Effective Education to Target Populations

This document is an excerpt from the National Eye Health Education Program Five-Year Agenda

EFFECTIVE EDUCATION TO TARGET POPULATIONS

I. Executive Summary

This section describes and presents information gathered on the delivery of outreach programs to target populations relevant to NEHEP. The five populations are as follows: 1) older adults, 2) people with diabetes, 3) Hispanics/Latinos, 4) African Americans, and 5) American Indians and Alaska Natives. These populations have been the subject of NEI-funded focus groups and other types of in-house research over the past few years. This research was conducted to gain a better understanding of the most effective ways to deliver eye health messages and the most appropriate settings for these messages to reach target populations. In addition to the in-house research, a literature review was conducted to learn more about the cultural and communication issues that face these populations and the most current accepted and proven practices that have worked in the delivery of health education and promotion messages.

Health Literacy

Health literacy is a fundamental concept that has a significant impact on health outcomes. It is defined as the capacity to obtain, process, and understand basic health information and health services needed to make appropriate health decisions. The impact of low health literacy on health care is a concern that spans all racial/ethnic groups, but it is of particular importance in populations where generally low literacy levels are more prevalent. Poor health literacy is common among racial and ethnic minorities, older adults, and patients with chronic conditions.[1] Health literacy has been identified as a significant barrier to the receipt of health care services and is increasingly recognized as a problem that impacts health care quality and costs. To effectively reach their target audiences, outreach programs and materials for all populations must take health literacy into account.

Older Adults

Outreach programs and materials targeting older adults should be culturally sensitive to the unique issues that older adults face, such as worries about the loss of independence, unwillingness to seek medical attention, and fears of the medical system. There is a pervasive fear of blindness among older adults and limited knowledge about age-related vision loss. Lay knowledge and the subjective assessment of risk have been identified as important motivators for influencing older people's health care decisions. Referrals for eye health care from physicians or health care professionals are critical because many older adults are not aware of eye exam guidelines. The involvement of family members in disseminating health information and making medical decisions is important for older adults. Intergenerational programs that allow the participation of family members can help to provide support and address the issue of transportation that can be a significant barrier to the receipt of preventive services and health

care. Educating community members and establishing relationships with community leaders have been found to be effective in this population.

The eye care professional's office is the most logical and efficient place to distribute information about low vision. However, many older adults are not already part of the eye health care system. Other channels of communication to reach this population include health care settings, pharmacies, the clergy, nonprofit vision organizations, AARP, senior centers, television, and state governments. Focus group research revealed that older adults with low vision prefer messages in the form of large-print brochures, videos, a toll-free number, and transit advertising. They also expressed the need for a script that they could use in the doctor's office with specific questions they should ask regarding low vision symptoms and eye health care.

Although the Internet is increasingly being used to gain knowledge about health-related topics, many older adults are not computer literate and often feel they have "missed the computer age." However, with the aging of the baby boomer generation, the Internet should not be dismissed as an effective tool to reach older persons, and it will become increasingly important as a source of health information. In fact, the number of adults over the age of 65 who use the Internet nearly doubled between 2000 and 2004 to 22 percent. In addition, 58 percent of Americans aged 50 to 64 currently use the Internet.[2] Internet materials developed for older adults should be designed to address health literacy levels, cognitive abilities, and vision problems that may affect this population.

People With Diabetes

Diabetes has become an epidemic in the United States, and projections for new cases in the coming years are alarming. In 2005, 20.8 million people were estimated to have diabetes, representing 7 percent of the U.S. population.[3] Health care professionals provide direct access to people with diabetes who are in the medical care system and can serve as the most credible source for eye health information and referrals. Outreach strategies should focus not only on educating people with diabetes, but also the health care professionals who are in contact with them. Primary care physicians can play a vital role in preserving vision in their patients by encouraging appropriate disease management and by ensuring patients undergo periodic evaluations by eye care professionals to receive needed eye care. Pharmacists offer an access point for insulin-taking diabetic patients, who are at higher risk for diabetic eye disease. Partnerships with diabetes-related health care providers are essential for successful outreach efforts.

Frequent communication is essential to assist patients with diabetes in managing their disease and to ensure that they are aware of and receive necessary eye care. To sustain the positive effects of short-term diabetes interventions, patients require ongoing support over the long term. Clinical staff involvement can benefit patients by helping them gain a better understanding of diabetes management, and of theoretical principles underlying patient empowerment. Providing educational materials that take health knowledge, literacy level, and health into account can improve patients' ability to manage their disease.[4]

Community-based diabetes support and education groups can help to establish trusting, caring relationships over time and bridge communication gaps between patients and providers.

Elements considered essential to the success of community education programs are provider partnerships, community classes, health workers who provide outreach and support, and a connection between education and clinical care. Examples of community outlets for information about diabetic eye disease include community health centers, health maintenance organizations, hospital outpatient clinics and emergency rooms, churches, supermarkets, and eye care chains.

Hispanic/Latino Populations

The Hispanic/Latino population includes Mexicans, Cubans, Puerto Ricans, Central Americans, and others of Hispanic origin. For this population, cultural factors are extremely important and strongly influence the quality of health care they receive. When compared with non-Hispanic/Latino individuals, Hispanics/Latinos usually express more caution about the degree to which they should trust others and about how helpful people are. This concept of mistrust or distrust is sometimes extended to the relationship this population has with their doctors or other health care professionals. Hispanics/Latinos may experience language discrimination and immigrants and non-native English speakers may need a medical translator. Spirituality and religious beliefs strongly influence health care decisions and the role of family in medical decision making is seen as necessary among Hispanics/Latinos.

Broadcast and print media are effective channels of communication for Hispanic/Latino populations. Television was the most frequently cited source of news and information by participants of a national survey. Radio, video, and audio news releases; information commercials; printed public service announcements (PSAs); Spanish-language or bilingual brochures; and special exhibits are also effective. Valuable communication channels include Hispanic/Latino health care professionals or others who work in Hispanic/Latino communities, pharmacists, public and nonprofit health care facilities that serve Hispanics/Latinos, and clinic and health center educators and volunteers who serve this community.

Focus group research identified a strong need for a general eye health awareness message for Hispanics/Latinos. Participants indicated that simple, straightforward messages are the most productive and informative. They expressed a strong interest in eye health and eye exam information, regardless of whether they had already developed any type of eye disease.

