

## CHAPTER 5. PARTNERSHIPS FOR MEANINGFUL ACCESS

### INTRODUCTION

This chapter presents several case studies illustrating creative approaches to widening meaningful access to technology and resources in diverse and underserved communities. The examples vary in scope from local to national initiatives, encompassing both health-specific and more general purposes. The programs either already serve as channels for e-health tools or represent potential channels. These examples illustrate ways to address diverse user characteristics and meaningful access issues described in [Chapter 2](#). They also show the effective use of multiple forms of partnership and collaboration discussed in [Chapter 4](#). The strategies profiled here rely on not-for-profit ventures supported by governmental bodies and public interest organizations. Having proven effective in communities outside the digital and economic mainstream, these strategies can complement more standard market approaches. In some cases, they may help create the conditions for a return on investment in health information technology in underdeveloped markets.

The present study confirmed earlier findings that many public and private programs are providing computers and Internet access for segments of the U.S. population that otherwise might not have

them (HHS, 2003). However, one of many challenges for those working for equality of opportunity in this area is that although need and gaps can be documented, the data for tracking the progress in meeting the need are limited. This study found that few publicly supported or nonprofit programs have the resources to document the effect of technology access on the intended beneficiaries. Even less is known about user demand for particular content and applications—for example, what might be of greatest interest to diverse user groups in supporting personal health management. This is an important area for additional research and data collection.

The strategies for broadening reach and impact profiled here are:

- Using the existing community infrastructure to provide access and training in underserved communities through
  - Libraries
  - Community technology and community-based organizations
- Implementing a statewide strategy involving multiple partners
- Reaching out to target audiences
- Supporting research involving diverse audiences

## USING THE EXISTING COMMUNITY INFRASTRUCTURE TO PROVIDE ACCESS AND TRAINING IN UNDERSERVED COMMUNITIES

### Libraries

Public libraries are the backbone of the traditional information infrastructure. In the last decade or so, they have been refashioning themselves, with major foundation support, to serve as hubs of public computing, especially for people in underserved communities. Thanks to extensive research and documentation, library-based computer programs can inform public computing activities in other settings as well. Libraries are an important and familiar venue for public access computing, especially for people without Internet access at home. They are the third most common place for Internet access for children, after home and school, and the most common access point for low-income and African American children (Kaiser Family Foundation, 2004). Twenty-eight percent of children with disabilities go online from a library, compared to 17 percent of children without disabilities (Kaiser Family Foundation, 2004). Ten percent of all Internet users—14 million Americans—regularly use library computers, which are often the only form of access for low-income users (Bill and Melinda Gates Foundation, n.d.).

Until recently, the potential of libraries as public computing sites was largely unrealized. In 1996, only 28 percent provided public access computers; then, a combination of initiatives raised the proportion to 95 percent by 2003 (National

Commission on Libraries, cited in Bill and Melinda Gates Foundation, n.d.). In the same year, the “E-rate” (Schools and Libraries Universal Service Fund) created a \$2.25 billion annual fund for discounts on connection costs for schools and libraries. Starting in 1997, the Bill and Melinda Gates Foundation committed \$250 million to the U.S. Libraries Program, a new initiative to support public access computing in libraries and to provide librarians with technical assistance training—“the largest gift to U.S. public libraries since that of Andrew Carnegie” (Gordon, Gordon, Moore, et. al., 2003). The program is for libraries in areas with at least a 10-percent poverty rate. By the end of 2003, it had installed about 40,000 computers and trained librarians in about 10,000 communities, in every state and the District of Columbia. Because of these initiatives, few sectors compare to libraries in “going to scale” to bridge the digital divide. A Gates Foundation report states, “Today, if you can reach a public library, you can reach the Internet” (Bill and Melinda Gates Foundation, n.d.).

