



# 11

## Health Communication

Lead Agency: Office of Disease Prevention and Health Promotion

*[Note: The [Healthy People 2010 Information Access Project](#) provides [dynamic, pre-formulated PubMed searches for selected objectives in this focus area](#) so that current information and evidence-based strategies related to these objectives are easier to find. The National Library of Medicine has also provided [PubMed links to available references](#) that appear at the end of this focus area document.]*

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## Goal

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### **Use communication strategically to improve health.**

## Overview

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Health communication encompasses the study and use of communication strategies to inform and influence individual and community decisions that enhance health. It links the domains of communication and health and is increasingly recognized as a necessary element of efforts to improve personal and public health.<sup>[1], [2], [3]</sup> Health communication can contribute to all aspects of disease prevention and health promotion and is relevant in a number of contexts, including (1) health professional-patient relations, (2) individuals' exposure to, search for, and use of health information, (3) individuals' adherence to clinical recommendations and regimens, (4) the construction of public health messages and campaigns, (5) the dissemination of individual and population health risk information, that is, risk communication, (6) images of health in the mass media and the culture at large, (7) the education of consumers about how to gain access to the public health and health care systems, and (8) the development of telehealth applications.<sup>3, [4], [5], [6], [7], [8], [9], [10], [11]</sup>

For individuals, effective health communication can help raise awareness of health risks and solutions, provide the motivation and skills needed to reduce these risks, help them find support from other people in similar situations, and affect or reinforce attitudes.<sup>1</sup> Health communication also can increase demand for appropriate health services and decrease demand for inappropriate health services. It can make available information to assist in making complex choices, such as selecting health plans, care providers, and treatments.<sup>1</sup> For the community, health communication can be used to influence the public agenda, advocate for policies and programs, promote positive changes in the socioeconomic and physical environments, improve the delivery of public health and health care services, and encourage social norms that benefit health and quality of life.<sup>2</sup>

The practice of health communication has contributed to health promotion and disease prevention in several areas. One is the improvement of interpersonal and group interactions in clinical situations (for example, provider-patient, provider-provider, and among members of a health care team) through the training of health professionals and patients in effective communication skills.<sup>3, 4</sup> Collaborative relationships are enhanced when all parties are capable of good communication.

Another area is the dissemination of health messages through public education campaigns that seek to change the social climate to encourage healthy behaviors, create awareness, change attitudes, and motivate individuals to adopt recommended behaviors.<sup>6, 9, 10</sup> Campaigns traditionally have relied on mass communication (such as public service announcements on billboards, radio, and television) and educational messages in printed materials (such as pamphlets) to deliver health messages. Other campaigns have integrated mass media with community-based programs. Many campaigns have used social marketing techniques.

### Attributes of Effective Health Communication

- **Accuracy:** The content is valid and without errors of fact, interpretation, or judgment.
- **Availability:** The content (whether targeted message or other information) is delivered or placed where the audience can access it. Placement varies according to audience, message complexity, and purpose, ranging from interpersonal and social networks to billboards and mass transit signs to prime-time TV or radio, to public kiosks (print or electronic), to the Internet.
- **Balance:** Where appropriate, the content presents the benefits and risks of potential actions or recognizes different and valid perspectives on the issue.
- **Consistency:** The content remains internally consistent over time and also is consistent with information from other sources (the latter is a problem when other widely available content is not accurate or reliable).
- **Cultural competence:** The design, implementation, and evaluation process that accounts for special issues for select population groups (for example, ethnic, racial, and linguistic) and also educational levels and disability.
- **Evidence base:** Relevant scientific evidence that has undergone comprehensive review and rigorous analysis to formulate practice guidelines, performance measures, review criteria, and technology assessments for telehealth applications.
- **Reach:** The content gets to or is available to the largest possible number of people in the target population.
- **Reliability:** The source of the content is credible, and the content itself is kept up to date.
- **Repetition:** The delivery of/access to the content is continued or repeated over time, both to reinforce the impact with a given audience and to reach new generations.
- **Timeliness:** The content is provided or available when the

audience and to reach new generations.

- **Timeliness:** The content is provided or available when the audience is most receptive to, or in need of, the specific information.
- **Understandability:** The reading or language level and format (including multimedia) are appropriate for the specific audience.

Increasingly, health improvement activities are taking advantage of digital technologies, such as CD-ROM and the World Wide Web (Web), that can target audiences, tailor messages, and engage people in interactive, ongoing exchanges about health.<sup>4, 11, [12]</sup> An emerging area is health communication to support community-centered prevention.<sup>[13]</sup> Community-centered prevention shifts attention from the individual to group-level change and emphasizes the empowerment of individuals and communities to effect change on multiple levels.