Community-based outreach is highly effective for Hispanics/Latinos. The use of "promatoras" (lay health educators) is an outreach model that has been internationally recognized for effectively disseminating information to Hispanic/Latino communities. The success of this model is attributed to the use of Spanish-speaking lay people and community leaders who provide culturally and linguistically appropriate information. Health fairs and community events provide other means for direct access to the Hispanic/Latino population and are effective ways to deliver health information. Collaboration with community leaders and the media are important for successful community-based outreach.

African American Populations

The African American population is genetically, culturally, and socioeconomically diverse. Education programs must address these differences and subcultures to be effective. African Americans tend to have large extended families and strong family ties. The role of family in

medical decision making is important. Spirituality and faith are integral to the culture and should not be overlooked in the development of outreach programs and materials. The incorporation of spiritual concepts, faith components, and non-traditional learning tools are effective ways to reach this population.

The setting in which information is communicated to African American patients is an important factor to consider in outreach efforts. Patient-centered, experiential approaches are more effective than lecture-based teaching. African Americans may experience more support and learn better in community-based settings, such as within family and religious groups, rather than in clinical situations. Community-based education is effective in making initial contact with this population. Peer educators and trained health education workers can be instrumental in building trust within the community.

Mass media channels (e.g., television, radio, print) are also effective in reaching the African American population. Using several channels of communication will provide repetition of the messages, an important factor in increasing awareness and knowledge. Organizations within the community can offer direct access to the target audience, reinforce and expand upon media messages, and provide referral to services. Together with the media, community channels can form a strong support network.

American Indians and Alaska Natives

American Indian and Alaska Native populations are diverse with varying cultural values and should not be considered as one homogenous population. The cultural values and traditional practices of both American Indians and Alaska Natives present important considerations for education efforts. Education programs must be conducted in a way that respects the authority, autonomy, and identity of each tribal community. Storytelling is a key approach to educating this population. Visual presentations are preferable to brochures. Interactive videos have been used successfully for educational outreach efforts.

Written messages should be presented in a believable, personal, and non-threatening way and validated by credible American Indian and Alaska Native sources and by scientific information. Materials should be written in adaptable formats and aimed at American Indians and Alaska Natives with various levels of education and literacy skills. Use of pictures and graphics is recommended, as they enhance the written message.

Stakeholder interviews with members of American Indian and Alaska Native associations and organizations that provide vision-related programs and/or services to their members revealed that the most effective approach used to communicate health information to this community was one-on-one personal contact. Stakeholders use a variety of methods to disseminate information to American Indians and Alaska Natives, including radio spots, posters, articles in tribal newsletters, mass mailings, Websites, health educators, and community health fairs.

Other effective communication channels for American Indians and Alaska Natives include television, senior centers, schools, existing diabetes education programs, health care providers, hospitals, community health representatives, and tribal networks of social services and health

care. The involvement of the tribal community and tribal leaders is essential for successful education efforts.

II. Health Literacy

Health literacy is the degree to which individuals have the capacity to obtain, process, and understand basic health information and health services needed to make appropriate health decisions. The 1992 National Adult Literacy Survey findings indicate that approximately 90 million adults may lack the needed literacy skills to effectively use the U.S. health system.[5] Low health literacy predominantly affects the most vulnerable populations, but it continues to grow as a problem for all Americans. In recent years, the Institute of Medicine and the Agency for Healthcare Quality and Research published reports linking low health literacy with negative patient outcomes.[6] The problem of low health literacy is also increasingly recognized as a problem that influences health care quality and costs.[7]

Health literacy has an effect on a person's ability to make sound health decisions about his or her health care, and it has a significant impact on the effectiveness of education efforts. Patients with limited health literacy are more likely not to use preventive health services such as vaccinations and mammograms, and more likely to improperly read medication dosing instructions and referral paperwork.[8] In a series of focus groups and interviews with patients who have inadequate or marginal health literacy, the patients reported experiencing problems with navigation, completing forms, following medication instructions, participating in provider-patient interactions, reading appointment slips, and using coping strategies.[9] A study among African American adults suggests that patients who have marginal or inadequate functional health literacy will have difficulty reading, understanding, and interpreting most written health texts and instructions.[10] In Hispanic/Latino populations, these health literacy problems can be further complicated for those with limited English proficiency.

Studies attest that health literacy is also a marked problem among older adults. One study found that there was considerably higher prevalence of inadequate and marginal health literacy among people aged 85 and older.[11] A second study found this higher prevalence exists even in an affluent geriatric retirement community.[12] Failing eyesight, reduced memory, and hearing loss have been found to be variables that adversely affect reading ability and impact health outcomes.[13] These findings are particularly troubling given that eye disease and low vision noticeably increase with older age and that the average life span for Americans is increasing over time. The higher prevalence of poorer reading and comprehension with aging heightens the need to develop additional or different communications strategies that can address health literacy across diverse groups, but with particular attention to those over the age of 65.

Low health literacy often affects those with compromised health status. In fact, inadequate health literacy has been found to be independently associated with worse glycemic control and higher rates of retinopathy among primary care patients with type 2 diabetes, and it may contribute to the disproportionate burden of diabetes-related problems among disadvantaged populations.

III. Cultural Considerations

The most effective public health education programs are those that address or overcome issues specific to the intended target population. One substantial issue is culture. Medical care quality is affected by cultural factors such as value systems, customs, patient-identified ethnicity, nationality, and stereotypes.[14] Cultural competence involves learning skills that allow a caregiver to "effectively and efficiently explore the aspects of a patient's culture that might impact the clinical encounter."[15]

Older Adults

Cultural issues resulting from the aging process are significant factors affecting the delivery of health care to the aging population. Older people may unwittingly assume the stereotypes of old age. Expectations regarding health diminish with age, sometimes realistically, but often not. Older people with treatable symptoms tend to dismiss their problems as an inevitable part of aging. As a result, they may not seek medical care and may suffer needless discomfort and disability. They may not even seek treatment for serious conditions including vision loss and visual impairment. A recent study documents that a significant number of older patients had not seen an optometrist in more than 3 years and only 16 percent of patients with treatable visual impairments were under ophthalmic care.[16]

The process of aging may be troubling for older adults who once bounced back quickly from an illness or who were generally healthy. Patients may be afraid that their complaints will be dismissed as trivial or that if they complain too much about minor issues, they will not be taken seriously later on. Some older patients do not mention symptoms because they are afraid of the diagnosis or treatment. They may worry that the physician will recommend surgery, suggest costly diagnostic tests or medications, or tell them to stop driving. There is a pervasive fear of blindness among older adults and limited knowledge about age-related vision loss.[17]

Aging baby boomers bring different expectations, experiences, and preferences to aging than did previous generations. Their needs vary from their parents' generation. People between the ages of 50 and 64, for example, are more likely than are those over the age of 65 to want to participate actively in health care treatments and decisions, use complementary or alternative medicine, and search the Internet for health information.