The Gates Foundation supported a 5-year independent evaluation by the Public Access Computing Center (PACC) of the University of Washington. The report, *Toward Equality of Access*, synthesizes the evaluation research and multiple other data sources in a rich overview of the history, status, and prospects for public computing in libraries (Bill and Melinda Gates Foundation, n.d.). These findings have significance beyond libraries. For example, one PACC study found that youth (who use an average of 4.2 locations for computer and Internet use) “often find themselves as educators when it comes to computer and Internet use”; 80 percent have experience

of this kind with adults (Public Access Computing Center, 2003). Study director Andrew Gordon also reports that library patrons use 31 percent of their Internet access to learn about a medical problem (Gordon et al., 2003).

The picture is not perfect, to be sure. Forty percent of libraries have no technical training for staff (Public Access Computing Center, 2004). Library computer users often encounter long lines and limited technical assistance; they may not live close to a library; and all libraries have limited hours. Although libraries have gone to great lengths to accommodate patrons who speak languages other than English, these users are still at a disadvantage because of the limited availability of content in their native languages.

Neither are the gains made to date assured, given local library funding cuts, threats to the E-rate, aging equipment, and the growing demand on limited library staffs. PACC research found that 22 percent of libraries report having difficulty sustaining their public access computing programs. It identified keeping libraries open, retaining Internet connectivity, and increasing library staff training as the three major challenges facing public libraries (Public Access Computing Center, 2004). The Gates Foundation has committed an additional \$17 million in challenge grants to help libraries sustain their public access computing programs over the long term. Public libraries join other sectors in having to focus on sustaining the gains made to date, even as they seek ways to expand the reach of their programs.

## ***Community Technology and Community-Based Organizations***

Nearly everyone comes to computers and Internet use armed with some form of training or technical assistance, formal or informal, often acquired in a supportive social environment. These factors are typically available to middle- and upper-class Americans through their jobs and educational opportunities. Community-based technology programs are designed for low-income adults and youth who either have no other means of access or prefer the supportive learning environment they find there.

Community technology centers are a major vehicle for the technology access programs of Federal agencies (particularly nonhealth agencies such as the U.S. Department of Education), community-based organizations, other nonprofit organizations, foundations, and the telecommunications industry. These programs take many forms and operate across a continuum of community-based and home-based use, with different organizations and programs working in different domains. The points of entry include low-cost housing, libraries, healthcare facilities, community organizations, and schools.

The typical community technology program offers a combination of open access to computers and structured curricula, classes, and technical assistance to help participants develop their technology skills. The majority of local sponsoring organizations has community

development missions and uses technology as a tool to help constituents advance their educations, employability, and job access.

Diversity of funding streams and sponsorship, fluctuations in organizational status, and other factors make it difficult if not impossible to estimate reliably the number of community technology programs in the United States. In general, this study found that the available data are spotty and based on either small programs or large surveys with low response rates.

A few somewhat impressionistic numbers, however, may give some sense of scale. In 2005, the national organization of community technology centers, CTCNet, had 1,200 paying organizational members, a small proportion of the total number of organizations. (A Chicago Web site lists 120 such centers in that city alone.) Extrapolating from her previous research on public computing in Toledo, researcher Kate Williams estimated between 88,000 and 144,000 public access computing sites in the United States, including Government, library, commercial, and nonprofit sites (Williams and Alkalimat, 2002).

Community technology centers are a subset of public access computing that CompuMentor estimates at 33,000 to 56,000 centers. A CompuMentor survey found that about 97 percent of these centers serve low-income populations, 85 percent serve communities of color, and 75 percent serve non-English speakers and people with limited English proficiency (Hoffman, 2003). Using the average of CompuMentor's estimate (44,500 centers), a rough but conservative "guesstimate" of

the number of people reached produces a total of 1,335,000 people.<sup>1</sup> If each of these individuals reaches two to three others in their "zone of influence" posited by Manhattan Research, it is reasonable to project that more than 3.3 million people a year use online resources at community technology centers.

Community technology experts and programs have broad experience in facilitating meaningful access and supplying multiple links to community life. They have created trusted service infrastructures, or use preexisting ones, and have demonstrated viable strategies for working with diverse social groups. They specialize in creating the congenial interpersonal context that diffusion of innovation theory says is important for the adoption of innovations (Rogers and Scott, 1997). Some participants become "infomediaries" for friends, relatives, and neighbors.

