information and support may be substantial, both public  
31 and private sector stakeholders, particularly government agencies and private corporations, will need to  
32 collaborate in such efforts. Programs and activities targeting “health literacy” are proposed in objective 5.  
33 Access improvement programs may include promoting information delivery in public areas such as  
34 shopping malls, supermarkets, post offices, libraries, public buildings, community centers, senior centers,  
35 places of worship, and other places accessible to underserved populations. Initiatives such as the  
36 Department of Housing and Urban Development’s (HUD’s) “Neighborhood Networks Initiative,” bringing  
37 Internet access and training to low-income housing, and the expansion of the “Universal Services”  
38 provisions of the Telecommunications Act to cover rural and low-income areas also are of interest. It  
39 should be noted, however, that non-technology-mediated modes of communication, such as personal  
40 contact and outreach, will also require funding.

41  
42 The intention of this developmental objective is to measure the existence of a publicly or privately (or  
43 jointly) funded program or activity in a city or county. Although such programs do not have to target all  
44 areas of the jurisdiction, they should address the needs of underserved groups, the characteristics of which  
45 may vary among areas. In most areas, primarily low-income families will be underserved. In some areas,  
46 however, disabled or older persons also may be underserved. The mere existence of such programs does  
47 not necessarily mean that underserved persons will have access to appropriate and timely health  
48 information, but it serves as a proxy for such access.

1 **Quality Standards**  
2

3 **2. (Developmental) Increase the number of centers for excellence (e.g., academic programs,**  
4 **national organizations) to advance the research and practice of health communication.**  
5

6 **Potential Data Source:** Survey through American Public Health Association Health Communication  
7 Interest Group.  
8

9 Health communication research is a relatively young field. In order to both advance the underlying  
10 knowledge base and translate it more broadly into practice, it will be necessary to provide both stimulus  
11 and coordination. Centers for excellence can catalyze such action through an array of activities such as (1)  
12 developing and disseminating quality standards; (2) promoting and developing initiatives to develop a  
13 consensus research agenda; (3) developing systems for identifying and accessing health communication  
14 research, both peer reviewed literature and research in progress, model curricula, and tested  
15 communication strategies, messages, materials, and resources; and (4) fostering networking and  
16 collaboration among health communicators.  
17

18 In addition, to improve coordination of health communication activities, it would be helpful for such  
19 centers to develop an infrastructure monitoring system that maps available health communication channels  
20 by location, sociodemographic variables, and other relevant categories: Internet access in homes,  
21 worksites, schools, libraries, hospitals, and long-term care facilities; satellite and cable reception  
22 (household and institutional); key networks (e.g., National Cancer Institute's [NCI's] Cancer Information  
23 Service; CDC's Distance Learning Network, National Breast and Cervical Cancer Early Detection  
24 Program, and Information Network for Public Health Officials project; education and outreach programs of  
25 various National Institutes of Health [NIH] institutes and the Health Care Financing Administration  
26 [HCFA]; the National Library of Medicine's [NLM's] Regional Medical Libraries; and the Department of  
27 Health and Human Services [HHS] healthfinder™ Web site).  
28

29 Centers for excellence in health communication could be funded through Federal grants (preferably  
30 cooperative rather than categorical), foundations, or private sector health care purchaser, payer, or provider  
31 organizations.  
32

33 **3. (Developmental) Increase to \_\_ percent the proportion of communication programs that**  
34 **incorporate appropriate evaluation activities and other components recognized as contributing**  
35 **to quality and effectiveness.**  
36

37 **Potential Data Sources:** *Federal Register* notices, Grantmakers in Health, National Health Council.  
38

39 The promotion of quality and effectiveness in programs funded by Federal, philanthropic, and not-for-  
40 profit organizations could be accomplished by requiring a minimum set of evaluation activities and  
41 specifying the characteristics to be measured from the lists detailed in the Background section. Such  
42 requirements could be set for communication programs funded under grants, by writing them into Requests  
43 for Proposals and Grant Program Guidelines, and for programs directly funded and implemented by a  
44 public or private sector entity, by requiring that they be incorporated into Statements of Work and Work  
45 Plans.  
46

47 For example, within the Federal Government, it could be stipulated that activities of \$200,000 or more  
48 include, at a minimum, appropriate audience testing for need, cultural sensitivity, comprehension, and  
49 receptivity, and that activities of \$1 million or more include formative research, process and summative  
50 evaluation, and appropriate interagency and public-private collaboration.