Hispanic/Latino Populations

In a study that employed focus groups, Hispanics/Latinos identified several cultural factors that affect the quality of the medical care they receive. Patients' perceptions of the quality of medical encounters are influenced by physicians' acceptance of holistic, mind-body prevention techniques (such as yoga and meditation). Some younger Hispanics/Latinos stated that they have been taught to seek God's help for minor health problems and seek out a physician only for serious medical concerns.[14]

The concepts of "fatalismo" (fatalism) and "resignación" (acceptance) are part of the culture, as well as religious beliefs.[18] Some Hispanics/Latinos think that diabetes is hereditary and determined by God. Therefore, they believe that the disease must be accepted and endured as a

possible "castigo divino" (punishment) for personal sin or sins of family members. Hispanics/Latinos with these beliefs are likely to be reluctant to seek health care for diabetic complications. These concepts and attitudes result in lack of trust and hope in treatments or preventive measures such as eye examinations to prevent blindness from diabetic eye disease.

When compared with non-Hispanic/Latino individuals, Hispanics/Latinos usually express more caution about the degree to which they should trust others and about how helpful people are. A study on attitudes revealed that 94.1 percent of the Puerto Ricans, 86 percent of the Cuban Americans, and 84.1 percent of the Mexican Americans interviewed, compared with 63 percent of the non-Hispanic/Latino Whites, felt that they must be very cautious with most people. Compared with 37 percent of the non-Hispanic/Latino Whites, only 5.9 percent of Puerto Ricans, 14 percent of Cuban Americans, and 15.9 percent of Mexican Americans felt that they could trust most people.[19]

Many times, this concept of mistrust or distrust is extended to the relationship that Hispanics/Latinos have with their doctors or other health care professionals. The concept of "personalismo" (personal touch) in the doctor-patient relationship is crucial. Hispanics/Latinos need to share with their doctors and feel that the doctors care and listen before they can trust them. On many occasions, Hispanics/Latinos view non-Hispanic/Latino doctors as too impersonal and distant. They feel they do not really care about them and may refuse to go back to them. This situation also affects compliance. When Hispanics/Latinos distrust a doctor, they are less likely to comply with the recommended treatments or medications.

Some Hispanics/Latinos feel that they are victims of discrimination. Many of them, particularly the older adults, feel unwanted. Many times, health care workers, knowingly or not, fail to demonstrate an interest in helping them. This violates their central cultural value of "respecto" (respect), and to keep their "dignidad" (dignity), they respond by not returning to the health care professional. The concept of "orgullo" (pride) is also very strong among the older adults, who often refuse to accept government help for health care because they perceive a welfare stigma attached to it. In a national survey, most Hispanics/Latinos responded that they had not felt direct discrimination against them. However, when asked about the level of discrimination experienced by Hispanic/Latino subgroups, most respondents felt that, as groups, Mexican Americans, Puerto Ricans, and Cuban Americans experience "a lot" of discrimination. Mexican Americans felt the highest level of discrimination (38.8 percent), followed by Puerto Ricans (30 percent). The percentage of Cuban Americans who perceived discrimination was only 17.8 percent.[19]

Hispanics/Latinos often experience language discrimination[14] and immigrants and non-native English speakers may need a medical translator. Interpreters are seen among Hispanics/Latinos as an enhancement to medical encounters. Although interpreters are seen as helpful, Spanish-speaking patients feel they receive better care when seeing a Spanish-speaking physician.[14] In fact, in a study that evaluated a breastfeeding education program taught in Spanish in a semi-rural part of Utah, it was found that even Hispanic/Latino women who speak fluent English are more likely to receive care from a Spanish-speaking provider.[20]

The role of family in medical decisionmaking is seen as necessary but is often dismissed by physicians.[14] In fact, some health concerns are considered private family matters. Sometimes

families become disjointed in the face of a health crisis. However, because family is so important to this culture, families can come together as a cohesive unit of support. Outreach workers who are able to deeply connect with Hispanic/Latino individuals may be seen almost as a member of the family, as well. Developing surrogate family relationships with the Hispanic/Latino community tends to be more effective in providing health and social services as compared with using organizational approaches.[21]

Older Hispanic/Latino adults see aches and pains as part of the natural aging process and prefer to rely on folk or home remedies instead of seeking professional health care. These informal health care systems could be counterproductive in delivering appropriate health care to older Hispanic/Latinos when health care professionals are not aware of such activities. It is important that public health education be directed toward older Hispanics/Latinos, as well as to the age group of 40- to 60-year-olds, with an emphasis on the value of family.[21] This population will grow over time and resources must be increased to address their needs.

African American Populations

The African American population is a genetically, culturally, and socioeconomically diverse group.[15,22] Health outreach programs must address ethnic differences and subcultures within this community.[22] Researchers have found that African Americans provide more favorable ratings of their care and of their doctors' efforts to include them in decision making when seeing African American physicians.[15] In focus groups, some African American women stated they see African American women physicians to avoid ethnic differences and to allow for better communication.[14]

In a separate focus group study, African Americans with diabetes were asked to evaluate a new diabetes self-care empowerment program. Participants in this study stated that matching sociodemographic characteristics of group members and facilitators is not important as long as the group facilitators are culturally sensitive.[23]

The role of family in medical decision making is important to older African Americans.[14] African Americans tend to have large extended families and strong family ties. A study of gender differences in the use of community services among older African Americans suggests that these individuals rely on family to take care of them. Even when older adults are aware of available community services, they are less likely to take advantage of them than Whites. Involving extended families in outreach efforts may encourage participation.[24]

The role of spirituality and faith is important to African Americans in making medical decisions, and it can sometimes be overlooked by physicians.[14] Evidence also exists for the importance of faith among African Americans when dealing with emotional issues. In a study of mothers of adults with developmental disabilities, it was found that, when compared with Whites, African Americans are more likely to use religion as a coping mechanism. The study authors concluded that outreach strategies "should not ignore the importance of faith ... in the lives of blacks."[25]

American Indian and Alaska Native Populations

American Indian and Alaska Native populations are very diverse. Many aspects of daily life are different among these populations, including language, housing, transportation, culture, outlook, and perceptions of Western health care, and tribes should not be considered homogeneous. Many tribal members are still suspicious of outsiders, including those from other tribes, because of historical experiences. But protocols have been developed to facilitate entry into tribal communities. Consistent, long-term involvement and commitment are crucial factors in acceptance of an outside agency's overtures.[26]