A set of Leading Health Indicators, which focus on key health improvement activities and are described in *Healthy People 2010: Understanding and Improving Health*, all depend to some extent on effective health communication. The promotion of regular physical activity, healthy weight, good nutrition, and responsible sexual behavior will require a range of information, education, and advocacy efforts, as will the reduction of tobacco use, substance abuse, injuries, and violence. For example, advocacy efforts to change prices and availability of tobacco and alcohol products have resulted in lower consumption levels. (See Focus Area 26. Substance Abuse and Focus Area 27. Tobacco Use.) Effective counseling and patient education for behavior change require health care providers and patients to have good communication skills. Public information campaigns are used to promote increased fruit and vegetable consumption (5-A-Day for Better Health!), higher rates of preventive screening (mammogram and colonoscopy), higher rates of clinical preventive services (immunization), and greater rates of adoption of risk-reducing behaviors (Back to Sleep and Buckle Up for Safety).

Health communication alone, however, cannot change systemic problems related to health, such as poverty, environmental degradation, or lack of access to health care, but comprehensive health communication programs should include a systematic exploration of all the factors that contribute to health and the strategies that could be used to influence these factors. Well-designed health communication activities help individuals better understand their own and their communities' needs so that they can take appropriate actions to maximize health.

## Issues and Trends

The environment for communicating about health has changed significantly. These changes include dramatic increases in the number of communication channels and the number of health issues vying for public attention as well as consumer demands for more and better quality health information, and the increased sophistication of marketing and sales techniques, such as direct-to-consumer advertising of prescription drugs and sales of medical devices and medications over the Internet. The expansion of

communication channels and health issues on the public agenda increases competition for people's time and attention; at the same time, people have more opportunities to select information based on their personal interests and preferences. The trend toward commercialization of the Internet suggests that the marketing model of other mass media will be applied to emerging media, which has important consequences for the ability of noncommercial and public health-oriented health communications to stand out in a cluttered health information environment.

Communication occurs in a variety of contexts (for example, school, home, and work); through a variety of channels (for example, interpersonal, small group, organizational, community, and mass media) with a variety of messages; and for a variety of reasons. In such an environment, people do not pay attention to all communications they receive but selectively attend to and purposefully seek out information.<sup>8</sup> One of the main challenges in the design of effective health communication programs is to identify the optimal contexts, channels, content, and reasons that will motivate people to pay attention to and use health information.

A one-dimensional approach to health promotion, such as reliance on mass media campaigns or other single-component communication activities, has been shown to be insufficient to achieve program goals. Successful health promotion efforts increasingly rely on multidimensional interventions to reach diverse audiences about complex health concerns, and communication is integrated from the beginning with other components, such as community-based programs, policy changes, and improvements in services and the health delivery system.<sup>10, [14]</sup> Research shows that health communication best supports health promotion when multiple communication channels are used to reach specific audience segments with information that is appropriate and relevant to them.<sup>6</sup> An important factor in the design of multidimensional programs is to allot sufficient time for planning, implementation, and evaluation and sufficient money to support the many elements of the program. Public-private partnerships and collaborations can leverage resources to strengthen the impact of multidimensional efforts. Collaboration can have the added benefit of reducing message clutter and targeting health concerns that cannot be fully addressed by public resources or market incentives alone.

Research indicates that effective health promotion and communication initiatives adopt an audience-centered perspective, which means that promotion and communication activities reflect audiences' preferred formats, channels, and contexts.<sup>6</sup> These considerations are particularly relevant for racial and ethnic populations, who may have different languages and sources of information. In these cases, public education campaigns must be conceptualized and developed by individuals with specific knowledge of the cultural characteristics, media habits, and language preferences of intended audiences. Direct translation of health information or health promotion materials should be avoided. Credible channels of communication need to be identified for each major group. Television and radio serving specific racial and ethnic populations can be effective means to deliver health messages when care is taken to account for the language, culture, and socioeconomic situations of intended audiences.

An audience-centered perspective also reflects the realities of people's everyday lives and their current



practices, attitudes and beliefs, and lifestyles. Some specific audience characteristics that are relevant include gender, age, education and income levels, ethnicity, sexual orientation, cultural beliefs and values, primary language(s), and physical and mental functioning. Additional considerations include their experience with the health care system, attitudes toward different types of health problems, and willingness to use certain types of health services. Particular attention should be paid to the needs of underserved audience members.