As an example of these synergies, One Economy Corporation created an innovative training program that prepares young people age 14 to 19 to serve as "Digital Connectors" in their communities. Through this program, to date, 500 youth have delivered more than 10,000 hours of service to approximately 3,000 families across 11 cities (S. Brachle, personal communication, January 2006). The Learning Centers of SeniorNet ([www.seniornet.org](http://www.seniornet.org)), which serve another underserved and underconnected group, use a peer training model for adults age 50

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<sup>1</sup> "Guesstimate" based on 44,500 centers with 100 users per center per year, 30 percent of whom seek health information.

and older. Learning Centers around the United States are managed primarily by senior volunteers, with classes taught and coached by volunteer instructors.

Community technology is included as an example of a dissemination strategy because those working in this field target and have expertise in working with the low-income communities that are at greatest risk of poor health and health care and most disconnected from services. These programs are important for public health because they represent an access point through which digital health resources can be extended to the communities likely to experience health disparities. Community technology programs have demonstrated success promoting personal and community economic development, and they can connect the same participants to personal health management resources. At a minimum, their content and dissemination models, research, and conceptual work can inform the development of e-health tools for these groups; at best, they themselves can serve as partners in e-health dissemination strategies.<sup>2</sup> In addition, these programs model participatory approaches and principles from which others interested in involving consumers can learn a great deal.

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<sup>2</sup> Study informants identified young people, mothers, and possibly seniors as priority target audiences. Regarding priority e-health tool content and purposes, they recommend consumer information and health education, disease management, online support groups, translations of medication instructions, and, above all, help in connecting to health services and health insurance (Conference Call on e-Health and Community Technology Access, May 18, 2004; see [Appendix 2](#)).

Although not an emphasis in most cases, health applications are among the uses of community technology resources, and they are recognized as a valuable way for participants to improve their quality of life. Extrapolating from data on the general population, 30 to 50 percent of community technology users will use some of their Internet time for health purposes (Bill and Melinda Gates Foundation, n.d.; USC Annenberg School Center for the Digital Future, 2004).

In general, the present study found that the public health and community technology fields seem to be at complementary stages with respect to potential partnerships. Having laid the groundwork in community capacities, the community technology network is expressing interest in broader uses of technology to improve their constituents' lives. Public health programs are searching for new and better ways to reach underserved populations with health promotion and disease prevention tools. Community technology programs have been honing the approaches public health programs need to bridge gaps caused not only by lack of technology but also by economic, cultural, and political factors. For example, community technology consultant Dr. Randal Pinkett of Building Community Technology Partners reports that after the constituents in his Roxbury, Massachusetts, project developed basic computer and Internet skills, they expressed an interest in the health uses of the technology for the second phase of the project (Pinkett, 2002).

Further research is needed to create a comprehensive, reliable national picture of community-based access in relation

to other forms of access, provide baseline data on the important issue of broadband deployment, and determine what is needed to strengthen community capacities to support personal health management. However, informants in this field express the view that there are enough pockets of information to start developing strategies for expanding e-health tool access in underserved communities (Conference Call on e-Health and Community Technology Access, May 18, 2004; see [Appendix 2](#)). Given the appropriate tools and capacity-building, community technology programs that embrace health applications as a priority service might play a crucial role in widening the access of underserved audiences to useful tools for enhancing their health.

## IMPLEMENTING A STATEWIDE STRATEGY INVOLVING MULTIPLE PARTNERS

Many states have notable programs to broaden technology access to improve citizens' lives. Through One Economy's Bring IT Home public policy campaign, for example, 38 states have amended their housing finance policies to provide incentives or mandates to developers that support the penetration of broadband in affordable housing.<sup>3</sup> The California experience models a statewide community technology strategy with several components. The strategic partners and participants come from national and state-

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<sup>3</sup> For example, Kentucky law requires that low- and moderate-income housing projects provide home access in order to receive state funding (Henry J. Kaiser Family Foundation, 2004).

based business, academic, philanthropic, public interest, and advocacy organizations, with the state's large and diverse population groups playing a strong role.