Getting patients to take preventive action can be a challenge. The tribal experience is often crisis oriented, and there may be a disconnect between health programs and patients. Some traditional values in American Indian and Alaska Native populations can also create a dilemma for health education efforts. On the one hand, people in American Indian and Alaska Native communities are very close to each other and know when a person is experiencing health problems. On the other hand, the cultural value of noninterference can mean that a person might join someone with diabetes in eating cake rather than remind him or her of the importance of avoiding sweets and controlling blood sugar.[26]

The cultural values and traditional practices of American Indians and Alaska Natives present important considerations for health communication efforts. Of critical importance is the primacy of the tribe and its collective nature. Education programs must be conducted in a way that respects the authority, autonomy, and identity of the tribal community; otherwise, opportunities for confusion, mistrust, and noncompliance will abound. Furthermore, tribal primacy is reinforced by the traditions, beliefs, and sensibilities imparted by kin, even in urban settings where tribal influence appears to be weaker. Many fundamental aspects of health are shaped by traditional beliefs. For example, diet involves far more than nutrition or taste preferences for most American Indians and Alaska Natives because traditional beliefs invest many foods with spiritual and social significance.[27]

In American Indian and Alaska Native populations, health is closely associated with religion and is often explained from a holistic point of view.[28] Traditional health practices are often spiritual in nature, focusing on underlying causes rather than on the relief of acute symptoms.[28,29] For many American Indians, medicine and religion are virtually identical.[30]

Although not all American Indians and Alaska Natives practice traditional medicine, a considerable population does.[30] For years, American Indians and Alaska Natives have responded to the personal, family, and community issues surrounding illness by relying on traditional medicine practitioners (e.g., medicine men, medicine women, herbalists, shamans, spiritual healers, Native American Church "roadmen"; diagnosticians including hand-tremblers, crystal-gazers, star-gazers, and "listeners") and traditional health practices (e.g., purification ceremonies such as sweat lodges, healing ceremonies such as the Sun Dance, teas, herbs, balms, ointments, salves, purgatives, smudging, special foods, therapeutic songs, chants, protective prayers, dancing, sand-painting, pipe, drum, and naming ceremonies).[29,30,31,32,33,34,35]

Some American Indians who have attended missionary schools have integrated the Christian religion into their traditional ceremonies.[34,35] The simultaneous use of different health care

options, combining principles of traditional and Western medicine, characterizes much of the help-seeking behavior among American Indians and Alaska Natives. [28,29,30]

IV. Channels of Communication

Older Adults

Growing numbers of older adults are using the Internet to obtain information. To address vision concerns, text should be readable, using an uncondensed sans serif typeface (e.g., Helvetica, Arial, Univers), a type size of at least 14 point, and a type weight of medium or bold. Left justified text is best for older adults. Color is also a factor to consider; yellow, blue, and green, when used in close proximity, can be difficult for some seniors to read.[36] It is important to present information clearly, using simple words. An online glossary should be provided for describing technical terms. Websites should be organized simply with a standardized layout. Icons and buttons should be large so that precise mouse movement is not necessary, while pull-down menus should be used sparingly.

People With Diabetes

Health care professionals are very credible sources of information for their patients, and they provide direct access to people with diabetes who are in the medical care system.[37] Physicians who care for people with diabetes are in the best position to counsel these patients about the need for eye examinations and to refer them for eye care. These physicians are also perceived by their patients as very credible information and referral sources. People with diabetes who participated in NEHEP focus groups expressed the belief that their physicians would “take care of them.”[38] Following a review of scientific literature, Rowe and colleagues[39] concluded that “primary care clinicians can play a vital role in preserving vision in their patients by managing systemic diseases that impact eye health and by ensuring that patients undergo periodic evaluations by eye care professionals and receive needed eye care.”

Other health care professionals (e.g., diabetes educators, pharmacists, nutrition educators, nurses, social workers) are also in an excellent position to provide diabetes management advice.[37] Pharmacists offer a logical access point, especially for insulin-taking diabetes patients, who are at higher risk for diabetic eye disease. They are in a position to suggest that all people with diabetes should have their eyes examined through dilated pupils at least once a year.

Using as many channels of communication as possible will provide repetition of messages, an important factor in raising awareness and knowledge and in motivating people to take action. Organizations within the community can offer direct access to people with diabetes, can distribute information, and can help provide referral to services. Together with interpersonal delivery, community channels can form a strong support network, with each channel reinforcing the message, encouraging those at risk to seek more information and eye examinations.

Community outlets for information about diabetic eye disease include community health centers, health maintenance organizations, hospital outpatient clinics and emergency rooms, churches, supermarkets, and eye health care chains, among others.

HISPANIC/LATINO POPULATIONS

Suggested modes of communicating with Hispanic/Latino populations include broadcast and print media.[40] Television was the most frequently cited source of news and information by Hispanic/Latino participants of a national survey. Radio, video, and audio news releases; information commercials; printed PSAs; Spanish-language or bilingual brochures; and special exhibits also were effective. Spokespersons who Hispanics/Latinos trust and who are appropriate for eye health messages can be used to announce and promote the eye health programs. If television, radio, and print PSAs are produced, the spokesperson(s) could be featured to get the attention of Hispanics/Latinos. The spokesperson(s) could also be encouraged to participate in promotion activities such as video news releases, information commercials, exhibits, interviews, and/or special media or community events.

Several media channels can be used for the distribution and dissemination of television and radio PSAs, including the Spanish-language national networks "Univisión" and "Telemundo." Spanish-language and bilingual radio networks, Spanish-language and bilingual television and radio stations in cities with high Hispanic/Latino populations, and mainstream television and radio stations that broadcast Spanish-language public affairs shows are all possible channels of communication.

Spanish-language or bilingual brochures can be distributed through Hispanic/Latino health care professionals or others who work in Hispanic/Latino communities, including pharmacists, public and nonprofit health care facilities, and clinic and health center educators and volunteers. Other channels of communication include churches and religious organizations; Hispanic/Latino community clubs and centers; grassroots Hispanic/Latino organizations (national and local); and Hispanic/Latino businesses such as pharmacies, beauty parlors, barber shops, and grocery stores. "Botánicas" (herbal medicine shops) where Hispanics/Latinos buy their folk or home remedies would also be a good channel for health care information. Exhibitors at Hispanic/Latino festivals and special events could also provide brochures to individuals.