Targeting specific segments of a population and tailoring messages for individual use are two methods to make health promotion activities relevant to audiences.<sup>[15]</sup> Examples include the targeted use of mass media messages for adolescent girls at increased risk of smoking;<sup>[16]</sup> the tailoring of computer-generated nutritional information to help individuals reduce their fat intake and increase fruit and vegetable consumption;<sup>[17]</sup> and a national telephone service for Spanish speakers to obtain AIDS information as well as counseling and referrals.<sup>[18]</sup>

Interventions that account for the cultural practices and needs of specific populations have shown some success. For example, a breastfeeding promotion program among Navajo women that was based on investigations of their cultural beliefs about infant feeding practices showed increased rates of breastfeeding.<sup>[19]</sup> Similarly, an intervention that used the novela, a popular form of Latino mass media, to reach young people and their parents sought to improve parent-youth communication in Hispanic families and to influence the adolescents' attitudes about alcohol.<sup>[20]</sup>

Advances in medical and consumer health informatics are changing the delivery of health information and services and are likely to have a growing impact on individual and community health.<sup>3, 4, 11, [21]</sup> The convergence of media (computers, telephones, television, radio, video, print, and audio) and the emergence of the Internet create a nearly ubiquitous networked communication infrastructure. This infrastructure facilitates access to an increasing array of health information and health-related support services and extends the reach of health communication efforts. Delivery channels such as the Internet expand the choices available for health professionals to reach patients and consumers and for patients and consumers to interact with health professionals and with each other (for example, in online support groups).

Compared to traditional mass media, interactive media may have several advantages for health communication efforts. These advantages include (1) improved access to personalized health information, (2) access to health information, support, and services on demand, (3) enhanced ability to distribute materials widely and update content or functions rapidly, (4) just-in-time expert decision support, and (5) more choices for consumers.<sup>4, 21</sup> The health impact of interactivity, customization, and enhanced multimedia is just beginning to be explored, and already interactive health communication technologies are being used to exchange information, facilitate informed decisionmaking, promote healthy behaviors, enhance peer and emotional support, promote self-care, manage demand for health services, and support

clinical care.

Widespread availability and use of interactive health communication and telehealth applications create at least two serious challenges. One is related to the risks associated with consumers' use of poor quality health information to make decisions. Concerns are growing about the Web making available large amounts of information that may be misleading, inaccurate, or inappropriate, which may put consumers at unnecessary risk. Although many health professionals agree that the Internet is a boon for consumers because they have easier access to much more information than before, professionals also are concerned that the poor quality of a lot of information on the Web will undermine informed decisionmaking. These concerns are driving the development of a quality standards agenda to help health professionals and consumers find reliable Web sites and health information on the Internet. An expert panel convened by the U.S. Department of Health and Human Services describes high quality health information as accurate, current, valid, appropriate, intelligible, and free of bias.<sup>4</sup>

The other challenge is related to the protection of privacy and confidentiality of personal health information. The personal privacy and the confidentiality of health information are major issues for consumers, and these concerns are magnified when information is collected, stored, and made available online.<sup>4</sup> As the availability and variety of interactive health applications grow, consumer confidence about developers' ability or intent to ensure privacy will be challenged. In the near future, personal health information will be collected during both clinical and nonclinical encounters in disparate settings, such as schools, mobile clinics, public places, and homes, and will be made available for administrative, financial, clinical, and research purposes. Although public health and health services research may require de-identified personal health information, policies and procedures to protect privacy will need to ensure a balance between confidentiality and appropriate access to personal health information.

The trend of rapidly expanding opportunities in health communication intersects with recent demands for more rigorous evaluation of all aspects of the health care and public health delivery systems and for evidence-based practices.<sup>[22]</sup> Numerous studies of provider-patient communication support the connection among the quality of the provider-patient interaction, patient behavior, and health outcomes.<sup>[23]</sup> As the knowledge base about provider-patient interactions increases, a need becomes apparent for the development of practice guidelines to promote better provider-patient communication. Additional evidence about the process of health information-seeking and the role of health information in decisionmaking also is needed. Health communication campaigns could benefit as well from more rigorous formative research and evaluation of outcomes. Expected outcomes should be an important consideration and central element of campaign design. As health communication increasingly involves electronic media, new evaluation approaches are emerging.<sup>4, [24], [25], [26]</sup> Given the critical role that communication plays in all aspects of public health and health care, health communication and outcomes research should become more tightly linked across all health communication domains.

Because national data systems will not be available in the first half of the decade for tracking progress, one subject of interest concerning health communication is not addressed in this focus area's objectives.

Representing a research and data collection agenda for the coming decade, the topic covers persons who report being satisfied with the health information they received during their most recent search for such information. Health-conscious consumers increasingly are proactive in seeking out health information. Individuals want information about prevention and wellness as much as about medical problems. Public health and the medical community share an interest in promoting—and sustaining—informed decisions for better health. Surveys suggest that people want to get health information from a professional and that counseling by health professionals can be effective both in reducing lifestyle risks and supporting self-management of chronic diseases like diabetes. (See Focus Area 1. Access to Quality Health Services and Focus Area 7. Educational and Community-Based Programs.) However, diminished time in clinical visits and some clinicians' discomfort with open communication work against optimum information exchange. In addition, many people want information to be available when and where they need it most. Health information should be not only easily accessible but also of good quality and relevant for the needs of the person. The increasing use of the Internet as a source for health information will require greater awareness of the importance of the quality of information.