At the center is Computers in Our Future (CIOF, [www.CIOF.org](http://www.CIOF.org)), a seminal program that helped create a scaffolding, if not an infrastructure, for technology access programs across the state. It was conceived and funded by the California Wellness Foundation to demonstrate the impact of increased technology access on education and employment opportunities for young people in low-income communities. The Wellness Foundation reasoned that education, employment, and economic development are preconditions of health and thus an appropriate investment for a foundation with a wellness mission. In 1997, the Foundation awarded 4-year grants totaling \$7.5 million to rural and urban community-based organizations around the state for the establishment of 11 community technology centers.

CIOF is somewhat unusual, and exemplary, among community-based organizations in the thoroughness of its data on the project. By the end of the grant period, the centers had trained 22,500 people in computer use, half of them young people (Fowells and Lazarus, 2001). They successfully reached priority audiences: roughly 80 percent of users are members of racial and ethnic minority groups. The project also produced a set of workable models for introducing technology and its uses to disadvantaged communities. The models involved open access to technology, training and skill building, linkages to employment resources, community resource functions,

and a means of expression for community technology advocacy. Although access to health information was not emphasized, many centers provided it.

Nine of the 11 community technology centers established by CIOF still exist. They share the landscape with other community technology endeavors, some of which started around the same time as CIOF and others of which resulted from it. Money from telecommunications companies is a common funding source for such programs, often mandated as a condition of mergers or other regulatory actions.

In California, an important grantmaking institution is the Community Technology Foundation of California (CTFC), which was created in 1998 by 134 community organizations and Pacific Bell (now part of SBC Communications). CTFC focuses on collaborative efforts “in California’s low-income, minority, limited-English-speaking, seniors, immigrant, and disability communities” ([www.ZeroDivide.org](http://www.ZeroDivide.org)). It funds access programs for a number of target populations—for example, the San Francisco-based Latino Issues Forum ([www.lif.org](http://www.lif.org)), which has programs on health, technology access, civic participation, and sustainable development.

The Community Technology Policy Council, another CTFC grantee, produced a detailed report on access among Asian Americans and Pacific Islanders, its constituency—another well-documented “pocket of information” about community access and use (Community Technology Policy Council, 2004). CTFC also sponsors

the Access Fund, which partners with the national Alliance for Technology Access to help organizations eliminate barriers faced by people with disabilities through program assessment, consulting services, technical assistance, and grants.

One focus in California, as elsewhere, is on sustaining the gains made in recent years. Linda Fowells of Community Partners, a Los Angeles-based nonprofit organization active in this area, regards advocacy activities as critically important. She says, “Policy work is the cutting edge of community technology today because that’s what will assure sustainability” (L. Fowells, personal communication, March 2004).

Virtually all of the aforementioned state groups are part of the California Community Technology Policy Group, which leverages policy information, training, grassroots advocacy, and lobbying to push for favorable state legislation and regulation. Such efforts have been markedly successful over the last decade. For example, California was the first state to have a set-aside fund for broad digital divide projects. The California Teleconnect Fund, which predates and is broader than the Federal E-rate, makes Internet connection available at half the market rate to schools, libraries, community-based organizations, and healthcare organizations.

In the health sector, the Northern Sierra Rural Health Network demonstrates innovative uses of technology and public policy to promote personal health management in a rural area. Headquartered in Nevada City and funded by the U.S. Department of Agriculture’s

Universal Service Fund, it coordinates a telemedicine network that it helped develop in its region. Working with two Stanford University clinician/researchers, the Network piloted a support group for women with breast cancer in two isolated communities, using videoconferencing facilities available in the local medical centers. The group is modeled on Internet support groups, which are not an option in that region because of the lack of high-speed Internet connection.

