

# Background Reading

## Outreach To Increase Screening for Breast and Cervical Cancer

### Part 2

### Overview of Outreach Strategies Background Reading



# Background Reading

## Introduction and Overview

This section provides an overview of various strategies being used to recruit older medically underserved women for breast and cervical cancer screening. They include

- Interpersonal strategies;
- Health promotion tips for older medically underserved women;
- Media strategies;
- Long-term care and retirement communities;
- Direct mail;
- Coalitions and partnerships;
- Community interventions;
- Provider and community health center interventions;
- Community health workers;
- Church-based interventions; and
- Worksite screening (Reaching women in the workplace).

Each strategy is described in detail below.

The two most common and predominant strategies used are media and interpersonal. It is important to understand that a variety of media and interpersonal methods often are used in conjunction with other strategies listed above to strengthen the possibility of success. That is, media and interpersonal strategies are needed to maximize the reach of your program. However, all strategies should be targeted according to the characteristics of the intended audience.

Throughout this section of the training packet, examples are provided from programs implementing different strategies. Although most of the examples provided are specific to breast and cervical cancer prevention or detection, some examples are from other health-related behavior change initiatives. These other examples are included because the principles described are applicable to and illustrate a framework for developing an intervention that may prove effective for recruiting older medically underserved women for breast and cervical cancer screening.

As you study the material presented here, keep in mind that the strategies described are highlighted because currently they are being used to facilitate the achievement of our ultimate goal—to recruit women for breast and cervical cancer screening.

and middle and upper income women. Each of these subgroups experiences some common and some unique barriers to obtaining screening, which are detailed elsewhere (AMC Cancer Research, 1992). Each subgroup also has special needs to consider when choosing priority program objectives-- where the program will take place, who will be involved and how, and what activities and/or materials will be included.

The program descriptions and evaluation data available to program planners have several limitations. There are few programs specifically designed for some of the subgroups, despite higher risk and significant needs specific to those subgroups. Few programs address both breast and cervical cancers. Interpersonal educational strategies, no matter how well designed, may have limited success because of other factors such as cost of screening and less-than-adequate access to medical care. Evaluation of programs is limited (or often still in progress), making it difficult to know for certain which strategies are most effective. However, it is possible to make some educated decisions, and we have tried to present the information and examples to help do that.

### Interpersonal Strategies and Their Theoretical Underpinnings

In broad terms, interpersonal strategies are defined as those which involve some sort of communication or interaction with a significant person or persons. A significant person may be a family member or other persons in one's social network. These may include friends, co-workers, or professionals such as a personal physician or other health worker. This paper considers five categories of interpersonal strategies: 1) activities undertaken by health care providers, such as physicians and nurses; 2) programs by trained peers; 3) group education programs; 4) programs using mediating structures or community institutions (churches, work sites, community centers, etc.); and 5) community development initiatives.

Interpersonal strategies have particular strengths and weaknesses as compared with other strategies. Television, radio, newspapers, and other printed material easily can reach large numbers of people. Mass media approaches may cost less per person reached, in part because public service announcements are often welcomed and broadcast or published at no charge (Severin & Tankard, 1992). On the other hand, interpersonal approaches may have minimal costs when implemented by volunteers, health professionals, or

## BREAST AND CERVICAL CANCERS EARLY DETECTION AND CONTROL: INTERPERSONAL STRATEGIES AND CHANNELS

**Jane Zapka**  
**University of Massachusetts Medical Center**

**Barbara Estabrook**  
**University of Massachusetts Medical Center**

In the past several decades, impressive scientific advances have been made in the diagnosis and treatment of breast and cervical cancers. Improved survival of both conditions is in large part due to early detection. However, women's regular participation in screening programs remains of major concern, particularly among certain sub-groups of women. Increased screening participation can be accomplished by a variety of intervention strategies. These include policy strategies which encourage financial access, organization strategies which enhance access and acceptability of services, and educational strategies which encourage initiation of and regular adherence to screening guidelines, as well as compliance with follow-up as appropriate.

This paper discusses a subset of educational strategies -- interpersonal strategies -- which could be adopted by public health organizations to promote the early detection and control of breast and cervical cancers. We explore the strategies, how they address the specific needs of the various subgroups and the particular problems associated with breast and cervical cancers screening. Specific programs which have used interpersonal strategies and channels are reported.

The special needs of five female population subgroups need to be considered. They are low-income African-American women, low-income Hispanic women, low-income white women, older women,

---

*Jane Zapka is a Professor and Barbara Estabrook is a Research Associate in the Department of Preventive and Behavioral Medicine at the University of Massachusetts Medical Center, Worcester, MA.*

Article reprinted with permission from the publisher. Permission for additional reproduction or inclusion in other publications must be obtained from the copyright holder.

support staff who are already performing other roles. Additionally, some subgroups of the population may not use certain media. For example, print media are reportedly the least used media by Hispanics, and young Hispanics especially turn to television or radio rather than to newspapers or magazines (National Cancer Institute, 1988).

Interpersonal strategies can provide more than information. Learning, skill development, and behavior change are enhanced if a person can practice the desired behavior and receive feedback, take a more active, participatory role, or exchange ideas with peers. Interpersonal strategies may be particularly important in breast and cervical cancers screening programs because of the need to address specific barriers of anxiety levels, modesty, and/or denial. Additionally, interpersonal approaches often can be tailored to specific needs such as language preference, degree of literacy, readiness for change, and level of risk. (Prochaska & DiClemente, 1988), which can maximize effectiveness (Hill, Rassaby & Gary, 1982).

A personal contact appears to be especially valuable to certain cultural groups. Programs which involve community leaders, members, or peers of the target population may work well with minority groups of lower socioeconomic status, taking advantage of a pre-existing social phenomenon. Because these groups "are more isolated from the influences that reach individuals of higher social economic status (SES), they tend to rely on family, friends, and other interpersonal networks in their own community for health information" (National Cancer Institute, 1988). For example, in Hispanic cultures the concept of "personalismo" is important. It is a personalization of an interaction between two people, usually in the form of face-to-face contact. It allows for the building of trust, which would then enable persons of Hispanic cultures to discuss personal matters with strangers (National Cancer Institute, 1988).

Naturally, many programs combine interpersonal strategies with others, including media strategies. A combination can accommodate different styles of learning and different stages of change, compensate for the weaknesses of certain methods, and provide the multiple inputs which are sometimes needed to effect and sustain change. For example, a program at Yale University begins with a personal telephone interview and then uses the data collected to prepare computer-generated written materials specific to that individual (Schymura, Thompson & Grady, 1989). Other programs combine specialized television campaigns aimed at women, with other interventions aimed at physicians (Hill, Rassaby & Gray,

1982). Numerous multiple intervention programs have been reported (Rimer, et al., 1992; Satariano, Schwartz, & Swanson 1982; Lane, Polednak & Burg, 1989; Lane, Polednak & Burg, 1991; Michielutte, et al., 1989; Morisky, Fox, Murata & Stein, 1989; National Cancer Institute, 1992). For example, the Health Insurance Plan (HIP) Breast Cancer Screening Study used several promotional methods, including a single mailing, single follow-up letter or phone call and repeated letters or phone calls. When multiple contacts were used, screening rates improved among some intended audience that have not fully benefited from screening opportunities (Fink, Shapiro, & Roester, 1972). The University of Massachusetts Community Intervention Program combined provider education, patient counseling, management system interventions, group programs in community settings, community media efforts, and flyers at workites which emphasized "encouraging a loved one to get screened" (Zapka, et al., 1993).

The appropriate selection and application of interpersonal strategies should reflect findings of a sound needs assessment. For example, program planners often use the health belief model as an overarching guide to consider numerous constructs (Gilliam, 1991). While strategies and messages of most community programs are based on several theoretical constructs as illustrated in Table 1, it is beyond the scope of this article to consider them in depth. Acknowledging that interpersonal strategies are driven by several theoretical paradigms (Rimer, 1990), a brief discussion follows only about key constructs.

### **Social Learning Theory**

Social Learning Theory purports that an individual's perception of the environment. Perceived difficulty in getting to screening or interacting with the health professionals involved must be considered much as a physical barrier would be. Another aspect of the environment is the availability of models for behavior. A woman can learn by observing other people's behaviors and the resulting outcomes, rewards, or penalties. A health education program can provide role models who have obtained cancer screening so that women can learn about how to do it and what to expect is likely to happen (Rimer, et al., 1992). There is some evidence that persons from Hispanic cultures "respond to positive messages that model the desired behavior rather than to descriptions of the problem or rational reasons for change (National Cancer Institute, 1988).

Table 1.  
Planning Community Cancer Screening Programs:  
Interpersonal Strategies and Related Theoretical Constructs

Interpersonal Strategies	Theoretical Constructs
<input type="checkbox"/> Activities Undertaken by Health Professionals	<input type="checkbox"/> Social Learning Theory <i>Personal Factors</i> <i>Behavior</i> <i>Environment</i>
<input type="checkbox"/> Programs by Trained Peers	
<input type="checkbox"/> Group Programs	<input type="checkbox"/> Stages of Change <i>Precontemplation</i> <i>Action</i> <i>Maintenance</i>
<input type="checkbox"/> Programs Using Mediating Structures or Community Institutions	
<input type="checkbox"/> Community Development Initiatives	<input type="checkbox"/> Community Organization Theory <input type="checkbox"/> Social Support Theory

To be capable of carrying out the behavior, women need knowledge about the behaviors involved in obtaining screening and practice in those behaviors. Despite its apparent simplicity, obtaining appropriate cancer screening is not a single behavioral task. It may include locating appropriate health care, making an appointment, arranging for child care, requesting time off from work, arranging transportation, being screened, arranging for payment for services, and periodically repeating the process" (Kegeles, & Grady, 1982; Minkler, 1990). In addition, screening may involve communication with one or more health care professionals and overcoming fear, embarrassment, or modesty. A health education program may not offer practice in all of these tasks, but it could help to women anticipate the tasks required and to think through or talk through how they would be accomplished. Helping women develop the capacity to take action for screening can help build a sense of confidence and personal control which are crucial to success. Themes of self-respect and self-care have been used with success in cancer screening (Solis, et al., 1985; Zapka, Chasan, Barth, Mas, & Costanza, 1992). The assumption is that women who can view

screening as relevant to their valued and important roles will be more likely to obtain screening.