## Disparities

Often people with the greatest health burdens have the least access to information, communication technologies, health care, and supporting social services. Even the most carefully designed health communication programs will have limited impact if underserved communities lack access to crucial health professionals, services, and communication channels that are part of a health improvement project.

Research indicates that even after targeted health communication interventions, low-education and low-income groups remain less knowledgeable and less likely to change behavior than higher education and income groups, which creates a knowledge gap and leaves some people chronically uninformed.<sup>[27]</sup> With communication technologies, the disparity in access to electronic information resources is commonly referred to as the “digital divide.”<sup>[28]</sup> The digital divide becomes more critical as the amount and variety of health resources available over the Internet increase and as people need more sophisticated skills to use electronic resources.<sup>[29]</sup> Equitably distributed health communication resources and skills, and a robust communication infrastructure can contribute to the closing of the digital divide and the overarching goal of Healthy People 2010 to eliminate health disparities.

Even with access to information and services, however, disparities may still exist because many people lack health literacy.<sup>[30]</sup> Health literacy is increasingly vital to help people navigate a complex health system and better manage their own health. Differences in the ability to read and understand materials related to personal health as well as navigate the health system appear to contribute to health disparities. People with low health literacy are more likely to report poor health, have an incomplete understanding of their health problems and treatment, and be at greater risk of hospitalization.<sup>[31]</sup> The average annual health care costs of persons with very low literacy (reading at the grade two level or below) may be four times greater than for the general population.<sup>[32]</sup> An estimated 75 percent of persons in the United States with chronic physical or mental health problems are in the limited literacy category.<sup>[33]</sup> People with chronic



conditions, such as asthma, hypertension, and diabetes, and low reading skills have been found to have less knowledge of their conditions than people with higher reading skills.[\[34\]](#), [\[35\]](#)

Although the majority of people with marginal or low literacy are white native-born Americans,[\[36\]](#) changing demographics suggest that low literacy is an increasing problem among certain racial and ethnic groups, non-English-speaking populations, and persons over age 65 years. One study of Medicare enrollees found that 34 percent of English speakers and 54 percent of Spanish speakers had inadequate or marginal health literacy.[\[37\]](#) As the U.S. population ages, low health literacy among elderly people is potentially a large problem. Nearly half of the people in the elderly population have low reading skills, and reading ability appears to decline with age. A study of patients 60 years and older at a public hospital found that 81 percent could not read and understand basic materials such as prescription labels and appointments.[\[38\]](#)

## Opportunities

For health communication to contribute to the improvement of personal and community health during the first decade of the 21st century, stakeholders, including health professionals, researchers, public officials, and the lay public, must collaborate on a range of activities. These activities include (1) initiatives to build a robust health information system that provides equitable access, (2) development of high-quality, audience-appropriate information and support services for specific health problems and health-related decisions for all segments of the population, especially underserved persons, (3) training of health professionals in the science of communication and the use of communication technologies, (4) evaluation of interventions, and (5) promotion of a critical understanding and practice of effective health communication.

A national health information infrastructure (NHII) provides a framework that stakeholders can use to communicate with each other and to transform data into useful information on multiple levels. Efforts are under way throughout the world to develop integrated national and global health information infrastructures to support health improvements. In the United States, the National Committee on Vital and Health Statistics (NCVHS) is advising the Secretary of Health and Human Services and Congress on the health information needs of the country. The NCVHS defines NHII as all of the technologies, standards, applications, systems, values, and laws that support individual health, health care, and public health. Issues related to technical standards, privacy and confidentiality, and regulatory guidelines are being addressed by the public and private sectors.[\[39\]](#), [\[40\]](#)

The infrastructure makes it possible for people not only to use health information designed by others but also to create resources to manage their own health and to influence the health of their communities. For example, community groups could use computers to gain access to survey information about the quality of life in their neighborhoods and apply this information to create an action plan to present to local elected and public health officials. Information is a critical element of informed participation and decisionmaking,

and appropriate, quality information and support services for all are empowering and democratic.

As patients and consumers become more knowledgeable about health information, services, and technologies, health professionals will need to meet the challenge of becoming better communicators and users of information technologies. Health professionals need a high level of interpersonal skills to interact with diverse populations and patients who may have different cultural, linguistic, educational, and socioeconomic backgrounds. Health professionals also need more direct training in and experience with all forms of computer and telecommunication technologies. In addition to searching for information, patients and consumers want to use technology to discuss health concerns, and health professionals need to be ready to respond. To support an increase in health communication activities, research and evaluation of all forms of health communication will be necessary to build the scientific base of the field and the practice of evidence-based health communication. Collectively, these opportunities represent important areas to make significant improvements in personal and community health.