AFRICAN AMERICAN POPULATIONS

The setting in which information is communicated to African American patients is an important factor to consider when structuring education efforts. Focus group research has shown that African Americans benefit more from patient-centered, practical approaches to learning as opposed to lecture-based teaching. African Americans may also experience more support and, thus, learn better in community-based settings, such as within family and religious groups, rather than in clinical situations.[41]

It has also been suggested that community-based outreach is effective in making initial contact with African Americans. When compared with Whites, African Americans are more likely to seek help in an informal setting (e.g., church). To provide appropriate care to poor urban African Americans, education efforts should focus on community-based mobile interventions.[42]

Mass media channels (e.g., television, radio, print) are also effective in reaching the African American population. However, while mass media channels are effective in improving initial awareness of health problems, health professionals (e.g., pharmacists, general physicians, nurses,

health educators) are the most credible sources of information for African Americans and anyone over age 60.[43] Because of the importance put on person-to-person communication in the African American community, interpersonal, community-based education can also be used effectively for health education to encourage appropriate action from African Americans.[44,45]

Using several channels of communication will provide repetition of the messages, an important factor in increasing awareness and knowledge. The mainstream mass media can be used to reach the greatest number of African Americans over age 40. Older adults are heavier television viewers during daytime and early evening—when PSA time is more likely to be available—than African Americans in other age groups.[46] Opportunities to convey messages through the media go beyond PSAs to include news, health features, talk shows, and coverage through entertainment programming. In addition to using television PSAs, which have broad reach and generate the most public inquiry response, radio PSAs can be tailored for stations reaching target audiences. Print ads for selected magazines and newspapers, editorial coverage, and public relations can also be effective.

Organizations within the community can offer direct access to the target audience, reinforce and expand upon media messages, and provide referral to services. Together with the media, community channels can form a strong support network. Suggested community outlets for information include barber shops, beauty parlors, community health centers, senior centers, hospital outpatient clinics and emergency rooms, churches, civic and professional associations, supermarkets, pharmacies, eye health care providers, and sororities and fraternities.

American Indian and Alaska Native Populations

NEI conducted stakeholder interviews with members of American Indian and Alaska Native associations and organizations that provide vision-related programs and/or services to their members. The majority of respondents said the most effective approach they used to communicate health information to American Indians and Alaska Natives is one-on-one personal contact. Other suggestions included translation into Native languages, emphasis on the cultural appropriateness of the information shared, concern for the literacy level of printed materials, and community involvement. Stakeholders use a variety of methods to disseminate information to American Indians and Alaska Natives, including radio spots, posters, articles in tribal newsletters, mass mailings, Websites, health educators, and community health fairs. One stakeholder noted that the American Indian population communicates orally so this type of communication also needs to be considered.[47]

Written messages should be presented in a believable, personal, and non-threatening way and validated by credible American Indian and Alaska Native sources and by scientific information. Materials should be written in adaptable formats and aimed at American Indians and Alaska Natives of varying literacy skills.[27]

Storytelling is a key approach to educating American Indians and Alaska Natives. Messages need to use words and analogies that will resonate with American Indians and Alaska Natives. It is more important that metaphors be simple and enhance understanding of why certain actions are necessary than that they be scientifically accurate. Indians talk about the eye as the window

of the heart through which you can see what is going on inside of people. A message that uses this image (e.g., "Protect your eyes so that you can see who you are.") might be helpful.[26]

Some elders only speak their tribal languages, which often have no words to describe conditions such as retinopathy. Elders who do speak English may not understand many of the technical terms and acronyms used in health messages.[26]

Focus groups conducted by the Koahnic Broadcast Corporation in Anchorage, AK, and Albuquerque, NM, found that, among American Indians and Alaska Natives, most news and information comes from television or print media. On the other hand, radio was not generally considered a news source, but many participants felt differently after hearing newscasts and feature programming specifically targeted to American Indians and Alaska Natives. Radio programs have also been effectively marketed through the use of billboards, posters at tribal offices, local magazines, village meetings, schools, and arts and crafts fairs. These same channels may be useful in marketing eye health messages and materials. Research by Nielsen Media Research and CommerceNet also shows that American Indians and Alaska Natives are the fastest-growing groups of Internet users among minority audiences.[26]

V. Findings from NEI/NEHEP In-House Research Focusing on Target Populations

This section summarizes the relevant findings from past NEHEP focus group research. The full reports from this research are available on the NEI Website at www.nei.nih.gov/nehep.

Older Adults

Qualitative Research Among People With Low Vision

Several focus groups and interviews were conducted in 1997 among people with low vision ranging in age from 45 to 75 and older.[48] When asked about effective channels of communication, almost all respondents said that the ophthalmologist's office would be the most logical and efficient place to receive information about low vision. Low vision clinics were also seen as appropriate. Other channels included optometrists, pharmacies, the clergy, nonprofit vision organizations, AARP, senior centers, television, and state governments.

Respondents said that large-print brochures that described their vision problems would be useful for providing them with information about low vision. Many liked the idea of a packet of information that could be provided by the eye care professional. The packet could contain information about specific vision problems, provide resources for medical care and coping assistance, and suggest questions that patients could ask the doctor. Those with severe vision problems said that they could no longer read large-print brochures.[48]

Some respondents were also interested in watching a video that could tell them about their specific problems so they could see what was happening to their eyes. They want the video to show what types of complications could arise and how to respond. This video would help them to alleviate their fear of not knowing what will happen to them. Most said they would rather

watch a video at home because they would be able to concentrate better and watch it several times.

Several respondents said they would like to have a list of questions they should ask their doctor, because they often forget questions that occur to them between appointments. They also often do not know enough about their problems to know what to ask.

Many liked the idea of a toll-free number that people could call for more information. Some liked the idea of getting information through transit advertising. Many wanted information on low vision via television. Others liked the idea of using special newsletters and publications of organizations to place stories and advertising about low vision. However, accessing information by the computer was not an appropriate tool for respondents. Many said they "missed the computer age."

When asked if they would like to receive the information or if they would prefer their caregivers to receive it and then relay it to them, the vast majority of respondents said they would like to get the information themselves. They want information directly because they want to keep their independence, do not think their children would find the right information, believe their children are too busy, do not think their children would pass the information on, or have no family left who really care.