Since learning and performance are hampered by certain emotional states; fear of cancer, anxiety, or embarrassment about the screening procedures may prevent women from seeking screening. Thus, in order to help women manage emotional arousal, emphasis would be placed on the benefits of screening. A program can also explicitly address fear, fatalism and denial (Dignan, et al., 1990).

The outcomes and perceived outcomes of a desired action are crucial: expectations precede behavior. They develop from learning about certain events that are likely to occur in given situations, or from anticipation of new situations. If an informed peer tells a woman about having a Pap smear and about its positive outcomes, her positive expectations about screening may be enhanced. Also important are the values that the individual places on a particular outcome, as a person will choose an action that minimizes negative outcomes and maximizes positive ones. In designing a program, positive outcomes need to be emphasized. Some programs also add positive reinforcements or rewards, such as giving incentive coupons to people who obtain screening (Mayer & Kellog, 1989). Adding a reward to an outcome may be especially useful in the case of screening, where short-term positive outcomes (pride at having completed the screening or relief at the absence of disease) are special care may be needed if the screening requires follow-up or treatment. In addition to tangible rewards, however, other types of rewards might be recognized. Some behaviors carry internal rewards for some people; for example, if the woman considers the action to be the "right thing to do," she can feel good about having done it. Some cancer screening programs have used this concept, emphasizing the value of setting a good example for others by taking care of oneself (Solis, et al., 1985; Zapka, Chasan, Barth, Mas, & Costanza, 1992). Additionally, the opportunity for peer influence and observation may result in enhanced positive expectations; if a woman understands the rewards another person receives from screening, that understanding can be a tool to help her adopt the desired behavior.

In summary, Social Learning Theory suggests that the use of interpersonal strategies within health education programs may be particularly appropriate because they promote social support, provide models for behavior, provide opportunities to learn the behaviors involved and provide the opportunity to address woman-specific

concerns about anxiety, outcomes and environmental barriers. Clearly, some of these objectives could be met by a variety of approaches, but others are optimally and effectively achieved through interpersonal strategies.

#### **Stages of Change Theory**

Stages of Change Theory also provides useful insight and information to guide choice of strategy. When individuals change that health habits, they go through a common and predictable process that consists of several stages. Rakowski et al. (1992) have developed stages of adoption for mammography based on the work of Prochaska and DiClemente (1988): (1) precontemplation--no mammogram and no plan for one in the coming year; (2) contemplation--(a) no prior mammogram but planning for one in the coming year or (b) one or more prior mammograms but no plan for one in the coming year; (3) action--one prior mammogram and planning for one in the coming year; and (4) maintenance--more than one prior mammogram and planning for one in the coming year. A few simple questions ("Have you thought about ...?", "Have you ever tried ...?", "Have you had any luck ...?", "What would help you plan...?") can help determine the person's status in this framework so that information and assistance may be tailored accordingly. Studies of the relative effectiveness of tailored messages (Skinner & Strecher, 1992) indicate that tailored interaction is best accomplished via interpersonal strategies, such as discussion with a health care provider or a personalized telephone message.

#### **Community Organization Theory**

Community Organization Theory may not on the surface be viewed as providing direction to selection of interpersonal strategies. We purport that community organization is a fundamental interpersonal strategy itself. Minkler (1990) notes that the community may be a distinct geographical area or a particular group of people. It has characteristics and contains organizations (churches, schools, formal and informal social groups) and structures (economic, political and social), any or all of which may affect members' health and their interactions with health care providers and institutions (Mayer & Kellogg, 1989).

Purposeful change can be created by a person or organization that has the power to do so and recognizes that power. The development of mastery over one's own life or future, empowerment

relates to individuals, organizations and communities. Community members need to participate in as many program phases as possible as problem solvers and decision makers. A public health program that actively involves the community is most likely to inspire feelings of "ownership" and to be successful. Furthermore, active learning is far more effective than passive learning. When public health agencies proceed with a community organization philosophy, community members become involved in planning through an advisory committee or board (Solis et al., 1985; Lacey, et al., 1989) as peer workers, as public advocates or via other activities.

Relevance of a program to the community's perceived needs is especially important. Ideally, a community chooses its own goals. Successes on those first priorities will enhance the ongoing process of community organization. However, many health programs, including cancer screening, have pre-established goals. The task is to make real choices available to the community in terms of how those goals are addressed. How should women be notified about the importance of screening and opportunities for screening? What do women in this community perceive as barriers to receiving screening and as factors encouraging screening? Who shall provide screening and where? What groups, institutions, or individuals should be involved? A program which cannot be relevant to community needs risks being ignored in the face of competing priorities.

Thus, several principles for the development of screening program strategies are derived from community organization principles as summarized in Table 2.

#### **Social Support Theory**

A social support network consists of the personal contacts with immediate family, other relatives, friends, neighbors, co-workers and professionals that provide people with social identity and provide emotional support, material aid, services, information and new social contacts (Lacey et al., 1989). Since support network members play critical roles in the development of attitudes and behaviors, they should be considered as potentially powerful vehicles in planning programs to increase screening behaviors. Health professionals (family physicians, for example) are often part of a woman's social support network and influence her screening participation. People who do not have a regular physician are less likely to receive appropriate screening than those who do, so a potential approach is to try to reach them through their social network. For example, a relative, friend, or co-worker may have a mammogram or

Table 2.

Community Organization Principles Important in the Development of Screening Program Strategies

- In-depth study and understanding of the community of interest by program planners is essential.
- Community members need to participate in meaningful ways, in as many program phases as possible, as problem-solvers and decision makers, not just as potential clients or recipients of services.
- Program goals should be perceived as relevant by community members.
- Program components should support empowerment--the development of individual control over one's life.

a pap smear, and could be encouraged to "pass it along" (verbally or with a flyer) to a loved one at risk (Zapka, et al., 1993).

Peer programs are an approach which may meet specific educational and behavioral goals and also enrich the social networks of elders. Two highly effective examples are to train elders to serve as educators for a comprehensive program of health education (Minkler, 1981) and to facilitate arthritis self-management groups (Lorig & Laurin, 1985). Using peer influence could increase cancer screening among the elderly.

Although there is wide variation in the characteristics of the networks of different people, there are some similarities with regard to specific groups which are of interest to screening program planners. For example, elderly population subgroups do not receive adequate cancer screening. They often experience contraction of their social networks through retirement, deaths of spouse or friends, geographic dispersal of children, relocation, reduced income, and lack of mobility. In fact, they are at risk of "social marginality," with only weak ties to their community (Minkler, 1990). Creative approaches to tap into potentially smaller and weaker networks might be devised, such as reaching them through churches, homemaker health aids, or grocery store "information tables."

#### **A Review of Interpersonal Strategies Activities Undertaken by Health Professionals**

Research has demonstrated that a physician's recommendation is extremely important and usually the most powerful force influencing

ing women to obtain cancer screening (Lane, Polednak & Burg, 1989; Morisky, Fox, Murata & Stein, 1989; Sobel, et al., 1989; NCI, 1990; Glockner, Holden & Hilton, 1992). A study by the American Cancer Society indicated that when their physicians recommended a mammogram, 94% of women had obtained one. In contrast, only 36% of women received mammography without a doctor's recommendation (NCI, 1990). Women who never had mammograms most commonly said it was because they had not thought about it, and that their physicians had not recommended it (NCI, 1990). The most common reason given by African-American women over 65 for not having mammography was lack of a physician's recommendation (NCI, 1990). This influence is especially effective among women of lower socioeconomic status (Kruse & Phillips, 1987; Sansom, Wakefield & Pinnock, 1971) also are least likely to receive adequate screening.

There are several methods and opportunities for health professionals to encourage screening participation. Recommendations may be communicated during a "checkup" screening visit, or a visit for purposes other than screening. This "inreach" approach makes the most of opportunities to encourage use of screening services, since women may not actively seek early detection visits with health care providers. Some inreach examples are:

- ❖ The Emergency Room Cancer Screening Program in New York City is evaluating a model to expand the availability and use of cancer screening services among low-income African-American patients who use the emergency room as a source of primary care (Zapka, Chasan, Barth, Mas, & Costanza, 1992).
- ❖ Women with appointments for other purposes have been offered screening by the general practitioner (Ward, Boyle, Redman & Sanson-Fisher 1991) or a nurse practitioner (Mandelblatt, et al., 1993) or to participate in breast cancer detection classes (Ansell, et al., 1988).
- ❖ Women seen in health center emergency rooms or attending the sexually transmitted disease clinic at Martin Luther King Hospital in Los Angeles were offered Pap tests (Minkler, 1990).
- ❖ Standard cervical cancer screening procedures were adopted for all outpatients by the five major hospitals in Newark, NJ (Foster, Holland, Louria & Stinson, 1988).

- ❖ Older women were given screening information when they brought grandchildren to a family health center for well-child visits or daughters for prenatal care (Zapka, Costanza, Stoddard, & Green, 1990).
- ❖ Women bringing school-age children for mandatory immunization were offered counseling about Pap smears (Zapka et al., 1990).
- ❖ Women received an invitation to breast cancer screenings which also invited them to have cervical screening at the same time (Lancaster & Elton, 1992).