1  
2 **Capacity and Ability of Health Consumer/Audience To Access, Understand, and Use Communication**  
3

- 4 **4. (Developmental) Increase to at least \_\_ percent the proportion of persons who report being**  
5 **satisfied with the health information they received during their most recent search for such**  
6 **information.**

7  
8 **Potential Data Sources:** Behavioral Risk Factor Surveillance System (BRFSS), CDC, NCCDPHP;  
9 Health Promotion Supplement of the National Health Interview Survey (NHIS), CDC, NCHS; and  
10 industry surveys (FIND/SVP, Nielsen, Jupiter Communications) could be modified.

11  
12 Recent studies confirm the strong public interest in health information and increasing access to health  
13 information. This may be driven by more health-conscious consumers and cost-conscious payers and care  
14 providers. Health information requests are among the top five queries to public library reference services;  
15 over 43 percent of regular Internet users are seeking health information. Individuals want information to  
16 answer not only questions about specific medical problems, but also about basic wellness issues such as  
17 nutrition. Public health and the medical community share an interest in promoting—and sustaining—  
18 “informed decisions” for better health.

19  
20 Surveys suggest that individuals want to get health information from a health professional. However,  
21 diminished time with each patient and some clinicians’ discomfort with open communication work against  
22 optimum information exchange in the context of the clinical visit. In addition, many people want  
23 information to be available when and where they need it most. To meet the growing interest in health  
24 information, delivery channels need to become ubiquitous—in the home, at work, in the community, as  
25 well as in a health setting. Potential sources include medical, dental, and pharmacy professionals; libraries;  
26 the Internet; Government clearinghouses; and voluntary organizations.

27  
28 Surveys of “satisfaction” with information would be important proxy measures for both the availability,  
29 quality, and utility of health information that people receive.

- 30  
31 **5. (Developmental) Increase to at least \_\_ percent the proportion of libraries and Area Health**  
32 **Education Centers (AHECs) that offer public education “health literacy” programs.**

33  
34 **Potential Data Sources:** National Library of Medicine National Network of Libraries of Medicine;  
35 Area Health Education Center survey, HRSA.

36  
37 “Health literacy” is increasingly vital to help people critically evaluate health information. The increased  
38 hospitalization costs directly attributable to inadequate health literacy are estimated at \$8 billion to \$15  
39 billion per year.<sup>2</sup> Health literacy programs may include sources and channels of information, critical  
40 thinking, judgment, and understanding of bias and levels of evidence. Public and medical libraries and  
41 AHECs could offer such programs in partnership with local media and other relevant entities, including  
42 voluntary and professional organizations and schools. In addition, other entities in the private sector  
43 should be encouraged to develop health literacy programs. Activities by members of the National Network  
44 of Libraries of Medicine and AHECs are considered proxy indicators for health literacy initiatives.

- 45  
46 **6. (Developmental) Increase to \_\_ percent the proportion of health-related World Wide Web sites**  
47 **sampled that disclose to users a minimum set of specific information relevant to quality.**

48  
49 **Potential Data Source:** Internet Healthcare Coalition.  
50

1 The rapidly growing volume of health information and support available on the Internet raises serious  
2 concerns regarding the accuracy, appropriateness, and potential health impact of these sites. Because many  
3 people rely on the information gleaned from the Internet to make important health decisions, it is possible  
4 that inaccurate or inappropriate health information will result in harmful decisions, such as purchasing  
5 goods and services of dubious quality or effectiveness, receiving inappropriate treatment, or wasting  
6 limited resources on ineffective treatment.