## Interim Progress Toward Year 2000 Objectives

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Health Communication is a new focus area for Healthy People 2010.

## Healthy People 2010—Summary of Objectives

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### Health Communication

**Goal:** Use communication strategically to improve health.

<b>Number</b>	<b>Objective Short Title</b>
11-1	Households with Internet access
11-2	Health literacy
11-3	Research and evaluation of communication programs
11-4	Quality of Internet health information sources
11-5	Centers for excellence
11-6	Satisfaction with health care providers' communication skills

## Healthy People 2010 Objectives

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**11-1. Increase the proportion of households with access to the Internet at home.****Target:** 80 percent.**Baseline:** 26 percent of households had access to the Internet at home in 1998.**Target setting method:** Better than the best.**Data source:** Computer and Internet Use Supplement to the Current Population Survey, U.S. Department of Commerce, Bureau of the Census.

Households, 1998	Internet Access at Home
	Percent
<b>TOTAL</b>	26
<b>Race and ethnicity</b> (head of household)	
American Indian or Alaska Native	DNA
Asian or Pacific Islander	DNA
Asian	DNC
Native Hawaiian and other Pacific Islander	DNC
Black or African American	DNA
White	DNA
Hispanic or Latino	13
Not Hispanic or Latino	DNA
American Indian or Alaska Native	19
Asian or Pacific Islander	36
Black or African American	11
White	30
<b>Gender</b> (head of household)	
Female	DNA
Male	DNA
<b>Family income level</b>	
Poor	DNA
Near poor	DNA
Middle/high income	DNA
<b>Education level</b> (head of household)	

Less than high school	DNA
High school graduate	14
At least some college	DNA
<b>Geographic location</b>	
Urban	28
Rural	22

DNA = Data have not been analyzed. DNC = Data are not collected. DSU = Data are statistically unreliable.

Many health care organizations and public service agencies use the Internet as one of their main channels for information delivery. Access to the Internet and subsequent technologies is likely to become essential to gain access to health information, contact health care organizations and health professionals, receive services at a distance, and participate in efforts to improve local and national health.<sup>4, 11</sup> The integration of communication media means electronic access to health information not only via computers but also with Web-enabled televisions and telephones, handheld devices, and other emerging technologies. Technical literacy, or the ability to use electronic technologies and applications, will be essential to gain access to this information.

Internet availability in the home is an important indicator of equitable access among population groups. An increasing number of people have access to the Internet at work and public facilities, such as libraries and community centers, but several limitations affect the use of online health information and support in these settings. Some employers monitor electronic mail and the types of sites visited by employees. Access in public settings may be problematic because of privacy and confidentiality concerns, and access may be needed during times when these facilities are unavailable. Because of the potentially sensitive nature of health-related uses of the Internet, access at home is essential.

Although the proportion of people with access to the Internet has risen dramatically since 1995, many segments of the population lack access, such as low-income and rural households; persons with less education; and certain racial and ethnic groups, such as African Americans and Hispanics.<sup>28</sup> Internet access rates vary considerably according to income. Only 11 percent of households earning \$24,999 or less have access, whereas 19 percent are connected among those earning \$25,000 to \$34,999; 30 percent have access among those earning \$35,000 to \$49,999; and 52 percent of households with \$50,000 or greater in income have an Internet connection.<sup>28</sup> Barriers to Internet access include cost, lack of services in certain communities, limited literacy, lack of familiarity with different technologies, and, especially for people with disabilities, inaccessible formats that limit appropriate and effective technology use. Initiatives to promote universal access to the Internet will involve public and private sector stakeholders, particularly government agencies and technology corporations.

## **11-2. (Developmental) Improve the health literacy of persons with inadequate or marginal literacy skills.**

**Potential data source:** National Adult Literacy Survey, 2002, U.S. Department of Education.

Responses from the National Adult Literacy Survey indicate that approximately 90 million adults in the United States have inadequate or marginal literacy skills.<sup>36</sup> Written information is not the only way to communicate about health, but a great deal of health education and promotion are organized around the use of print materials, usually written at the 10th grade level and above. These materials are of little use to people who have limited literacy skills.<sup>[41]</sup> The result is that a very large segment of the population is denied the full benefits of health information and services.

Closing the gap in health literacy is an issue of fundamental fairness and equity and is essential to reduce health disparities. Public and private efforts need to occur in two areas: the development of appropriate written materials and improvement in skills of those persons with limited literacy. The knowledge exists to create effective, culturally and linguistically appropriate, plain language health communications. Professional publications and Federal documents provide the criteria to integrate and apply the principles of organization, writing style, layout, and design for effective communication.<sup>41, [42]</sup> These criteria should be widely distributed and used. Many organizations such as public and medical libraries, voluntary, professional, and community groups, and schools could offer health literacy programs that target skill improvement for low-literacy and limited English proficient individuals. If appropriate materials exist and people receive the training to use them, then measurable improvements in health literacy for the least literate can occur.