In addition to strategies where clients and clinicians are face-to-face, the following are some other ways to provide personalized information to clients and capitalize on the influence of a provider's recommendation:

- ❖ Targeted or personalized mailings can be sent to clients by a health facility or provider (Haiart, et al., 1990; Baines, 1984; Hurley et al., 1992).
- ❖ Telephone interviews (Schymura, Thompson & Grady, 1989) can provide individualized telephone instruction, counseling and referral (Minkler, 1990; Oklahoma State Department of Health, 1991) or phone banks (Mayer & Kellogg, 1989).
- ❖ Telephone counseling as a follow-up strategy was found to be particularly effective (King, et al., 1994).

Programs that used a personal, mailed invitation from the woman's general practitioner achieved mammography attendance rates of 60% to 75%, compared to rates of 15% to 24% without the personal invitation (Haiart, et al., 1990). A comparison of different types of letters from a screening program found the most effective was a letter specifying an appointment time, with a follow-up letter to non-attenders (Hurley, et al., 1992). One program using personalized letters to encourage follow-up appointments among women with abnormal pap smears found that the letters were only successful when used in combination with a mailed slide-tape program or with transportation incentives in the form of free bus passes (Marcus, et al., 1992). Another program which distributed literature prior to visits found that very few women initiated discussion of screening, but when the physician recommended screening at the same visit, most women agreed to it (Cockburn, Hirst, Hill & Marks, 1990). A program inviting older women for breast and cervical screenings at

50

the same visit significantly increased cervical screening in this age group (Lancaster & Elton, 1992).

To maximize adoption of interpersonal strategies for women by clinicians, it is often necessary first to design interventions aimed at the clinicians themselves. Cancer screening can be significantly increased by enhancing the clinician's performance. There is evidence that many physicians do not recommend screening to a majority of eligible patients (NCI, 1990; Spurlock, Nadel & McMannon, 1992; Rimer, et al., 1990). Significant differences among physician specialties have been noted. Physicians practicing specialties other than gynecology (and in some studies internal medicine) make significantly fewer referrals for cancer screening (Zapka, et al., 1993; Glockner et al., 1992; Turner, et al., 1992; Cohen, Roos, MacWilliam & Wajda, 1992). Internal medicine residents in a California group practice were found to order mammograms for only 13% of women patients over age 50 prior to an intervention (McPhee, Richard & Solkowitz, 1986). This study also found that physicians significantly overestimated their referrals for mammography; physicians estimated that they ordered mammograms for 49% of eligible patients, but medical records indicated that only 23% received referrals during the study period. Fox and Stein (1991) found that white women were twice as likely as Hispanic women to report that their physician had mentioned mammography (58% vs. 29%). Also, physicians may be less likely to discuss breast health with the advancing age of their patients, despite the fact that the physician's enthusiasm for mammography was by far the most powerful force in completion of mammography (Grady et al., 1992; Fox, Slu & Stein, 1992). One study found that the peak age for medical breast examination is 25-34, after which examination decreases with age (Hill, Rassaby, & Gray, 1982). Another study indicated significant misunderstanding or misapplication of screening guidelines by physicians: mammography was used excessively for younger women and was inadequate among older women (Harris, et al., 1991).

Recent studies report dramatic increases in mammography during recent years and in the number of women advised to have a mammogram by their physician (Coleman et al., 1993; Lane & Burg, 1992). Another finding with implications for program planning was the fact that 68% of physicians surveyed reported that patient request affects their ordering of mammograms (Zapka et al., 1990). However, Fox et al. (1992) report that only 18% of women aged 50-64 and 7% of women over age 75 ask for a mammography referral.

51



Eighty-three percent of women questioned in the same study said they would get a mammogram if recommended by their doctor. Authors suggest intervention messages which encourage both physicians and patients to bring up the subject of mammography.

In summary, it is possible to significantly increase cancer screening by enhancing the physician's performance in the interaction with patients. Numerous approaches have been used and generally achieved some success in increasing screening or promoting physician acceptance of screening programs, although not all programs have presented evaluation data. Some examples follow, and we refer to the reader numerous citations in the references section:

- ❖ Special television programs were directed at physicians (Hill, Rassaby & Gray, 1982).
- ❖ Physicians were trained in a counseling protocol to deal with specific barriers given by their patients for not wanting a Pap smear (Ward, Boyle, Redman & Sanson-Fisher, 1991).
- ❖ One or more educational sessions were designed for physicians at hospital rounds, medical associations, in-service training and/or scientific meetings. Sessions cover such topics as breast cancer epidemiology, risk factors, breast examination, interpersonal communications skills, malpractice liability, the process of referral, effectiveness and safety of mammography, screening services as a malpractice issue, management of suspicious radiology findings, and case study (Baines, 1984; Fox, Tsous, & Klos, 1985; Costanza, et al., 1993; Fletcher, et al., 1993). One program followed a single educational session with a reinforcing memorandum (Fox et al., 1985). The Office Reminder Systems project in California found a positive correlation between a screening compliance score and the number of continuing medical hours attended (Minkler et al., 1990).
- ❖ Letters, newsletters, brochures, journal articles, patient education kits, or other written materials have been directed at physician (Hill et al., 1982; Lane et al., 1989; Michielutte et al., 1989; Balne, 1984).

Related interventions aimed at clinicians to improve the effectiveness of "inreach" strategies are those related to promoting

changes in their office practices. Physicians have cited "lack of time" as one reason that cancer screening is not included in routine office practice (Hill et al., 1982). Other reasons given include physician forgetfulness and difficulty in identifying test due dates (McPhee, Richard, Bird, Solkowitz & Jenkins, 1985; MCPhee, Richard & Solkowitz, 1986) Some "systems" intervention examples are:

- ❖ Reminders attached to or printed on encounter forms, and reminders stamped in medical records (McPhee et al., 1986; Costanza et al., 1993; MCPhee et al., 1989; NCI, 1991).
- ❖ Audit of medical records with specific performance feedback and monitoring adherence to protocol (McPhee et al., 1989; Nattinger, Panzer, & Janus, 1989; Los Angeles Department of Health, 1991).
- ❖ Standardization of protocols for physical exams, screening, or follow-up (Los Angeles Department of Health, 1991; Illinois State Department of Health, 1991)
- ❖ Clinic-based or population-based call and recall system (Mak, & Stratton, 1993).
- ❖ Development of an instrument to assess cancer risk--based on health factors and behaviors, combined with psychological data--to make specific recommendations for screening and risk factor control and development interventions for physicians (Illinois State Department of Health, 1991).
- ❖ Organization of a network of primary health care centers, as well as a mammogram van to increase screening among the medically underserved (Morbidity and Mortality Weekly Report, 1991).
- ❖ The Harlem Cancer Education and Detection Project is evaluating the use of a "patient navigator" who acts as a patient advocate so that the patient receives needed social and health services (Minkler, 1990).

Obviously, strategies are often combined for greater impact. Also, interventions directed at physicians are often combined with efforts aimed at patients, including courses for physicians, patient reminder cards and telephone counseling (Trook, et al., 1992; Costanza, et al., 1991; Burack, 1989); a television campaign (Hill et al., 1982); literature and reminder cards mailed home (McPhee et al., 1989) or distributed at clinic appointments; (Cockburn, Hirst, Hill &

Mark, 1990; Nattinger, Panzer & Janus, 1989) mammogram appointment scheduling and reminder postcards; (Wolosin, 1990) questionnaires about preventive behaviors; (Chambers, Balaban, Carlson, Ungemack & Grasberger, 1989) media and direct education workshops; (Micheluite et al., 1989) individual patient counseling, community group education, teaching aids and media programs (Zapka et al., 1993; Lane et al., 1991).

Certainly other health professionals also can effectively offer cancer screening services and/or education and can positively influence screening behavior (Mandelblatt et al., 1993). A community health center-based intervention with Latina women utilized clinic aides to introduce the issues of breast cancer screening to women prior to their appointment with a physician (Zapka, et al., 1993). In another example, a nurse clinician provided individualized BSE instruction to HMO patients; this approach increased the rate of regular practice of BSE from 62% to 91%, and removed all barriers to practice for 75 percent of women who had reported barriers. Over 80% were evaluated as good or excellent on technique (Mahloch, et al., 1990). Nurse practitioners offering breast and cervical screenings on the same day as visits for other reasons achieved a significantly higher screening rate than a control group of physicians with a reminder system (Mandelblatt et al., 1993). There is evidence that members of several health professions, including but not limited to physicians, lack the skills to teach patients or convey instructions effectively (Lorenz, 1986). In exit interviews, approximately 50 percent of patients could not recall instructions given to them. In addition, surveys of nurse practitioners and persons specifically employed to teach patients indicate that they want information on how to teach patients. Courses offered through regional Diabetes Research and Training Centers have been popular and successful in increasing skill and hold promise for improved patient outcome (Lorenz, 1986). Though developed for a different subject area, the approach of improving patient teaching skills is one that merits continued investigation and attention in cancer screening interventions.