## REACHING OUT TO TARGET AUDIENCES

This section profiles three outreach programs—two sponsored by Federal agencies and one sponsored by a national nonprofit organization—that combine targeted resources, participatory models, and alliances with community-based organizations.

The National Library of Medicine (NLM) is charged with managing and disseminating scientific health information. It manages scores of Web sites for health professionals and, increasingly, consumers and collaborates with a network of regional libraries. A decision by NLM to join more forcefully in the effort to eliminate health disparities has led in recent years to a significant expansion in its approach to disseminating health information for underserved groups.

NLM intensified its outreach to American Indians in 1997 in an initiative called the Tribal Connections Project. The project, whose ultimate aim is to help underserved Indian communities connect with broad-

based health information, has much in common with the community technology programs described above.

Specialized content development is part of the story. NLM sponsors three Web sites for American Indians and Alaska Natives. [TribalConnections.org](http://TribalConnections.org), which initially focused on serving the indigenous people of the Pacific Northwest and Alaska, began as a portal to health information sites of interest to healthcare providers and consumers. Recently, it has evolved into also providing its own content, using Native American writers to pen health-related articles that combine Western and Native approaches to healing and healthy living. [TribalConnections.org](http://TribalConnections.org) also disseminates the articles to Native American publications across the United States.

Having set the goal of expanding its services to Native Americans, an underserved community, NLM invested significant resources in a broad, multifaceted program. The program included assessing local needs and building awareness of the Internet, forging new partnerships with and between the participating American Indian reservations and Alaska Native villages and other organizations, improving the information technology infrastructure and Internet connectivity at 15 of 16 sites, and conducting training sessions with several hundred tribal participants across 13 sites.

The organizers report that “the project demonstrated the key role of tribal community involvement and empowerment and contributed to development of an outreach evaluation field manual and the evolving concept of community-based



outreach” (Wood, Sahali, Press, et al., 2003). Project director Fred Wood adds that NLM learned from its tribal work that “the old ways of disseminating health information do not work for reaching underserved population groups. What is needed is a robust multidimensional approach to outreach” (F. Wood, personal communication, October 7, 2004).

NLM is now using community-based outreach strategies in many communities throughout the country, as reflected in its *National Library of Medicine Strategic Plan for Addressing Health Disparities 2004-2008* ([www.nlm.nih.gov/pubs/plan/nlm\\_health\\_disp\\_2004\\_2008.html](http://www.nlm.nih.gov/pubs/plan/nlm_health_disp_2004_2008.html)). NLM convened stakeholders in a December 2004 symposium to review the plan for community-based health information outreach (<http://medstat.med.utah.edu/symposium/>).

One Economy Corporation ([www.one-economy.com](http://www.one-economy.com)), a national nonprofit organization based in Washington, DC, uses targeted content as part of a broader strategy to promote meaningful technology access. It identifies the 12 million people living in Government-supported affordable housing and the 5 million living in non-Government-supported affordable housing, as its primary and secondary markets, respectively. The organization makes the “equity case” for widening access and promotes a strong governmental role. For example, it leads a national advocacy effort, Bring IT (Information Technology) Home, aimed at state policy. (Some of its accomplishments are described above.) In addition, One Economy makes the economic case for widening access, pointing out that the 27 million people in

affordable housing represent \$250 billion in purchasing power. In its words, it seeks to demonstrate “how technology can enhance the interaction between affordable housing residents, nonprofit organizations, local government, and the private sector” (One Economy Corporation, 2004).

One Economy particularly stresses the need of low-income users for local information, noting that “online content has been primarily designed for Internet users who have discretionary money to spend, that is, a highly educated audience that reads at average or advanced literacy levels” (One Economy Corporation, 2004, p. 26). In 2001, One Economy launched the Beehive ([www.thebeehive.org](http://www.thebeehive.org)), a bilingual Web site providing localized “self-help content,” including considerable health information, “in languages and at a literacy level that speak to low-income people” (One Economy Corporation, 2004, p. 27). Its literature describes the Beehive as “going significantly beyond the issue of access to technology and addressing the content and culture change it will take to achieve economic outcomes.”