7  
8 Numerous initiatives are under way to identify appropriate and feasible approaches to quality assurance for  
9 online health information, and it is possible that a “consensus” approach will emerge. However, a large  
10 part of the responsibility for quality assurance will continue to rest with the developers or sponsors of  
11 health Web sites. Voluntary adoption of quality standards or guidelines may be the primary mechanism for  
12 quality assurance in the near future and possibly in the long term.

13  
14 At a minimum, sites would disclose specific information about the following attributes of their content or  
15 site: (1) the explicit purpose of the site, including any commercial purposes; (2) the identity of the  
16 developers and sponsors of the site (and how to contact them) and information about any potential conflicts  
17 of interest or biases; (3) the original sources of information or data available on the site; (4) the currency of  
18 information or data; (5) any reasons the site may not be appropriate for specific groups of people; and (6)  
19 how the site ensures the privacy and confidentiality of any personal information collected from users. This  
20 set of information is indicative of the quality and credibility of the site.

21  
22 *Capacity and Ability of Health Communicators To Be Effective*

23  
24 **7. (Developmental) Increase to \_\_ percent the proportion of health professional schools that**  
25 **include a health communication/media technology curriculum.**

26  
27 **Potential Data Sources:** Association of Schools of Public Health, Association of American Medical  
28 Colleges, NCI.

29  
30 Merging individualized chronic disease risk reduction messages with communication technologies is the  
31 newest challenge to health educators, communicators, and primary care providers. Government agencies  
32 with a health and disease focus acknowledge that interactive health communication technologies will  
33 continue to replace traditional methods of disseminating information and educating professionals and the  
34 public. However, it has been observed that many grant applicants with advanced degrees do not have the  
35 skills and experience to meet the challenge. There is a real need to adequately prepare future graduates of  
36 schools of public health, medicine, nursing, and other health professions to meet the challenges of utilizing  
37 a continuum of communication approaches, including advanced technologies, to educate the public about  
38 health issues.

39  
40 A detailed course review by NCI staff indicates that while the majority of the 28 schools of public health  
41 and contiguous university departments have undergraduate courses in health communication or media  
42 technologies, none offered a combined curriculum at a master’s or doctoral level. Establishing such  
43 programs in health professional schools will expand the pool of people knowledgeable and qualified to  
44 plan, implement, and evaluate effective health communications. These programs should include (1) ample  
45 staffing with appropriate expertise, (2) appropriate media equipment or labs, (3) traineeships that mentor  
46 students in the translation of science or research findings into population-specific applications, and (4)  
47 partnerships with private-sector companies to provide on-the-job training.

1 **Related Objectives From Other Focus Areas**

2  
3 **Physical Activity and Fitness**

4 14 Clinician counseling about physical activity

5  
6 **Nutrition**

7 14 Nutrition education, elementary schools

8 15 Nutrition education, middle/junior high schools

9 16 Nutrition education, senior high schools

10 17 Worksite nutrition education and weight management programs

11 19 Nutrition counseling

12  
13 **Tobacco Use**

14 10 Advice to quit smoking

15 12 Providers advising smoking cessation

16 21 Tobacco use prevention education

17  
18 **Educational and Community-Based Programs**

19 7 Patient satisfaction with health care provider communication

20 8 Patient and family education

21 11 Culturally appropriate community health promotion programs

22  
23 **Access to Quality Health Services**

24 A.3 Routine screening about lifestyle risk factors

25  
26 **Family Planning**

27 10 Pregnancy and STD preventive methods

28  
29 **Public Health Infrastructure**

30 6 Access to public health information and surveillance data

31  
32 **References**

33  
34 1. Ratzan, S.C., ed. Health communication, Challenges for the 21st century. Special issue. *American Behavioral*  
35 *Scientist* 38(2), 1994.

36  
37 2. Baker, David W. 1997. The impact of health literacy on patients' overall health and their use of healthcare  
38 services. In: *Proceedings of Health Literacy: A National Conference*. June 3, 1997, Washington, DC.  
39 Sponsored by Center for Health Care Strategies, Inc., Pfizer, Inc.

40  
41 The following is a preliminary list of key resources for health communication theory and application.