### **Programs Using Trained Peers**

The use of members of a particular group or community, specially trained to counsel or educate their population peers, has been tried over the years in many settings. The influence of a member of one's own group can be a powerful vehicle. With a peer,

there may be fewer issues of social distance between client and provider. The use of peers enlists natural channels of social influence (Minkler, 1981) may eliminate problems such as language barriers and can bring to a program a direct personal understanding of cultural and community factors (Elder, et al., 1991). Some examples of peer education programs are:

- ❖ Proyecto a Su Salud used a pair of group leaders, one project staff member and one peer from the Latina community in group education sessions (Solis, et al., 1985).
- ❖ The Metropolitan Detroit Cancer Control Program (Satariano et al., 1982) recruited outreach health workers from high-risk neighborhoods. These workers were trained to contact women in the community in their homes and provide direct, personal information about risk for cervical cancer and the need for screening. The outreach workers publicized the program and were able to refer women to mobile clinics in their neighborhoods. The numbers of women screened at the outreach clinics were compared with women screened through worksite clinics and those screened at standing clinics (hospital outpatient clinics and neighborhood health clinics). The outreach approach was especially effective in reaching African-American women ages 20 to 80. Eighty-eight percent of all African-American women were screened using the mobile clinics.
- ❖ In inner-city Baltimore, 144 community volunteers from churches and other organizations were trained to counsel inadequately served women about cervical cancer screening. Clients were initially surveyed and identified by telephone. Each educator subsequently counseled an average of eight women, 43% of whom made and kept appointments for Pap smears and indicated their intention to have a repeat test the following year (Mamon, et al., 1992).
- ❖ One Michigan county plans to use volunteer retired physicians to recruit elderly women for a breast cancer screening program (Sienko, Osuch, Garlinhouse, Rakowski & Given, 1992).
- ❖ African-American church women in Rhode Island are being trained to recruit other African-American women for cervical and breast screening and to help them

overcome barriers to screenings and follow-up care (Scott, DeBuono, Fulton, Smith & Feldman, 1992).

- ◆ The Minority Cancer Education Program in Buffalo, NY, has targeted African-American and other ethnic minorities, the medically underserved and the elderly (Roberson, 1986). Cancer education programs are delivered by neighborhood volunteers who advise and monitor program activities, assist with developing of promotional materials, schedule and teach education programs, recruit program participants and assist with special projects. Two community health leaders were paid project staff from the community. Personal contacts, presumably with volunteers and guides, were responsible for recruiting 87% of the participants into BSE classes. An increase in BSE practice was reported, as was improvement in BSE technique.
- ◆ Women's groups from local churches have volunteered to serve as "motivators" for a breast cancer screening project in Charlotte, NC (Bird, 1992).
- ◆ In inner-city Atlanta, lay health workers provide in-home education sessions for individuals in an effort to increase adherence to screening schedules for low-income African-American women. Emphasis is put on culturally sensitive role modeling and discussion; results from this study are not yet available (Sung, et al., 1992).
- ◆ To provide screening for high-risk Caribbean immigrants in New York City, local community-based organizations (churches, schools, colleges, community service centers) identified or established a liaison person or committee to work with project staff. Together they tried to either identify to existing activities such as health fairs or Cancer Awareness Days or to develop new activities that would fit well with cancer screening. They also tried to target program activities. For example, with low income or recent refugee groups, comprehensive screening activities were organized. For more affluent, U.S.-born groups, more focused informational activities were planned (Fruchter, et al., 1985).
- ◆ In northern Manhattan, 14 women were trained to offer education programs within the Dominican community (Bloch, 1991).
- ◆ The American Association of Retired Persons includes programming for volunteer leaders in their mammography

awareness campaign (Rubinstein, 1991; American Association for Retired Person, 1991).

### **Group Education Interventions**

The use of groups to present information and promote behavior change is a time-honored approach used with success in many forms and diverse settings. As outlined in the previous section, many programs adopt the group intervention approach, sometimes employing peer facilitation. A group may be brought together for a lecture or audiovisual presentation, an efficient way to communicate a large amount of information to many people. Such a presentation can be enhanced with group discussion, which offers unique opportunities not usually available in a medical appointment or other individual interaction. A group program may also provide valuable modeling for behavior by either participants or leaders and also may include such effective methods as guided practice (Marty, McKernott & Gold, 1983). When group discussion involves individuals who share common health problems, it is likely to be "pertinent, relevant, and understandable" and to result in mutual reinforcement (Green, 1978). Group programs can be versatile, effective, and relatively simple to implement. An informal "class" setting is familiar and acceptable to many people. It can be designed to address specific concerns of a particular group and can be easily modified in the face of changing needs. Group programs may be located at health centers, hospitals, other medical settings and also in other locations, such as community organizations (described in next section). The use of "home parties" or "living room sessions" is gaining popularity (Preston, Baranowski & Higginbotham, 1988). However, limited or conflicting evidence is available concerning the efficacy and acceptability of group approaches with regard to cancer screening. Some group program examples are:

- ◆ Community-based educational group sessions were used for older women or minority women as part of multifaceted strategies to increase screening. Attendance at sessions appeared to encourage mammography at a higher rate than found in the community at large or in control communities (Rimer et al., 1992; Dignan et al., 1990; Forsyth, Fulton, Lane, Burg & Krishna, 1992).
- ◆ Women who received cervical cancer screening and a group education program were significantly more likely

to obtain preventive health care than non-participants (Carney, Dietrich & Freeman, 1992).

- ❖ A BSE teaching program in a college setting increased performance. Participants were also asked to discuss BSE with their mothers and others, and this social networking message appeared to be an effective strategy to reach another population subgroup (Mamon & Zapka, 1985).
- ❖ Health belief model messages, a "You ought to be in pictures" theme and a "Once is not enough" message were effectively used within community education discussions in Los Angeles (Stein, Fox, Murata & Morisky, 1992).
- ❖ A group education program for African-American women included an activity and discussion to address fear, fatalism, denial, and other myths and barriers to prevention (Dignan et al., 1990).
- ❖ Superior and more regular performance of BSE was found among British women who attended a class than among women who were educated individually at a clinic (Flaherty, Phillip, Harris, & Joslin, 1986).
- ❖ Group and individual teaching for BSE were compared and both were found to increase skills and frequency of BSE (Bralley, 1986). Neither strategy increased knowledge, and only individual teaching increased perceived susceptibility to breast cancer. As is noted above, many health professionals who provide patient education lack teaching skills, which could be a factor in these cases. British women invited to a BSE teaching class were less likely to attend than those invited to obtain mammography. The BSE class attendees expressed disappointment that they were not screened or examined by medical staff (Calnan, 1984). This might serve to caution program planners not to replace needed or expected medical services with group educational approaches but to offer both.
- ❖ In Phoenix, researchers compared a program they considered to be strictly educational with a combined educational and psychological approach (Reynolds, West & Aiken, 1990). Major barriers to screening were discussed. Also included was a role play of the process of making a written commitment to obtain a mammogram appointment, to provide a modeling opportunity. Group

members were led through an imagining exercise about getting a mammogram and finally were asked to make a commitment to having a mammogram. Knowledge, attitudes and beliefs changed as a result of the interventions but not actual behavior. Implications for practitioners include addressing specific barriers, stressing the value of early detection, and the importance of a multifaceted approach.

- ❖ A single session group approach found some moderate success with the elderly in the Cancer Program for Older Citizens in Philadelphia (Feldman, 1992). After viewing a slide-tape presentation, attendees received booklets and participated in a group discussion with an oncology nurse. The discussion stressed modelling, repetition, and clear instructions for action for initiating a discussion with their doctor.
- ❖ One promising approach combining group strategy with the use of a peer educator is the "home party," or "charla" (in Latino communities). Generally, "charla" happens with the natural gathering of Latinos in their own social setting. This approach has been used to increase acceptance of breast cancer screening (Feldman, 1992) and in other health programs such as prenatal care (Torres, & Ciachello, in press). The model involves a small group (10-15 persons of similar social background) invited to a private home for socializing, combined with a presentation and informal discussion led by a trained peer. This can provide a comfortable environment for discussion of personal matters and capitalize on the strong influence of peers.

### **Reaching People Through Mediating Structures**

Outreach efforts to community organizations (such as churches, schools, businesses, libraries, city agencies, civic groups, women's clubs and groups, community centers, senior centers, English-as-a-Second-Language classes, retirement communities, private homes, and public or elderly housing) and establishments such as laundromats and beauty salons are a means of contacting women who do not seek health care regularly (Lane et al., 1989; Morisky et al., 1989; Zapka, et al., 1993; Sung et al., 1992; American Association for Retired Persons, 1991; Laws, 1987). Local chapters of the American Cancer Society have worked independently

(Shankland, 1988) or cooperatively with other organizations (McCoy, Neilsen, Chiwood, Zaveritnik & Khoury, 1991) to offer service delivery and/or educational programs. These programs follow the adage, "Go where the people are." Although many programs report success, one program which sent paid staff to community and employee groups found this method to be very expensive and not very effective (Hurley, et al., 1992).

Connections to churches are especially strong for some cultural groups, notably blacks and Hispanics, and for the elderly. The African-American church has been characterized as an "extremely relevant focus for the practice of community medicine," having "had to attend to the total needs of its members." Although few specific cancer screening programs are documented, African-American churches are involved in many aspects of health care, including primary care delivery, community mental health and hypertension screening (Scott, DeBuono, Fulto, Smith, & Feldman, 1992; Levin, 1984). Consequently, education, recruitment, and perhaps even actual screening activities might be acceptable to churches and to women. Michielutte et al. (1989) place special emphasis on reaching women through churches in their project to reach poor, elderly and rural-dwelling African-American women. Lacey et al. (1989) report work with churches in Chicago with poor African-American women. Morisky et al. (1989) report that outreach through the Catholic Church was an especially important way to reach Hispanic women in Greater Los Angeles, who required more outreach activities than whites or blacks in the same program. In Philadelphia, the elderly were reached through senior citizens' groups affiliated with churches and synagogues (Keintz, Rimer, Fleisher & Engstrom, 1988). Church-based women's groups in Charlotte, NC have volunteered to serve as "motivators" for a breast cancer screening project (Bird, 1992).