People With Diabetes

Diabetes Focus Groups

A series of focus groups was conducted in Sarasota, FL, with people with diabetes and their family and friends.[49] Participants reported that they relied on their personal physicians or eye care professionals most heavily for information and recommendations regarding their eye health care. The American Diabetes Association (ADA) was named as another important source of information. In particular, the ADA monthly publication Diabetes Forecast was familiar to all participants. Local hospitals, education programs, support groups, word-of-mouth, drugstore newsletters or pamphlets, news programs, and the general media also were considered to be helpful resources. Another suggestion for dissemination of information was a telethon held during National Diabetes Month (November) or in March on Diabetes Alert Day. Pharmacists were not considered as good information sources because "They are trying to sell you something" or "They are too busy." Family physicians were not seen as credible sources for diabetes-related information because "They don't know enough about the disease."

Participants believed that more education is needed for diabetes patients, the general public, and health care professionals. All expressed the need for more detailed information specifically concerning diabetic retinopathy. They also recommended that information such as where to go, names of doctors who provide laser surgery, and names of the types of examinations be included in messages. An experience with a significant health problem such as diabetes or hearing of someone they know having a health problem was considered a significant motivating factor for people to begin actively seeking information.

Hispanic/Latino Populations

Diabetic Eye Disease Message Testing Focus Group

In 2003, focus groups were conducted with Hispanics/Latinos with diabetes, as well as with family and friends of Hispanics/Latinos with diabetes, in Los Angeles, CA; Orlando, FL; and Miami, FL.[50] In Los Angeles, an additional two focus groups were conducted with Hispanic/Latino migrant farm workers with diabetes. The qualitative research effort tested two television PSAs for Hispanics/Latinos with diabetes and their families and friends. The two PSAs were presented to native Spanish-speaking focus group participants for their reactions regarding message content and presentation, audience appeal, cultural appropriateness, message clarity, and calls to action.

Participants said that PSAs should be developed in a variety of formats such as print, television and, radio. A few participants explicitly suggested that television PSAs developed by NEI should air between the hours of 6:00 p.m. and 8:00 p.m. to ensure that the targeted population would have a chance to see the information contained in the announcement. Many participants reported watching television regularly, primarily in the evening during the week.

Participants also suggested the implementation of a toll-free number where callers can talk to someone who speaks fluent Spanish. This toll-free number should be displayed continuously during the PSA. Participants also recommended that the PSA mention that the call and the information are free.

Spanish Low Vision Booklet Focus Groups

Eight Spanish-language focus groups were conducted nationally during November and December 2000 to test the usage of various key terms, photographs, and colors in the Spanish Low Vision Booklet.[51] The booklet was also tested to ensure that it was culturally and linguistically appropriate to relay vision-related concepts and practices. Additionally, the focus groups reviewed general information on knowledge of eye health and low vision issues and examined the best possible methods to distribute health-related information to Hispanic/Latino populations.

Some participants said that they have seen brochures and other information in their doctors' offices, but very few said that they had been given information by their eye care professional. A few of the participants said that they do not engage in detailed discussions with their eye care professional concerning their respective eye conditions and diseases. A few of the participants in the Los Angeles, Miami, and New York focus groups said that their doctors told them there was nothing that could be done for their eye conditions.

Participants in various groups said that if they were told they were losing their eyesight, they would want information on how to stop the disease from advancing and how to cope with their impending vision loss. To receive this information, participants in various groups said that postal mail and videos would be the best ways. Other means of distribution that were mentioned included churches, television, and radio. Participants stressed that they would not like to receive information of this type in supermarkets and drug stores. They said that many times people rush through these types of establishments, and would not take the time to read it.

Hispanic Eye Health Campaign Focus Group Report

In May 2002, seven focus groups were conducted for the Hispanic eye health campaign.[52] Two focus groups were held in Washington, DC, and five were held in Milwaukee, WI. These focus groups comprised 71 participants, ranging in age from 21 to 65 or older, and included several subpopulations such as Central American, South American, Mexican, Puerto Rican, Cuban, and other Spanish-speaking nationalities.

Each focus group was presented with four messages and visual images to increase awareness of getting a comprehensive dilated eye exam. Several factors were assessed, including overall eye health awareness, the impact of messages and images, and where participants received most of their health information. A number of trends and overarching themes consistently emerged across these groups: the understanding that eye health is important and poor vision can drastically impede their lives, the importance of getting eye exams, and confirmation that television is the most popular venue for receiving health-related information. Although the majority of participants knew about eye exams, very few knew how often they should have their eyes examined, regardless of age.

Participants indicated that simple, straightforward messages are the most effective and informative. Results also showed a strong need for a general eye health awareness message. Participants expressed a strong interest in eye health and eye exam information, regardless of whether they had already developed any type of eye disease. The study also found that the majority of participants were motivated to get their eyes examined after viewing messages and concepts.

"Ojo con su Visión" Test Market Sites

Through *Ojo con su Visión,* a national program targeting Hispanic/Latino adults, NEHEP hopes to increase awareness about the importance of dilated eye exams and to tailor vision loss prevention messages. To test the effectiveness of their messages and materials and to identify dissemination strategies, NEHEP selected three test market sites.[53] This local outreach effort also tested the efficacy of working with various contacts in health care facilities and community-based organizations to reach the target audience.

Lessons learned from the *Ojo con su Visión* Test Market Sites include the following:

- Coordinate events that help community members identify their health needs whereby messages can be delivered directly to the target audience
- Identify and support community fairs or health fairs
- Work with university-based health center educators and volunteers
- Collaborate with community-based organizations linked to other community-based organizations and media
- Continue to develop positive and educational messages
- Develop messages and materials in both English and Spanish

- Promote media products to media with collaborative efforts.

African American Populations

Focus Groups With African Americans at Risk for Glaucoma

Focus groups were conducted in Chicago, IL, and Bethesda, MD, with African Americans aged 50 and older who are at risk for glaucoma.[45] Participants were asked various questions regarding their health status, sources of medical/health information, reasons and barriers to seeking medical care, familiarity with eye diseases and blindness, frequency of eye exams, and general knowledge of glaucoma. Participants were also asked for suggestions and/or recommendations for programs, messages, and channels of communication that would be effective in the African American community. Participants felt that the most effective way to educate members of the community would be through churches, schools, and family members. Suggested sources for information about glaucoma were eye care professionals, pamphlets in the eye care professional's office, pharmacies, magazine articles, hospital clinics, Lions Clubs, senior citizen retirement clubs, and churches. Participants also recommended that messages be disseminated through a variety of channels, including media, churches, pharmacies, laundromats, supermarkets, and buses. A toll-free number was also considered as a possible channel for information, although some members recognized that they would not seek information from this source because they had to make an extra effort. Participants thought that a non-celebrity with glaucoma would be a more credible source for messages than a celebrity that "can afford treatment" and that messages should not stress that glaucoma is primarily a problem that affects African Americans because "other groups may think they don't need to be concerned about it."