### **11-3. (Developmental) Increase the proportion of health communication activities that include research and evaluation.**

**Potential data sources:** Sponsored survey of *Federal Register* notices; Grantmakers in Health; National Health Council.

Effective health communication programs are built on sound research and evaluation. Meaningful research and evaluation are not afterthoughts but integral parts of initial program design. Research provides the ideas and tools to design and carry out formative, process, and outcome evaluations to improve health communication efforts, certify the degree of change that has occurred, and identify programs or elements of programs that are not working.<sup>1, 10</sup> Research and evaluation systematically obtain information that can be used to refine the design, development, implementation, adoption, redesign, and overall quality of a communication intervention.<sup>[43], [44]</sup>

Programs funded by Federal, philanthropic, and not-for-profit organizations could be strengthened with requirements for a minimum set of evaluation activities and specific measurements. The level of research and evaluation required should reflect the costs, scope, and potential impact (in terms of benefit or harm) of the communication activity proposed. At a minimum, programs should be expected to conduct appropriate audience testing for need, cultural and linguistic competence, comprehension, and receptivity.



Requirements and specifications for evaluation could be set for grant-funded communication programs and included in requests for funding proposals and grant program guidelines as well as for programs directly funded and implemented by public or private sector organizations by including research and evaluation activities in their work plans.

**11-4. (Developmental) Increase the proportion of health-related World Wide Web sites that disclose information that can be used to assess the quality of the site.**

**Potential data sources:** Health on the Net Foundation; Health Internet Ethics (Hi-Ethics); Internet Healthcare Coalition.

With the rapidly growing volume of health information, advertising, products, and services available on World Wide Web sites, serious concerns arise regarding the accuracy, appropriateness, and potential health impact of these sites.<sup>4, 21</sup> People are using the Internet to look up information, purchase medications, consult remotely with providers, and maintain their personal health records. Approximately 70 million persons in the United States use the Internet for health-related reasons,<sup>[45]</sup> and the potential for harm from inaccurate information, inferior quality goods, and inappropriate services is significant. Many initiatives are under way to identify appropriate and feasible approaches to evaluate online health sites.<sup>26</sup> Professional associations are issuing guidelines and recommendations,<sup>[46], [47], [48]</sup> Federal agencies such as the Federal Trade Commission are actively monitoring and sanctioning owners of Web sites that are false or misleading,<sup>[49]</sup> and developers and purchasers of online health resources are being urged to adopt standards for quality assurance.<sup>4</sup>

To allow users to evaluate the quality and appropriateness of Internet health resources, health-related Web sites should publicly disclose the following essential information about their site:<sup>4</sup> (1) the identity of the developers and sponsors of the site (and how to contact them) and information about any potential conflicts of interest or biases, (2) the explicit purpose of the site, including any commercial purposes and advertising, (3) the original sources of the content on the site, (4) how the privacy and confidentiality of any personal information collected from users is protected, (5) how the site is evaluated, (6) and how the content is updated. An additional mark of quality which should be present in a Web site relates to the site's accessibility by all users. Contents of the site should be presented in a way that it can be used by people with disabilities and with low-end technology.

**11-5. (Developmental) Increase the number of centers for excellence that seek to advance the research and practice of health communication.**

**Potential data sources:** Health Communication Interest Group, American Public Health Association; Society for Social Marketing; Association of Schools of Public Health; Health Communication Divisions, International Communication Association and National Communication Association; NCI.

To enlarge the knowledge base of health communication and incorporate it into health promotion practice, a research and training infrastructure is needed to develop, model, and coordinate activities. For this purpose, centers for excellence located in academic institutions, national organizations, or research centers would be instrumental to meet scientific and practical needs. The centers would be responsible for an array of activities, such as (1) promoting the adoption of health communication theories and practices in health care, disease prevention, and health promotion initiatives, (2) developing and disseminating quality standards, (3) coordinating initiatives to develop a consensus research agenda, (4) developing systems to identify and assess health communication research, (5) evaluating communication strategies, messages, materials, and resources, (6) fostering networking and collaboration among health communicators, health educators, and other health professionals, (7) promoting health communication skills training for health professionals, and (8) promoting research and dissemination activities among specific population groups.

These centers should provide expert staff, model curricula with core competencies in health communication and media technologies, appropriately equipped media labs, research seminars, continuing education and distance learning courses, and training and placement programs to expand the pool of health communication professionals and health professionals with communication skills. The centers also could create databases that would catalog items such as formative and outcomes research studies and reports and could partner with existing governmental dissemination networks to make data publicly available. Centers for excellence in health communication could be funded through Federal grants, foundations, or private sector health care organizations.