The workplace as another venue for programs (worksite mammography and breast cancer education programs) is believed to be promising because of the large numbers of working women over age 40, the large amount of time people spend in the workplace and the documented success of worksite-based programs in cancer screening and other topics (Braley, 1986; Kaluzny, Schenck & Rickett, 1986; Paskett, et al., 1990). A survey of Fortune 500 companies shows support for mammography: 71% provided insurance coverage for screening mammograms and 29% brought mobile equipment on site (Mahaney, 1992). Some screening programs also

included employee spouse (Kessler, Rimer, Devine, Gatenby, & Engstrom, 1991; Bodner, Bond, et al., 1992) and/or retirees (Bodner et al., 1992). Although most participants were themselves active employees, a program which includes spouses may reach people who otherwise are not contacted. One informant reported that while Hispanics who are not acculturated to American society have low participation in community groups, their involvement was highest in work or labor unions (National Cancer Institute, 1988). The National Cancer Institute has developed a packet of materials, "Worksite Mammography and Breast Cancer Education Programs," which offers a comprehensive guide for planning, based in part on the experiences of corporations that already provide such services. It advocates a combination of media, group information sessions, participation by company physicians or nurses or local cancer center staff, and seminars for employees and medical staff. The Wisconsin Division of the American Cancer Society also distributes an information package about worksite programs (American Cancer Society, 1990). Kaluzny et al. (1986) review the implementation process and related factors for cancer prevention programs, and recommend the use of participant involvement and social support. One survey of working women's screening behavior indicated that having a co-worker with breast cancer was associated with use of mammography (Glanz, et al., 1992).

A program at Pennzoil Company offered all employees a lecture/slide program on cancer and a risk assessment questionnaire (Laville, Vernon, Jackson & Hughes, 1989). Those considered to be at high risk, based on the questionnaire, were invited to consult individually with a nurse educator/screener, and most were invited for appropriate diagnostic procedures, including mammography. Sixty to 66.5% of women identified as high risk for breast cancer attended the consultation and 49% participated in mammography screening. Users and non-users were compared on a number of dimensions. During an 18-month period, more than 3,500 women received mammography through a program at Bell Atlantic Corporation (Laville, Vernon, Jackson & Hughes, 1989). Sixty-two percent of eligible active employees sought mammography via a program at Dow Chemical Company after education sessions and media exposure (Bodner et al., 1992).

In contrast, the Metropolitan Detroit Cancer Control Program (Satariano, Schwartz, & Swanson, 1982) found extremely low participation in worksite clinics when compared with numbers of

women screened at standing clinics (hospitals, etc.) and especially in contrast to results at mobile clinics when high-risk women were recruited by peer outreach workers. Morisky et al (1989) decided not to include worksite interventions in their project after discovering that only 8% of their intended audience worked within the target communities. Planners must ascertain where their intended audience can be found.

### **Community Development Strategies**

As noted earlier, community participation and commitment is essential to any quality screening endeavor. A large intervention project in Chicago (Minkler, 1989) is using a combination of strategies to help poor urban African-American women address their health problems by learning more about cancer, obtaining screening and any needed follow-up or treatment, and reducing institutional barriers which inhibit them from receiving care. The intervention includes education and outreach in the community; education and recruitment in clinics; screening in clinics; and diagnosis, treatment and follow-up in Cook County Hospital. Project staff (specially trained nurses and lay community outreach workers) routinely visit each of over 1,000 "contact points" in the community (agencies, businesses, institutions, housing developments, schools, and churches).

Cuidaremos ("We Will Care for Ourselves") was another project that used community development techniques to promote breast self-examination (Lorig & Walters, 1980-81). A small group of community women perceived a need and identified a large network of opinion leaders within the community. These opinion leaders developed and administered a needs assessment survey, assisted in the development of a "trigger" film (not designed to stand alone, but rather to trigger discussion), received training as group facilitators and cancer educators, and organized and provided community education classes. Short-term follow-up and preliminary evaluation were encouraging.

Community development strategies, including the involvement of community members and community definition of problems, are particularly recommended for helping to establish trust in working with low-income Hispanic populations (National Cancer Institute, 1988) well as with heterogeneous communities (Taplin, Mahloch, Majer, Taylor & Urban, 1992).

A breast cancer screening program for Chinese-American women in San Francisco offered screening and education. It was designed to build relationships with the Chinese community and to develop that community's ability to mount similar programs in the future (Shankland, 1988).

### **Choosing Strategies and Planning Programs**

The program reports and research regarding breast and cervical cancers screenings have substantially increased in the past few years. While this represents exciting progress and rich descriptions of various strategies, the task of choosing priority strategies and messages remain complicated. The choice of interpersonal strategy (e.g., physician inreach, community group programs) and choice of messages within the strategy (e.g., stressing benefits of early screening, emphasizing a social support message) must be contemplated within the context of knowledge about the needs and preferences of subgroups of the local population. Building on the important observations of Iverson and Vernon (1989) the following approaches are offered to guide practitioners in the choice of strategies and messages:

*In communities where the majority of women have not been screened recently, interventions aimed at medical care providers will be the most effective in initially increasing screening participation.*

As reported earlier, numerous studies consistently document the critical role providers play in increasing screening participation. Given that most women, even low-income minority women, have at least some contact with the medical care system, encouraging clinician "inreach" is the single strategy most likely to significantly impact women. When screening participation within a community is low, clinician initiation and referral are likely to show marked impact. As screening is diffused within the community, additional complementary interpersonal strategies will need consideration to reach those who do not participate and/or have only limited contact with medical care providers.

*Programs aimed at clinicians can first address their knowledge, motivation, and skills. Second, they can address aspects of the practice environment which enable and reinforce inreach behavior.*

As noted earlier, programs aimed at increasing clinician knowledge and skills have proved effective. Clinician-focused efforts have included messages related to recommended screening guidelines, aspects of quality comprehensive screening, risk-management benefits and clinical management skills. Legislation which provides reimbursement for screening service (Thompson, Kessler & Boss, 1989) makes it easier for clinicians to recommend screening and for patients to comply with the recommendations (Zapka & Berkowitz, 1992). Additionally, motivation of clinicians is enhanced when their screening behavior is reinforced by such practice supports as referral systems, tickler/computerized reminders and standardized forms. These practice support strategies are likely to be even more important as we enter an era of screening behavior maintenance; that is, adherence to regular periodic screening as compared with screening initiation.

*The essential decisions about strategy and messages for women's interventions are those related to: 1) which subpopulation(s) should receive priority attention, and 2) what the priority objectives are that need addressing within that subpopulation.*

The decisions about priority populations rest on information provided by surveillance data and population surveys, as well as focused data provided by special needs assessment efforts. Additional guidance can come from published reports documented here and elsewhere (Rimer, Ross, Cristinzio & King, 1992). For instance, cancer registry data may show diagnosis at a later stage among minority women, and community health center data may show a high level of screening participation by women who visit regularly, but low participation by sporadic and/or elderly clients. In this situation, the priority target group would be elderly minority women, and a priority objective would be to increase preventive visits, those that include a complete health exam, and cancer screening. As another example, in a baseline survey prior to the outset of their program, Morisky et al. (1989) discovered significant preference for Spanish language among their target population, as well as significantly lower utilization of screening among Hispanics. This led them to adjust their outreach activities focusing on English-as-a-Second Language classes. They also found that women over age 65 were much less likely to have a physician recommend mammography

than younger women. This led them to schedule continuing education for physicians on risk factors, and to present programs at senior centers encouraging more assertiveness in dealing with physicians. A screening program of a community hospital in Flint, MI, used media and physician referrals to recruit women, yet reached few disadvantaged women (Dodds et al., 1991). The Forsythe County (North Carolina) Project (Dignan et al., 1990) found great sensitivity to sexual topics in their target group of African-American women, as well as "fearful and fatalistic" attitude toward cancer issues, low literacy, and visual and auditory impairment. They planned their group education program with these factors in mind.

*The choice of strategies directly aimed at women must weigh the important complex and interrelated criteria of relevance and acceptability, likelihood of effectiveness, scope and breadth, feasibility, and cost-effectiveness.*

As noted in Table 3, numerous criteria should be explicitly weighed by program planning staff, with input from the community and funding authorities by way of a variety of participation strategies. These include citizens' advisory committees; employing target group members; special convened meetings; interviews and negotiations with funding agency representatives; short-conferences and workshops; and/or focus groups (Green & Kreuter, 1991).

As inferred by the preceding discussion of the 4 general groups of interpersonal strategies, the choice of the strategy is guided by the specific educational needs of a particular population subgroup. When evaluating alternatives, program managers should explicitly develop a set of decision criteria--those considerations important to evaluating and comparing alternative solutions.

*The selection of messages to be stressed within the strategy should reflect informed theory-driven choices.*

Numerous examples of program messages are highlighted in the previous sections. For example, for the elderly, factors such as hearing or vision deficits, limited literacy, and the difficulty of changing the long-held belief that cancer is a "death sentence" need to be accommodated (Rimer et al., 1990). The section on the advantages of interpersonal strategies over other methods included information on the concept of "personalismo," important to Hispanic people. To operationalize this concept, messages about getting

Table 3.  
Criteria for Consideration in Strategy and Message Selection

- Relevance and Acceptability**  
Are the approaches perceived as needed and sensitive to needs and preferences of the intended audiences, as well as sponsors and funders? For example, use of "charla" groups may be more acceptable to elderly Latina women who rarely use clinical services than individual education by an outreach worker.
- Likelihood of Effectiveness**  
In view of identified goals and objectives, what program strategy is most effective as judged on the basis of empirical study and/or informed by theory and principles of practice? In a community with low levels of screening participation, a physician education strategy will be most effective, while in a population where screening is more diffused, a personalized reminder for repeat screening might be more effective, with a more intensive interpersonal strategy focused on non-participants.
- Scope and Breadth**  
What is the balance of need, effectiveness and the number of persons reached by each strategy/program option? One strategy, such as community outreach, may reach fewer women than another strategy, but it may be more effective for women at greater risk. Can a certain strategy be aimed at the multiple objectives of increasing both cervical and breast screenings by increasing prevention visits?
- Feasibility**  
What strategies/programs or combinations are feasible from the organization's resource perspective (financial requirements, available staff competency)? In many cases, extra resources may be out of the question, so that prudent readjustments of staff assignments may be the only feasible alternative. Do they have the needed competencies for the intervention?
- Cost in Relation to Benefits**  
What is the relationship of cost to quantitative and qualitative benefits? What are the opportunity costs? Does an expensive outreach strategy, which results in minor improvements in screening, yield gains in other important and qualitative benefits such as community trust and participation? A high-cost strategy may be only successful with the hard-to-reach. Does the decision to focus on that group prevent other important work from being undertaken? Do funders understand the cost-benefit trade-offs, and are they willing to support them?

involved in prevention services could be cultivated within social groups. Other important issues for Hispanics include family ties, fatalism about health (feeling out of control), misconceptions about disease prevention and treatment, and the use of folk medicine (National Cancer Institute, 1988). Other messages identified to be of special relevance to older Hispanics include "respect for oneself and others" (take care of yourself because others love you); setting an example; and the role of women as caretakers (others depend on you) (Solis et al., 1985; Zapka et al., 1992).