Glaucoma Message Testing Focus Groups

In March 2003, focus groups were conducted in the Washington, DC, suburbs; Columbia, SC; and Jackson, MS, to test the radio PSAs currently in development for African Americans aged 50 and older and their family and friends.[54] Five separate radio PSAs were presented to focus group participants for their reaction regarding message content, audience appeal and relevancy, cultural appropriateness, and clarity. As part of these focus groups, radio preferences among participants were examined.

Participants said that they listen to the radio when riding in the car. As such, the majority of participants said that they listen to the radio at some point during a day. Only one or two participants said that they do not listen to the radio daily. However, responses concerning the amount of time spent listening to the radio on a daily basis varied greatly. Most participants said that they listen to the radio for a total of 1 hour during the course of a day. Other participants said that they listen to the radio 3 to 7 hours a day.

When asked the time that they prefer to listen to the radio, morning was the most popular choice among participants. Specific times typically mentioned include 7:00 a.m. to 4:00 p.m., 7:00 a.m. to 8:00 a.m., and 6:00 a.m. to 8:00 a.m. Several participants also mentioned that they listen to the radio around 5:00 p.m. during their afternoon commute, as well.

The most popular types of radio stations listened to included gospel, jazz, oldies-but-goodies, talk radio, reggae, rhythm and blues, sports, and urban. Only a few people said that they listen to

the AM frequency. Those persons who said that they do listen to the AM frequency typically preferred gospel, talk radio, and sports radio.

American Indian and Alaska Native Populations

Focus Groups and Key Informant Interviews

A series of focus groups and interviews was conducted with members of American Indian and Alaska Native populations with diabetes to gain an understanding of what education strategies would be most successful in this population. Participants strongly emphasized the need for active participation of community members in the design and implementation of educational activities and materials. The development of collaborative relationships with tribal leaders, organizations, and health care providers was considered another essential element for effective health education. Additional recommended strategies included the following:

- Use testimonials from people young and old in the community who have diabetes.
- Use storytelling—the stories of ancestors can provide inspiration and strength to younger generations.
- Create new health message-oriented stories to be shared in the community.
- Work with elders to develop and create programs. Elders can help identify the key messages and messengers who will motivate members of their community to take action.
- Work with youth to develop and create programs. Youth can be messengers who help motivate members of their community to take action.
- Present information to American Indian and Alaska Native elders in a visual, simple, step-by-step way using culturally relevant symbols and icons. Use community forums involving tribal leaders, elders, and youth to create a template of basic questions to get feedback about key issues that will reflect local values, beliefs, and preferences.
- Provide compelling information to tribal leaders based on what community members need and would like when soliciting their help.
- Conduct health education programs using mobile eye examination equipment to create rapport with communities.
- Create flexible models that can be adapted for use in the many diverse tribal communities.
- Establish the relevance of eye health in the context of diabetes and complement existing programs.
- Enlist support from carefully screened American Indian and Alaska Native celebrities such as artists, actors, and athletes.

- Participate in major intertribal events such as the Gathering of Nations, Crow Fair, and rodeos.

- Involve traditional healers in outreach activities.

VI. RELEVANT FINDINGS PUBLISHED IN RESEARCH PERIODICALS

A literature review was conducted with the following objectives: 1) to review the results of recent studies related to annual eye screenings or exams with an emphasis on identifying strengths or barriers for compliance with eye exam guidelines, 2) to identify outreach and education strategies successful in diabetes management and general health prevention practices, and 3) to identify outreach strategies successful in attracting individuals to screenings of any kind that might be applied to NEHEP national education efforts to encourage eye screenings. The strategies used in these education and screening programs may inform NEHEP about effective methods of reaching and educating different populations about the importance of annual dilated eye exams.

RESEARCH RELATED TO USE OF EYE SCREENINGS AND EXAMS

A study of low-income women with diabetes revealed significant gaps in knowledge about diabetes-related eye complications.[55] More than half of the subjects did not know that eye complications may be asymptomatic and that there are ways to lower the risk of eye problems. One-fifth of participants did not know that annual eye exams are recommended or what type of health provider should perform an eye exam. More than three-quarters did not mention having drops put in their eyes as part of an eye exam. Subjects were concerned about eye complications associated with diabetes, were aware of the benefits of eye exams, and reported high levels of self-efficacy for receiving an annual eye exam.

A study designed to determine factors affecting compliance with guidelines for annual eye examinations for persons diagnosed with diabetes or age-related macular degeneration found that the probability of having an exam reflected perceived benefits and factors associated with the ease of a visit.[56]

Another study conducted among a multiethnic, predominately minority sample of residents from low-income public housing found no relationship between the presence of diabetes and the timing of an eye examination.[57] Sixty-one percent of participants reported having vision care coverage. Yet, one out of four respondents claimed that no health care provider had ever told them that they needed an eye examination. Affordability, continuity, and regular sources of care, as well as receiving physician advice, were the core factors significantly associated with receiving vision care. These findings point toward the urgent need for educational and motivational interventions that encourage health care providers serving underserved communities to promote eye examinations, particularly among patients with diabetes, patients with hypertension, and other people at risk for eye-related diseases and complications.

The results of a study conducted among African Americans with diabetes demonstrated that a community-based, culturally specific intervention will attract African Americans with diabetes to eye disease screening clinics.[58] In this program, successful techniques were those that developed

trust through personal relationships. Community-based organizations and clinic volunteers were instrumental in providing needed resources to the community, and eye screening clinics were held in easily accessible locations. PSAs were delivered through local media and materials were distributed at community health fairs and other events. Program staff established personal relationships with patients through phone communication before and after clinic visits.

In an evaluation of the eye care received by people who participated in the Hoffberger community-based eye-screening program, failure of screenees to come for examinations and lack of followup were identified as serious problems. Reasons given for failing to come for definitive examination were as follows: no appointment given (26 percent), forgot (20 percent), lack of transportation (9 percent), and lack of insurance coverage (6 percent). Of those who accepted a second visit date after defaulting, only 25 percent (41/167) appeared.[59]

In a study designed to examine the effectiveness of personal telephone contact in improving return rates for annual diabetic eye evaluations in eye disease screening clinics for African Americans with diabetes, researchers found that personal telephone contact improves return rates for annual eye exams in urban African American communities.[60]

Among Navajo Indians, the major patient characteristic associated with failure to obtain recommended followup ophthalmologic evaluation and care is lack of transportation. A study of Navajo Indians with diabetic retinopathy concluded "Interventions to increase the proportion of Navajo Indians with diabetic retinopathy who receive appropriate ophthalmologic care must address the issue of transportation."[61]

Effective Health Education and Outreach Strategies Related to Diabetes

Frequent communication with patients with diabetes is essential to assisting patients in managing their disease. However, many of the interventions directed toward patients with diabetes are conducted over a brief period of time. To sustain the positive effects of short-term diabetes interventions, patients require ongoing support over the long term.[41]

In a research trial of an educational intervention for patients with type 2 diabetes, the intervention was found to be clinically effective over the short term, but limitations to maintaining effects were evident. In particular, the study found that while patients can be educated toward greater autonomy, not all health professionals are ready to work in partnership with them. It highlighted the importance of clinical staff not only gaining a better understanding of diabetes management, but also of the theoretical principles underlying patient empowerment.