To date, localized Beehive sites have been developed for 26 cities and 1 state (Kentucky). Nationally, the Beehive serves more than 300,000 users every month. One Economy stresses home-based, rather than community-based, technology access because of the greater convenience and privacy of operating from home. In what might be called the apotheosis of its approach, 200 new units of affordable housing in the South Bronx were outfitted with a centralized Internet connection and household wireless access capabilities in

2004. The cost of Internet access is built into the rent for these units, and targeted content is available from the Beehive.

Targeted content development also proved essential in serving the inner-city populations of a National Cancer Institute (NCI) program in New York City. The Digital Divide Program (DDP) was NCI's first effort explicitly aimed at finding ways to get digital cancer information to people on the other side of this divide. NCI was motivated by the knowledge that ethnic minority, low-income, and less educated populations bear a disproportionate cancer burden and have limited access to electronic health information.

The purpose of DDP research was to find out more about various groups' interest in and use of cancer information tools to inform future program design. In September 2000, NCI awarded roughly \$1 million (total) to four programs, all joint efforts between the Cancer Information Service (CIS) and regional organizations, to test strategies to increase cancer communications in underserved communities. Collectively, the four DDPs addressed all components of meaningful access: appropriate content, equipment provision, Internet access, and skill development and support. Former NCI Program Director Gary Kreps writes that the programs modeled "provocative new community strategies for providing underserved groups of people with access to relevant computer-based information about cancer" (Kreps, 2002).

In New York City, the DDP of the Memorial Sloan-Kettering Cancer Center CIS collaborated with the Verizon Education

and Technology Center in Harlem and other community organizations to train program participants. Among other benefits, this helped to raise awareness of the location of public computing access points. Perhaps the most significant feature of the Sloan-Kettering project was its development of an innovative information resource for constituents that combines health information content and practical assistance in the use of online resources.

Concluding that the voluminous cancer information available on the national CIS site was too complex and overwhelming for its target audience, project managers developed a special user-friendly, bilingual Web site for their program. [CancerInfoNet.org](http://CancerInfoNet.org) presents information about cancer in an organized and easy-to-read format and provides links to a few selected Government-approved sites for each type of cancer. It also offers Web-based instruction and practice opportunities for using the Internet, along with tips for evaluating Web content. Fourteen other CIS programs around the country are now using [CancerInfoNet.org](http://CancerInfoNet.org).

## **SUPPORTING RESEARCH AND DEVELOPMENT INVOLVING DIVERSE AUDIENCES**

The Federal and foundation programs described in this section support the translation of research findings into evidence-based e-health tools for consumers, patients, caregivers, and, in some cases, healthcare providers. They are included here because of their emphasis on developing techniques for reaching diverse and underserved audiences.

Among Federal agencies, NCI has played a leading role in furthering health communication in general and e-health tools in particular. In one of its several consumer-oriented initiatives, NCI uses Small Business Innovation Research (SBIR) grants to help develop evidence-based, commercially viable e-health applications for diverse and underserved audiences.<sup>4</sup> The Institute has invested heavily in translating cancer research findings into products that use media technology to reduce cancer risks, provide treatment options, and address the needs of cancer survivors. The SBIR program has a number of notable characteristics, not the least of which is that it is one of the largest programs funding the development and dissemination of evidence-based e-health tools. It uses the rigorous National Institutes of Health (NIH) scientific review process, with peer review panels composed of academic experts and small business owners with experience in public health, communications, or media technology.

SBIR funds eight categories of research, seven of which are for consumers, patients, or caregivers. Among other things, the research projects facilitate changing behaviors associated with cancer risk; support family and individual decisionmaking related to cancer genetics; develop communication techniques for

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<sup>4</sup> The small business grants program, established in 1982, combines two funding mechanisms—Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR)—both of which are designed to involve small businesses in stimulating technological innovation. Eleven Federal agencies and several NIH Institutes use the mechanism. See <http://grants.nih.gov/grants/funding/sbir.htm> for information on NIH's small business program.

diverse populations; provide interactive programs to help with survivorship and quality-of-life issues; and develop public access systems for cancer education, information, prevention, screening, and assessment.