*Combinations of interventions are likely to be more effective than single interventions.*

In general, the greater the number of interventions with which a woman is involved, the greater the impact on the stated objectives. Unfortunately, it is usually difficult to identify the relative impact of each strategy on a specific population with a unique set of personal and social attributes. Again, educated, theory-based guesses should drive program decisions. For example, if screening participation among low-income African-American women is low, a physician education/referral message about how to reduce a woman's perceived barrier is more likely to be effective if the practice or clinic has also established a referral/reminder system to enhance compliance. Additionally, a peer group community outreach strategy for minority women emphasizing culturally appropriate messages could be enhanced by additional related messages in minority-targeted media.

### Conclusion

In communities where the majority of women have not been recently screened, interventions aimed at medical care providers will be the most effective in increasing screening participation. Programs aimed at clinicians can first address knowledge, motivation and skills. Second, they can address aspects of the practice environment that enable and reinforce in-reach behavior.

The essential decisions about strategy and messages for women's interventions are those related to: 1) which subpopulation(s) should receive priority attention, and 2) what the priority objectives are that need addressing within that subpopulation. The choice of strategies directly aimed at women must weigh the important complex and interrelated qualities of effectiveness, scope and breadth, feasibility and cost-effectiveness, as well as expectations of funding agencies.



The selection of messages to be stressed within the strategy should reflect informed theory-driven choices. Thus, combinations of interventions are likely to be more effective than single intervention.

### References

- AMC Cancer Research Center. (1992). Breast and cervical cancers screenings: Barriers and use among specific populations. AMC, Denver, CO.
- American Cancer Society, Wisconsin Division (1990). Mammograms can detect breast cancer while it's still this small: worksite breast health programs. Unpublished paper., Wisconsin Division, Milwaukee, WI, ACS.
- American Association for Retired Persons. (1991). "You Owe It to Yourself" Mammography Awareness Campaign. Washington, DC: American Association for Retired Persons.
- Ansell, D. A., Dillard, J., Rothenberg, M., Bork, J., Fizzotti, G. F., Alagaratnam, D., Shiimoto, G., Gunther, T., & Greager, J.A. (1988). Breast cancer screening in an urban African-American population: Preliminary report. Cancer, *62*, 425-428.
- Baines, C. J. (1984). Impediments to recruitment in the Canadian National Breast Screening Study: Response and resolution. Controlled Clinical Trials, *5*, 129-140.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavior change. Psychological Review, *84*, 191-215.
- Bartlett, E. E. (1984). The contributions of behavioral science to patient education practice: a review. In Ruffin J. L. (Eds.): Advances in Medical Social Science, Vol. II. New York, NY: Gordon and Breach Science Publishers.
- Bird, R. E. (1992). A successful breast cancer screening program. Cancer, *69*, 1938-1941.
- Bloch, S. (1991). Increasing Pap smear compliance among young underserved women in northern Manhattan. Unpublished paper. New York, NY, Columbia University Comprehensive Cancer Center.
- Bodner, K. M., Bond, G. G., Phillips, P. L., Bollinger, L. J., Lipps, T. E., & Cook, R. R. (1992). Preliminary evaluation of an employer-sponsored mammography screening program. Journal of Occupational Medicine, *34*, 793-796.
- Bralley, L. J. (1986). Effects of health teaching in the workplace on women's knowledge, beliefs, and practices regarding breast self-examination. Research in Nursing and Health, *9*, 223-231.
- Burack, R.C., & Liang, J. (1989). The acceptance and completion of mammography by older African-American women. American Journal of Public Health, *79*(6), 721-726.

- Calanan, M. (1984). Explaining participation in programs for the early detection of breast cancer. Community Medicine, *6*, 204-209.
- Caplan, L.S., Wells, B.L., & Haynes, S. (1992). Breast cancer screening among older racial/ethnic minorities and whites: Barriers to early detection. (Special Issue). Journal of Gerontology, *47*, 101-110.
- Carney, P., Dietrich, A. J., Freeman, D. H. (1992). Improving future preventive care through educational efforts at a women's community screening program. Journal of Community Health, *17*, 167-174.
- Chambers, C. V., Balaban, D. J., Carlson, B. L., & Ungemack, J. A., & Grasberger, D. M. (1989). Microcomputer-generated reminders: Improving the compliance of primary care physicians with mammography screening guidelines. Journal of Family Practice, *29*(3), 273-280.
- Cockburn, J., Hirst, S., Hill, D., & Marks, R. (1990). Increasing cervical screening in women of more than 40 years of age: An intervention in general practice. Medical Journal of Australia, *152*, 190-193.
- Cohen, M. M., Roos, N. P., MacWilliam, L., & Wajda, A. (1992) Assessing physicians' compliance with guidelines for Papanicolaou testing. Medical Care, *30*(6), 514-528.
- Coleman, E. A., & Fener, E. J. (1993). NCI Breast Cancer Screening Consortium: Breast cancer screening among women from 65-74 years of age in 1987-88 and 1991. Annals of Internal Medicine, *117*(11), 961-966.
- Costanza, M. E., D'Orsi, C. J., Greene, H. L., Gaw, V. P., Karellas, A., & Zapka, J. G. (1991). Feasibility of universal screening mammography: lessons from a community intervention. Archives Internal Medicine, *151*, 851-856.
- Costanza, M. E., Zapka, J. G., Harris, D. R., Hosmer, D., Barth, R., Gaw, V. P., Greene, H. L., & Stoddard, A. M. (1993). Impact of a physician intervention program to increase breast cancer screening. Journal of Cancer Epidemiology, Biomarkers, Prevention, *1*, 581-589.
- Dignan, M. B., Beal, P. E., Michielutte, R., Sharp, P. C., Daniels, L. A., & Young, L. D. (1990). Development of a direct education workshop for cervical cancer prevention in high risk women: The Forsyth County project. Journal of Cancer Education, *5*, 217-223.
- Dodds, M. E., Dowd, S. L., Mitchell-Beren, M., Yarbrough, M., & Choi, K. (1991). A breast cancer screening program in a community hospital. Journal of Community Health, *16*, 241-249.
- Eardley, A., & Elkind, A. (1990). A pilot study of attendance for breast cancer screening. Social Science and Medicine, *30*(6), 693-699.
- Elder, J. P., Castro, F. G., De Moor, C., Mayer, J., Candelaria, J. I., Campbell, N., Talavera, G., Ware, L. M. (1991). Differences in cancer-risk related behaviors in Latino and Anglo adults. Preventive Medicine, *20*, 751-763.

**Wellness Perspectives: Research, Theory and Practice, 11(2) 1995**

- Feldman, Z. (1992). Breast health education using home parties. Personal communication. Worcester, MA, Great Brook Valley Health Center.
- Fink, R., Shapiro, S., & Roester, R. (1972) Impact of efforts to increase participation in repetitive screenings for early breast cancer detection. American Journal of Public Health, 62, 328-336.
- Flaherty, C., Philip, J., Harris, W. G., & Joslin, C. A. F. (1986). Breast screening clinic versus health education session as outlets for education in breast self-examination. Journal of Epidemiology and Community Health, 40, 67-70.
- Fletcher, S. W., Harris, R. P., Gonzalez, J. J., Degnan, D., Lannin, D. R., Strecher, V. J., Pilgrim, C., Guade, D., Earp, J. A., & Clark, R. L. (1993). Increasing mammography utilization: A controlled study. Journal of National Cancer Institute, 85, 112-120.
- Forsyth, M. C., Fulton, D. L., Lane, D. S., Burg, M. A., & Krishna, M. (1992). Changes in knowledge, attitudes and behavior of women participating in a community outreach education program on breast cancer screening. Patient Education Counseling, 19, 241-250.
- Foster, J. D., Holland, B., Louria, D. B., & Stinson, L. (1988). In situ/invasive cervical cancer ratios: impact of cancer education and screening. Journal of Cancer Education, 3(2), 121-125.
- Fox, S., Tsous, C. V., & Klos, D. S. (1985). An intervention to increase mammography screening by residents in family practice. Journal of Family Practice, 20(5), 467-471.
- Fox, S. A., Stein, J. A. (1991). The effect of physician-patient communication on mammography utilization by different ethnic groups. Medical Care, 29(11): 1065-1082.
- Fox, S. A., Siu, A. L., & Stein, J. A. (1992). Breast cancer screening in older women: Effects of race, age, health status and physician-patient communication. Personal communication.
- Fruchter, R. G., Wright, C., Habenstret, F., Remy, J. C., Boyce, J. G., & Imperato, P. J. (1985). Screening for cervical and breast cancer among Caribbean immigrants. Journal of Community Health, 10(3), 121-135.
- Gilliam, S. J. (1991). Understanding the uptake of cervical cancer screening: the contribution of the health belief model. British Journal of General Practise, 41, 1510-513.
- Glanz, K., Resch, N., Lerman, C., Blake, A., Gorchov, P. M., & Rimer, B. K. (1992). Factors associated with adherence to breast cancer screenings among working women. Journal of Occupational Medicine, 34, 1071-1078.
- Glockner, S. M., Holden, M. G., Hilton, S. V. W., Norcross, W. A. (1992). Women's attitudes towards screening mammography. American Journal of Preventive Medicine, 8(2), 69-77.