#### **11-6. (Developmental) Increase the proportion of persons who report that their health care providers have satisfactory communication skills.**

**Potential data sources:** National Committee for Quality Assurance; Behavioral Risk Factor Surveillance System (BRFSS), CDC, NCCDPHP; National Health Interview Survey (NHIS), CDC, NCHS; industry surveys (FIND/SVP, Nielsen, Jupiter Communications).

Good provider-patient communication contributes to quality care and improved health status. Patients' assessment of their providers' communication skills is important for individuals with a usual source of care as well as for those without, who may have less frequent contact with the medical care system. Studies indicate that patients find communicating with their health care providers difficult<sup>23, [50]</sup> and report that providers do not give them enough information, even though they highly value the information and want to know more.<sup>[51]</sup> Clear, candid, accurate, culturally and linguistically competent provider-patient communication is essential for the prevention, diagnosis, treatment, and management of health concerns.<sup>23, [52]</sup>

Effective communication underpins prevention and screening efforts at the clinical level, when providers have the opportunity to engage in one-on-one counseling and supply information that is culturally and linguistically appropriate and delivered at the person's health literacy level. Diagnoses and treatments

require doctors to negotiate a common understanding with patients about what is to be done. The quality of provider-patient communication can affect numerous outcomes, including patient adherence to recommendations and health status.<sup>[53]</sup> Appropriate information and communication with a provider not only can relieve patients' anxieties but also can help patients understand their choices, allow them to participate in informed decisionmaking, and better manage their own health concerns.

## Related Objectives From Other Focus Areas

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### 1. Access

- 1-3. Counseling about health behaviors
- 1-12. Single toll-free number for poison control centers

### 2. Arthritis, Osteoporosis, and Chronic Back Conditions

- 2-8. Arthritis education

### 3. Cancer

- 3-10. Provider counseling about cancer prevention

### 4. Chronic Kidney Disease

- 4-3. Counseling for chronic kidney failure care

### 5. Diabetes

- 5-1. Diabetes education

### 7. Educational and Community-Based Programs

- 7-2. School health education
- 7-3. Health-risk behavior information for college and university students
- 7-5. Worksite health promotion programs
- 7-7. Patient and family education
- 7-8. Satisfaction with patient education
- 7-9. Health care organization sponsorship of community health promotion activities
- 7-10. Community health promotion programs
- 7-11. Culturally appropriate and linguistically competent community health promotion programs

### 9. Family Planning

- 9-11. Pregnancy prevention education

### 10. Food Safety

- 10-5. Consumer food safety practices

### 12. Heart Disease and Stroke

- 12-2. Knowledge of symptoms of heart attack and importance of dialing 911
- 12-4. Bystander response to cardiac arrest
- 12-8. Knowledge of early warning symptoms of stroke

### 13. HIV

- 13-8. HIV counseling and education for persons in substance abuse treatment
- 13-9. HIV counseling and testing in State prisons
- 13-10. HIV counseling and testing in State prisons

### 16. Maternal, Infant, and Child Health

- 16-7. Childbirth classes
- 16-13. Infants put to sleep on their backs

### 17. Medical Product Safety

- 17-3. Provider review of medications taken by patients
- 17-4. Receipt of useful information about prescriptions from pharmacies

17-5. Receipt of oral counseling about medications from prescribers and dispensers

17-6. Blood donations

### **19. Nutrition and Overweight**

19-16. Worksite promotion of nutrition education and weight management

19-17. Nutrition counseling for medical conditions

### **23. Public Health Infrastructure**

23-2. Public access to information and surveillance data

### **24. Respiratory Diseases**

24-6. Patient education

### **25. Sexually Transmitted Diseases**

25-12. Responsible sexual behavior messages on television

### **26. Substance Abuse**

26-17. Perception of risk associated with substance abuse

### **27. Tobacco Use**

27-16. Tobacco advertising and promotion targeting adolescents and young adults

## Terminology

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(A listing of abbreviations and acronyms used in this publication appears in Appendix H.)

**Accuracy:** Content that is valid and without errors of fact, interpretation, or judgment.

**Advocacy:** Communication directed at policymakers and decisionmakers to promote policies, regulations, and programs to bring about change.

**Availability:** Content (whether a targeted message or other information) that is delivered or placed where the audience can access it. Placement varies according to audience, message complexity, and purpose—from interpersonal and social networks to billboards, mass transit signs, prime-time TV, and radio and from public kiosks (print or electronic) to the Internet.

**Balance:** Where appropriate, content that fairly and accurately presents the benefits and risks of potential actions or recognizes different and valid perspectives on an issue.