Ingram et al. identify elements that are essential to an outreach program mainly targeting Hispanics/Latinos with diabetes. The elements considered essential to the success of the program included provider partnerships, community classes, health workers who provided outreach and support, and a connection between education and clinical care.[62]

An aggressive diabetes education program was evaluated for its effectiveness in reducing blood glucose levels in a Medicaid population. Study directors attributed program success to the one-on-one and group support components of the program.[63]

Other Effective Outreach Strategies

Choi and Smith analyzed minority involvement in an older adults nutrition program and identified outreach strategies that succeeded in getting racial and ethnic minority elders to participate. These strategies included involving family members in disseminating information, establishing relationships with community leaders, increasing cultural programs and activities, adding intergenerational programs, recruiting volunteer drivers, and locating centers in key locations.[64] Several barriers to participation were identified; these included lack of information, reluctance to ask for help, fear or distrust, culturally driven discomfort, and lack of transportation.

A study designed to explore the influences on older adults for influenza vaccine uptake found that the decision whether to accept or refuse the influenza vaccination was influenced by trust or mistrust of modern medicine, prior experience of vaccination, and perceived risk from influenza.[65]

The use of "promatoras" (health educators) is an outreach model that has been internationally recognized for providing effective information dissemination to Hispanic/Latino communities. The goal of the model is to create awareness about the importance of preventive health care through the use of Spanish-speaking lay people and community leaders who provide culturally and linguistically appropriate information. Spanish-speaking volunteers can overcome language barriers that sometimes hamper outreach efforts.[66]

It has been shown that mobile units are an effective method of outreach to Mexican immigrants in rural northern Colorado. The units provided services in health care screening, education, and primary care for acute problems.[67] Similar programs have been implemented for eye health care. For example, the Pennsylvania Diabetes Academy, with funding from the Centers for Disease Control and Prevention (CDC), supports local ophthalmologists taking diabetic eye care in vans to underserved populations.[26]

Older African Americans in rural South Carolina benefit from an outreach program that employs paid, trained outreach workers. Through this community/academic partnership, outreach workers assist patients in connecting with needed medical services. The outreach workers may arrange for transportation, schedule appointments, or make referrals for public benefits and drug programs. Results demonstrate that the outreach program increased the quality of life for older African Americans. Most importantly, eligible patients who were not previously receiving public benefits signed on for various programs.[68]

Education Strategies To Encourage Screening Participation

Several studies have examined the role of outreach in screening older women for breast and cervical cancer.[69,70,71,72,73] In late 2002, Reuben et al., concluded that "on-site mammography at community-based sites where older women gather" is effective in increasing screening rates.[71]

Vogt, et al. also found that mammography and cervical cancer screenings took place more frequently following a letter and a phone call. Specifically, mammography and cervical cancer screening occurred at rates of 10 and 17 percent, respectively, for patients receiving usual care,

24 and 22 percent for patients receiving two letters, 51 and 54 percent for patients receiving a letter and a phone call, and 50 percent (for both tests) for patients receiving two phone calls.[72]

Tailored outreach is also effective at increasing screening rates, compared with usual care, and screens significantly more women for breast and cervical cancer.[73,74] Valanis, et al. reported that a tailored letter–telephone intervention is more effective than a tailored in-office intervention at screening women aged 52 to 64. This increase was attributed to the fact that the in-office intervention could only take place if the patient visited the clinic for another reason.

The American Cancer Society introduced the "Tell a Friend" program to encourage women to tell their friends about the need for early detection of cancers. The program recruits women and trains them to encourage at least five of their friends or acquaintances to get their annual Pap test and mammogram. An expansion of the model was implemented by a Los Angeles clinic focusing on African American women. The expansion, which provided incentive gifts, included additional outreach by the volunteers such as assisting with workshops and distributing educational materials and flyers. This expanded outreach effort resulted in a doubling of African American women screened at the clinic.[67]

In a study of Southwestern American Indian women, access to care, knowledge of the examinations, and health beliefs were positively associated with breast cancer screening.[74]

Characteristics of Exemplary Outreach Programs

NEI recently granted an Express Award to conduct a series of interviews with representatives of government agencies and nongovernmental organizations with mission statements that sought to do the following: 1) improve and expand access to quality health care, 2) protect the health of racial and ethnic minority populations and eliminate health disparities, and 3) sponsor and conduct research that provides evidence-based information on health care outcomes, quality, cost, use, and access.[75] When asked about characteristics of programs or materials to increase the receipt of eye and/or health care services that would be considered "exemplary," the following characteristics were considered to be the most important:

- Health-literate materials
- Cultural appropriateness
- Increased cultural competency
- Performance feedback
- Online basic health information
- Community-based outreach
- Community-based input
- Buy-in from community members

- Collaborative in nature
- Rigorous collection and analysis of data
- Current clinical, diagnostic, and treatment technique use.

VII. CONCLUSIONS

General principles, which include addressing cultural and socioeconomic differences, health literacy, and mistrust or distrust, can be applied in the development of outreach strategies and programs for any population. There are many unique challenges posed by each of the select populations described that must be taken into account for effective outreach strategies to be developed. Health literacy levels and limited knowledge about eye health and disease must be addressed, along with the cultural and communication issues specific to each target audience. Public health education programs that address issues specific to each target audience have been found to be the most effective.

The in-house focus group research has provided valuable information with respect to differences in general understanding of eye health issues, perceptions, communication preferences, and best practices for reaching each of the target populations. Health care professionals, broadcast and print media, and the Internet are preferred channels of receiving health information for the select populations described in this paper. The literature review has provided additional information with respect to recent practices that have been successful in attracting people to screenings and identification of barriers that may prevent them from receiving appropriate eye health care. The use of this information will help to enrich and strengthen NEHEP as it moves forward in the development of future materials and programs for these populations.

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