70

**Public Education Intervention Strategies for Breast and Cervical Cancers**

- Grady, K. E., Umkau, J. P., McVay, J. M., & Reisine, S. T. (1992). The importance of physician encouragement in breast cancer screening of older women. Preventive Medicine, 21, 766-780.
- Green, L. W., & Kreuter, M. W. (1991). Health promotion planning: an educational and environmental approach. Mayfield Publishing Company, Mountain View, CA.
- Green, L. W. (1978). Determining the impact and effectiveness of health education as it relates to federal policy. Health Education Monography, 6(1), 66-74.
- Haiart, D. C., McKenzie, L., Henderson, J., Pollock, W., McQueen, D. V., Roberts, M. M., & Forrest, A. P. M. (1990). Mobile breast screening: Factors affecting uptake efforts to increase response and acceptability. Public Health Report, 104, 239-247.
- Harris, R., Fletcher, S. W., Gonzalez, J. J., Lannin, D. R., Degnan, D., Earp, J. A., & Clark, R. (1991). Mammography and age: Are we targeting the wrong women? A community survey of women and physicians. Cancer, 67(7), 2010-2014.
- Hill, D., Rassaby, J., & Gray, N. (1982). Health education about breast cancer using television and doctor involvement. Preventive Medicine, 11, 43-55.
- Hurley, S. F., Jolley, D. J., Livingston, P. M., Reading, D., Cockburn, J., Flint-Richter, D. (1992). Effectiveness, costs and cost effectiveness of recruitment strategies for a mammographic screening program to detect breast cancer. Journal of National Cancer Institute, 84(11), 855-863.
- Illinois State Department of Health. (1991). In Cervical cancer control: status and directions. National Cancer Institute, Centers for Disease Control, (NIH No. 91-3223). Bethesda, MD.
- Iverson, D. C., & Vernon, D. S. (Unpublished paper, 1989). Program principles associated with successful health education and health promotion interventions.
- Kaluzny, A., Schenck, A., & Ricketts, T. (1986). Cancer prevention in the workplace: an organizational innovation. Health Promotion, 1(3), 293-299.
- Kegeles, S. S., & Grady, K. E. (1982). Behavioral dimensions. In D. Schottenfeld, J. Fraumeni (Eds.): Cancer epidemiology and prevention. Philadelphia, PA, W. B. Saunders and Company.
- Keintz, M. K., Rimer, B., Fieisher, L., & Engstrom, P. (1988). Educating older adults about their increased cancer risk. Gerontologist, 28(4), 487-90.
- Kentucky Department of Health. (1991). In Cervical cancer control: Status and directions. National Cancer Institute, Centers for Disease Control, (NIH No. 91-3223). Bethesda, MD.

71

**Wellness Perspectives: Research, Theory and Practice, 11(2) 1995**

- Kessler, H. B., Rimer, B. K., Devine, P. J., Gatenby, R. A., & Engstrom, P. I. (1991). Corporate-sponsored breast cancer screening at the work site: Results of a statewide program. Radiology, 179, 107-110.
- King, E. S., Rimer, B. K., Seay, J., Balschem, A., Trock, B., & Engstrom, P. F. (1994). Promoting mammography use through progressive intervention: Is it effective? American Journal Public Health, 84(1), 104-106.
- Kruse, J., & Phillips, D. M. (1987). Factors influencing women's decision to undergo mammography. Obstetrics and Gynecology, 70, 744-748.
- Kuhns-Hastings, J., Brakey, M. R., & Marshall, I. A. (1993). Effectiveness of a comprehensive breast cancer-screening class for women residing in rural areas. Applied Nursing Research, 6, 71-79.
- Lacey, L. P., Phillips, C. W., Ansell, D., Whitman, S., Ebie, N., & Chen, E. (1989). An urban community-based cancer prevention screening and health education intervention in Chicago. Public Health Report, 104(6), 536-541.
- Lancaster, G., & Elton, P. (1992). Does the offer of cervical screenings or the breast cancer screenings encourage older women to have a cervical smear test? Journal of Epidemiology and Community Health, 46, 523-527.
- Lane, D. S., Polednak, A. P., & Burg, M. A. (1989). Measuring the impact of varied interventions on community-wide breast cancer screening. Advances in cancer control: Innovations and research. New York, NY: Alan R. Liss, Inc.
- Lane, D. S., Polednak, A. P., & Burg, M. A. (1991). Effect of continuing medical education and cost reduction on physician compliance with mammography screening guidelines. Journal of Family Practise, 33(4), 359-368.
- Lane, D. S., & Burg, M. A. (1992). Strategies to increase mammography utilization among community health center visitors: Improving awareness, affordability and accessibility. Medical Care, 31(2): 175-181.
- Laville, E. A., Vernon, S. W., Jackson, G. I., & Hughes, J. I. (1989). Comparison of participants and nonparticipants in a work site cancer awareness and screening program. Journal of Occupational Medicine, 31(3), 221-232.
- Laws, B (1987). Breast education screening and testing program. Unpublished report. Onandaga County Health Department, Syracuse, NY.
- Levin, J. S. (1984). The role of the African-American church in community medicine. Journal of National Medical Association, 76(5), 477-483.
- Lorenz, R. A. (1986). Training health professionals to improve the effectiveness of patient education programs. Diabetes Education, 12(Specl. 204-209).

**Public Education Intervention Strategies for Breast and Cervical Cancers**

- Lorig, K. R., & Laurin, J. (1985). Arthritis self-management; or, the chocolate-chip cookie caper. In H. P. Cleary, J. M. Kichen, P. G. Enzor, (Eds.): Advancing health through education: a case study approach, Palo Alto, CA: Mayfield Publishing.
- Lorig, K., & Walters, E. G. (1980-81). Cuidaremos: The HECO approach to breast self-examination. International Quarterly of Community Health Education, 1(2), 125-34.
- Los Angeles Department of Health. (1991). Cervical cancer control: status and directions. National Cancer Institute, Centers for Disease Control, (NIH No. 91-3223). Bethesda, MD.
- Mahaney, F. X. (1992). Survey says leading firms support mammography. Journal of National Cancer Institute, 21, 1618-1619.
- Mahloch, J., Paskett, E., Henderson, M., Grizzle, J., Ross-Price, M., Thompson, R. S. (1990). An evaluation of BSE frequency and quality and their relationship to breast lump detection. Advances in cancer control: Screening and prevention research. New York: Alan R. Liss, Inc.
- Mak, D. B., & Straton, J. (1993). The Fitzroy Valley pap smear register: Cervical screening in a population of Australian Aboriginal women. Medical Journal of Australia, 158, 163-166.
- Mamon, J. A., Shediak, M. C., Crosby, C. B., Celentano, D. D., Sanders, B., & Matanoski, G. M. (1992). Development and implementation of an intervention to increase cervical cancer screening of inner-city women. International Quarterly of Community Health Education, 12(1), 21-34.
- Mamon, J. A., & Zapka, J. G. (1985). Improving frequency and proficiency of breast self-examination: Effectiveness of an education program. American Journal of Public Health, 75(6): 618-624.
- Mandelblatt, J., Traxler, M., Lalka, P., Thomas, L., Chauhan, P., Maitsoane, S., & Kanetsky, P. A. (1993). A nurse practitioner intervention to increase breast and cervical cancers screenings for poor, elderly African-American women. Journal of General Internal Medicine, 8, 173-178.
- Marcus, A. C., Crane, L. A., Kaplan, C. P., Reading, A. E., Savage, E., Gunning, J., Bernstein, G., Bereck, J. S. (1992). Improving adherence to screening follow-up among women with abnormal Pap smears: Results from a large clinic-based trial of three intervention strategies. Medical Care, 30(3): 216-229.
- Marty, P. J., McDermott, R. J., & Gold, R. S. (1983). An assessment of three alternative formats for promoting breast self-examination. Cancer Nursing, 6(3), 207-211.
- Mayer, J. A., & Kellogg, M. C. (1989). Promoting mammography appointment making. Journal of Behavior Medicine, 12(6), 605-611.