42  
43 Andreasen, A.R. *Marketing Social Change*. San Francisco, CA: Jossey-Bass, 1995.

44  
45 Ajzen, I. and Fishbein, M. *Understanding Attitudes and Predicting Social Behavior*. Englewood Cliffs, NJ:  
46 Prentice-Hall, 1980.

47  
48 Bandura, A. *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, NJ:  
49 Prentice-Hall, 1986.

50  
51 Council on Competitiveness. *Highway to Health: Transforming U.S. Health Care in the Information Age*.

*Healthy People 2010 Objectives: Draft for Public Comment*

- 1 Washington, DC, 1996.  
2  
3 Deering, M.J. Health communication and health policy. In: *Health Communication Research: A Guide to*  
4 *Developments and Directions*. Greenwood Press, 1998 (in press).  
5  
6 Eng, T.R.; Maxfield, A.; Patrick, K.; Deering, M.J.; Ratzan, S.C.; Gustafson, D.H. Access to health information and  
7 support: A public highway or private road? *JAMA* (in press).  
8  
9 Freimuth, V.S. *Are Mass-Mediated Health Campaigns Effective? A Review of the Empirical Evidence*. Rockville,  
10 MD: National Heart, Lung, and Blood Institute, U.S. Department of Health and Human Services, 1994.  
11  
12 Glanz, K.; Lewis, F.M.; Rimer, B.K., eds. *Health Behavior and Health Education*. San Francisco, CA: Jossey-  
13 Bass, 1990.  
14  
15 Goldberg, M.E.; Fishbein, M.; Middlestadt, S.E., eds. *Social Marketing: Theoretical and Practical Perspectives*.  
16 Mahwah, NJ: Lawrence Erlbaum Associates, 1997.  
17  
18 Government Accounting Office. *Consumer Health Informatics. Emerging Issues*. Publication no. GAO/AIMD-96-  
19 86. Washington, DC: GAO, July 1996.  
20  
21 Harris L.M., ed. *Health and the New Media. Technologies Transforming Personal and Public Health*. Mahwah, NJ:  
22 Lawrence Erlbaum Associates, 1995.  
23  
24 *Journal of Health Communication*. Taylor and Francis, publishers.  
25  
26 Maibach, E.W. and Parrott, R.L., eds. *Designing Health Messages*. Newbury Park, CA: Sage, 1995.  
27  
28 Office of Technology Assessment. *Bringing Health Care Online. The Role of Information Technologies*.  
29 Publication no. OTA-ITC-624. Washington, DC: U.S. Government Printing Office, September, 1995.  
30  
31 Payne, J.G., ed. New frontiers in political communication. *American Behavioral Scientist* 37(2), 1993.  
32  
33 Robinson, T.N.; Patrick, K.; Eng, T.R.; Gustafson, D. for the Science Panel on Interactive Communication and  
34 Health. 1998. An evidence-based approach to interactive health communication: A challenge to medicine in the  
35 Information Age: *JAMA* (submitted).  
36  
37 Rogers, E.M. and Storey, J.D. Communication campaigns. In: Berger, C. and Chaffee, S., eds. *Handbook of*  
38 *Communication Science*. Newbury Park, CA: Sage, 1987.  
39  
40 Sutton, S.M.; Balch, G.I.; Lefebvre, R.C. Strategic questions for consumer-based health communications. *Public*  
41 *Health Reports* 10(6):725-733, 1995.  
42  
43 Swinehart, J.W. Health behavior research and communication campaigns. In: Gochman, D.S., ed. *Handbook of*  
44 *Health Behavior Research IV: Relevance for Professionals and Issues for the Future*. New York: Plenum Press,  
45 1997.  
46  
47 U.S. Department of Health and Human Services. *Making Health Communication Programs Work: A Planner's*  
48 *Guide*. NIH publication no. 92-1493. Washington, DC: Office of Cancer Communications, National Cancer  
49 Institute, 1992.  
50  
51 Winett, L.B. and Wallack, L. Advancing public health goals through the mass media. *Journal of Health*  
52 *Communication* (1) 173-196, 1996.  
53