**Consistency:** Content that remains internally consistent over time and also is consistent with information from other sources.

**Consumer health informatics:** Interactive health communication (see below) focusing on consumers.

**Consumer health information:** Information designed to help individuals understand their health and make health-related decisions for themselves and their families.

**Cultural competence:** The design, implementation, and evaluation process that accounts for special issues of select population groups (ethnic and racial, linguistic) as well as differing educational levels and physical abilities.

**Decision support systems:** Computer software programs designed to assist diagnostic and treatment decisions.

Examples include drug alert notification systems, prompts to implement practice guidelines, and health risk appraisals.

**Evidence base:** Relevant scientific evidence that has undergone comprehensive review and rigorous analysis to formulate practice guidelines, performance measures, review criteria, and technology assessments<sup>22</sup> for telehealth applications.<sup>4, 24</sup>

**Formative research:** Assesses the nature of the problem, the needs of the target audience, and the implementation process to inform and improve program design. Formative research is conducted both prior to and during program development to adapt the program to audience needs. Common methods include literature reviews, reviews of existing programs, and surveys, interviews, and focus group discussions with members of the target audience.

**Health communication:** The art and technique of informing, influencing, and motivating individual, institutional, and public audiences about important health issues. The scope of health communication includes disease prevention, health promotion, health care policy, and the business of health care as well as enhancement of the quality of life and health of individuals within the community.<sup>[54]</sup>

**Health education:** Any planned combination of learning experiences designed to predispose, enable, and reinforce voluntary behavior conducive to health in individuals, groups, or communities.<sup>[55]</sup>

**Health literacy:** The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions.<sup>30</sup> (See also *Literacy*.)

**Health promotion:** Any planned combination of educational, political, regulatory, and organizational supports for actions and conditions of living conducive to the health of individuals, groups, or communities.

**Interactive health communication:** The interaction of an individual with an electronic device or communication technology to access or transmit health information or to receive guidance on a health-related issue.<sup>21</sup>

**Internet:** A worldwide interconnection of computer networks operated by government, commercial, and academic organizations and private citizens.

**Literacy:** The ability to read, write, and speak in English and to compute and solve problems at levels of proficiency necessary to function on the job and in society, to achieve one's goals, and develop one's knowledge and potential.<sup>[56]</sup>

**Medical informatics:** A field of study concerned with the broad range of issues in the management and use of biomedical information, including medical computing and the study of the nature of medical information itself.<sup>[57]</sup>

**Outcome evaluation** (sometimes called impact evaluation): Examines the results of a communication intervention, including changes in awareness, attitudes, beliefs, actions, professional practices, policies, costs, and institutional or social systems.



**Patient communication:** Information for individuals with health conditions to help them maximize recovery, maintain therapeutic regimens, and understand alternative approaches. Patient communication includes educational resources, provider-patient communication, and, increasingly, peer-to-peer communication.

**Process evaluation:** Monitors the administrative, organizational, or other operational characteristics of an intervention. Process evaluation includes monitoring the dissemination of communication products to intended users (whether gatekeepers or audiences) and audience members' exposure to a message. For an interactive health communication application, process evaluation may include testing how the application functions.

**Reach:** Information that gets to or is available to the largest possible number of people in the target population.

**Reliability:** Content that is credible in terms of its source and is kept up to date.

**Repetition:** Delivery of and access to content continued or repeated over time, both to reinforce the impact with a given audience and to reach new generations.

**Risk communication:** Engaging communities in discussions about environmental and other health risks and about approaches to deal with them. Risk communication also includes individual counseling about genetic risks and consequent choices.

**Social marketing:** The application of marketing principles and techniques to program development, implementation, and evaluation to promote healthy behaviors or reduce risky ones.<sup>[58], [59]</sup>

**Tailoring:** Creating messages and materials to reach one specific person based on characteristics unique to that person, related to the outcome of interest, and derived from an assessment of that individual.<sup>15</sup>

**Targeting:** Creating messages and materials intended to reach a specific segment of a population, usually based on one or more demographic or other characteristics shared by its members.<sup>15</sup>

**Telehealth:** The application of telecommunication and computer technologies to the broad spectrum of public health, medicine, and health.

**Telemedicine:** The use of electronic information and communication technologies to provide clinical care across distance.<sup>24</sup>

**Timeliness:** Content that is provided or available when the audience is most receptive to, or in need of, the specific information.

**Underserved:** Individuals or groups who lack access to health services or information relative to the national average. The underserved population may include residents of rural, remote, or inner-city areas; members of certain racial and ethnic groups; socioeconomically disadvantaged persons; or people with disabilities.

**Understandability:** Reading or language level and format (including multimedia) appropriate for a specific audience.

**World Wide Web (Web):** An international virtual network composed of Internet host computers that can be accessed by graphical browsers.

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