NCI's SBIR program places strong emphasis on serving high-risk and diverse populations. A number of the tools it has funded use community-based sites to enable access for individuals without home computers—for example, a public access multimedia kiosk with bilingual information on breast cancer for Spanish-speaking women. Grant guidelines stipulate a developmental process that includes end-user participation (through focus groups) in product feasibility testing, design, and evaluation. The guidelines also require two rounds of usability testing, one independently conducted and one using NCI's Usability Lab, with the costs covered by the grant. To date, approximately 75 e-health tools have been developed, tested for usability, and evaluated as to efficacy through NCI's SBIR program and either are now or soon will be in the commercialization stage.

Although decidedly closer to “bedside” than to “bench” from the outset, the SBIR program still has limitations related to sustainability, dissemination, and monitoring effectiveness over the long term. As a partial effort to address this limitation, grantees since 2003 have been required to devise a means of tracking sales and purchaser demographics. A closely related program, the NCI Centers for Excellence in Cancer Communications research initiative, is another major Federal investment in the role of communications

in narrowing the gap between discovery and application and in reducing health disparities.

The Robert Wood Johnson Foundation (RWJF) and NCI cosponsored a research dialogue on online behavior change and disease management in August 2001 (National Cancer Institute and Robert Wood Johnson Foundation, 2001). The principles articulated by meeting participants are the standard ones put forward for communicating with diverse audiences, including tailoring content and assuring usability and appropriate technology access. Participants recommended that forthcoming research identify the salient characteristics—such as culture, literacy, trust of e-health information, and Internet use—that influence interactive health communication for different population groups. These are the same research issues highlighted in the Institute of Medicine report, *Speaking of Health*, which stresses the need for research to determine, first, whether “paying attention to heterogeneity matters,” and second, if it does, which health communication interventions are most effective (IOM, 2002).

These principles helped shape RWJF’s Health e-Technologies Initiative ([www.hetinitiative.org/](http://www.hetinitiative.org/)), which began in 2003. The Foundation committed \$10.3 million to support research to advance the discovery of scientific knowledge regarding the effectiveness of interactive applications for health behavior change and chronic disease management. The first round of awards, funded through a 2002 call for proposals, included 8 Outcome Evaluation Awards that evaluate

specific consumer e-health tools and 10 Methodology and Design Awards, 4 of which relate to consumer e-health tools. The second round of grants, through a 2004 call for proposals, funded eight additional awards of up to \$400,000 to study consumer-facing Web portals. One goal of Health e-Technologies is finding out “whether or not these applications improve processes and outcomes of care for culturally diverse groups of patients/consumers.”

## SUMMARY

This chapter describes cases and identifies new constituencies for the use of technology and e-health tools in diverse and underserved communities. The strategies involved are:

- Using the existing community infrastructure to provide training and open access in underserved communities through
  - Libraries
  - Community technology and community-based organizations
- Implementing a statewide strategy involving multiple partners
- Reaching out to target audiences
- Supporting research and development involving diverse audiences

These projects illustrate, to varying degrees, principles and attributes that will be important in future initiatives to widen reach and impact. First, all employ comprehensive approaches to achieving meaningful access. Second, they

involve a wide number of partners and stakeholders, as demonstrated particularly well in the California example. Third, they use participatory approaches that engage consumers not just as targets and recipients but also as designers of content and services. They are not just *for* but also *by* and *with* diverse communities. The community technology and NLM examples are the most explicit about this

approach. Fourth, they offer sustained, continuous services at the community level. Library programs exemplify this attribute, although, as noted, their longevity is not assured. Finally, all these projects leverage significant resource commitments from a range of sponsors, including Federal agencies, industry, and foundations, in each case serving as important vehicles for their sponsors' missions and program objectives.