**Wellness Perspectives: Research, Theory and Practice, 11(2) 1995**

- McCoy, C. B., Nelsen, B. B., Chitwood, D. D., Zaveritnik, J. J., & Khoury, E. L. (1991). Increasing the cancer screening of the medically underserved in South Florida. Cancer, 67(6), 1808-1813.
- McPhee, S. J., Richard, R., & Solkowitz, S. N. (1986). Performance of cancer screening in a university internal medicine practice. Journal of General Internal Medicine 1, 275-281.
- McPhee, S. J., Bird, J. A., Jenkins, C. N. H., & Fordham, D. (1989). Promoting cancer screening: A randomized, controlled trial of three interventions. Archives Internal Medicine, 149, 1866-1872.
- McPhee, S. J., Richard, R. J., & Solkowitz, S. N. (1986). Performance of cancer screening in a university internal medicine practice. Journal of General Internal Medicine 1, 275-281.
- McPhee, S. J., Richard, R., Bird, J. A., Solkowitz, S. N., & Jenkins, C. N. H. (1985). Reasons physicians do not perform cancer screening. Clinical Research, 33, 727A.
- Michielutte, R., Dignan, M. B., Wells, H. B., Young, L. D., Jackson, D. S., & Sharp, P. C. (1989). Development of a community cancer education program: The Forsythe County, NC cervical cancer prevention project. Public Health Report, 104(6), 542-551.
- Minkler, M. (1990). Improving health through community organization. In K. Glanz, F. M. Lewis, & B. K. Rimer (Eds.); Health behavior and health education. San Francisco, CA, Jossey-Bass.
- Minkler, M. (1981). Applications of social support theory to health education: Implications for work with the elderly. Health Education Quarterly 8(2), 147-165.
- Minkler, M. (1990). Improving health through community organization. In K. Glanz, F. M. Lewis & B. K. Rimer (Eds.); Health behavior and health education. San Francisco, CA, Jossey-Bass.
- Morbidity and Mortality Weekly Report. (September 1991). Increasing breast cancer screening among the medically underserved — Dade County, Florida, September 1987-March 1991. 40(16), 261-263.
- Morisky, D. E., Fox, S. A., Murata, P. J., & Stein, J. A. (1989). The role of needs assessment in designing a community-based mammography education program for urban women. Health Education Research 4(4), 469-478.
- National Cancer Institute, Office of Cancer Communications. (1988). Background paper for Hispanic Communications Plan. Unpublished. Bethesda, MD.
- National Cancer Institute. (1990). NCI Breast Cancer Screening Consortium: Screening mammography: A missed clinical opportunity? Journal of the American Medical Association, 264(1), 54-58.

**Public Education Intervention Strategies for Breast and Cervical Cancers**

- National Cancer Institute. (1991). Reducing Cervical Cancer in Baltimore: In Cervical cancer control: status and directions. (NIH No. 91-3223). Bethesda, MD.
- National Cancer Institute, Office of Cancer Communications (1992). Hagalo hoy . . . por su salud y su familia. Bethesda, MD.
- National Cancer Institute, Office of Cancer Communications (1991). Worksite mammography and breast cancer education programs. Bethesda, MD, 1991.
- National Cancer Institute. (1991). Improving Physician Preventive Care Activities, N. C. : In Cervical cancer control: status and directions. (NIH No. 91-3223). Bethesda, MD.
- National Cancer Institute. (1991). NCI Primary Care Physician Study, New Hampshire: In Cervical cancer control: status and directions. (NIH No. 91-3223). Bethesda, MD.
- Nattünger, A. B., Panzer, R. J., & Janus, J. (1989). Improving the utilization of screening mammography in primary care practices. Archives Internal Medicine, 149, 2087-2092.
- Oklahoma State Department of Health (1991). In Cervical cancer control: status and directions. National Cancer Institute, Centers for Disease Control, (NIH No. 91-3223). Bethesda, MD.
- Paskett, E. D., White, E., Urban, N., Gey, G. O., Hornecker, J., Meadows, S., & Sifferman, F. R. (1990). Implementation and evaluation of a worksite breast self-examination training program. In Advances in cancer control: Screening and prevention research. New York, NY: Alan R. Liss, Inc.
- Perry, C. L., Baranowski, T., & Parcel, G. S. (1990). How individuals, environments and health behavior interact: Social learning theory. In K. Glanz, F. M. Lewis, B. K. Rimer (Eds.); Health behavior and health education. San Francisco, CA, Jossey-Bass.
- Preston, M. A., Baranowski, T., & Higginbotham, J. C. (1988). Orchestrating the points of community intervention. International Quarterly of Health Education, 9, 11-34.
- Prochaska, J. O., DiClemente, C. C. (1988). Measuring process of change: Applications to the cessation of smoking. Journal of Consulting and Clinical Psychology, 56, 520-528.
- Rakowski, W., Dube, C. E., Marcus, B. H., Prochaska, J. O., Velicer, W. F., & Abrams, D. B. (1992). Assessing elements of women's decisions about mammography. Health Psychology, 11(2), 111-118.
- Reynolds, K. D., West, S. G., & Aiken, L. S. (1990). Increasing the use of mammography: a pilot program. Health Education Quarterly, 17(4), 429-441.

### Wellness Perspectives: Research, Theory and Practice, 11(2) 1995

- Rimer, B. K., Trock, B., Balshem, A., Engstrom, P. F., Rosan, J., & Lerman, C. (1990). Breast screening practices among primary physicians: Reality and potential. Journal of American Board Family Practise, 3(1), 26-34.
- Rimer, B. K., Resch, N., King, E., Ross, E., Lerman, C., Boyce, A., Kessler, H., & Engstrom, P. F. (1992). Multistrategy health education program to increase mammography use among women ages 65 and older. Public Health Report, 107(4), 369-380.
- Rimer, B. K. (1990). Perspectives on interpersonal theories in health education and health behavior. In K. Glanz, F. M. Lewis, & B. K. Rimer, (Eds. ); Health behavior and health education. San Francisco, CA, Jossey-Bass.
- Rimer, B. K., Ross, E., Cristinzio, S., & King, E. (1992). Older women's participation in breast screening. Journal of Gerontology, 47 Special Issue, 85-91.
- Roberson, N. (1986). A community-based cancer education program. In Public education about cancer: recent research. UICC Technical Report Series #80. International Congress, Bern, Switzerland.
- Rubinstein, L. (1991). You can make a difference: educating older women about mammography. A guide for program planners and volunteer leaders. Washington, DC, American Association for Retired Persons.
- Sansom, C. D., Wakefield, J., & Pincock, K. M. (1971). Choice or chance? How women come to have a cytostest done by their family doctor. International Journal of Health Education, 14, 127-138.
- Satariano, W. A., Schwartz, A. G., & Swanson, G. M. (1982). Screening for cervical cancer: Results from several intervention strategies. In Issues in cancer screening and communications. New York, NY: Alan R. Liss, Inc.
- Schymura, M. J., Thompson, W. D., & Grady, K. E. (1989). Two interventions to improve use of screening for breast cancer. In Advances in cancer control: innovations and research. New York, NY: Alan R. Liss, Inc.
- Scott, H. D., DeBuono, B. A., Fulton, J. P., Smith, R. A., & Feldman, J. P. (1992). The breast cancer screenings program in Rhode Island. Journal of Public Health Policy, 13, 52-65.
- Severin, W. J., Tankard, J. W. (1992). Communication theories: origins, methods, and uses in mass media. New York, NY: Longman.
- Shankland, S. (1988). Breast cancer screening program for Chinese-American women. American Cancer Society, San Francisco, CA, San Francisco Chapter.
- Sienko, D. G., Osuch, J. R., Garlinhouse, C., Rakowski, V., & Given, B. (1992). The design and implementation of a community breast cancer screening project. Cancer, 42(3), 163-177.

### Public Education Intervention Strategies for Breast and Cervical Cancers

- Skinner, C. S., & Strecher, V. J. (1992). Physician recommendations for mammography: Do tailored messages make a difference? Presented at the annual meeting of the American Health Association, Washington, DC, 1992.
- Sobel, J., Gordon, D., Kristal, A., Eklund, G. W., Curtin, A., & Kennedy, P. (1989). The Oregon Breast Cancer Detection Awareness Project: Follow-up of a community-based breast cancer screening campaign. In Advances in cancer control: Innovations and research. New York, NY: Alan R. Liss, Inc.
- Solis, J., Richardson, J., Hissrich, J. C., Torres-Gil, F., Marks, G., Bira, L., & Pino, N. A. (1985). Cancer screening behavior among elderly Hispanic women. Presented at the Second International Conference on Cancer and Hispanics, American Cancer Society, Nogales, AZ.
- Spurlock, C., Nadel, M., & McManmon, E. (1992). Age and Pap smear history as a basis for intervention strategy. Journal of Community Health, 17(2), 97-107.
- Stein, J. A., Fox, S. A., Murata, P. J., Morisky, D. E. (1992). Mammography usage and the health belief model. Health Education Quarterly, 19(4), 447-462.
- Sung, J. F. C., Coates, R. J., Williams, J. E., Liff, J. M., Greenberg, R. S., McGrady, G. A., Avery, B., & Blumenthal, D. S. (1992). Cancer screening intervention among African-American women in inner-city Atlanta--design of a study. Public Health Report, 107(4), 381-388.
- Taplin, S., Mahloch, J., Mejer, K., Taylor, V., & Urban, N. (1992). The design and implementation of community interventions to increase women's breast cancer screening use. Paper presented at the American Public Health Association, Washington, DC.
- Taplin, S., & Anderman, C. A. (1989). Grothans, L. : Group Health Cooperative of Puget Sound: In Breast cancer risk and participation in mammographic screening. American Journal of Public Health, 79(11): 1494-1498.
- Thompson, G. B., Kessler, L. G., & Boss, L. P. (1989). Breast cancer screening legislation in the United States: A commentary. American Journal of Public Health, 79, 1541-1543.
- Torres, M.I., & Ciachello, M. (in press). Maternal and child health among Latinos in the United States. In Health promotion in the Latino community in the U.S. C. Molina, M. Molina-Aguerre, and P. Lecca (Eds.) American Public Health Association, Washington, DC.
- Trock, B., Rimer, B.K., King, E., Blashem, A., Cristinzio, C.S., & Engstrom, P.F. (1992). Impact of an HMO-based intervention to increase mammography utilization. Cancer Epidemiology, Biomarkers, Prevention.

**Wellness Perspectives: Research, Theory and Practice, 11(2) 1995**

- Turner, B.J., Ansel, Z., Lustbader, E., Schwartz, J.S., Balslem, A., & Grisso, J.A. (1992). Breast cancer screening: Effect of physician specialty practice setting, year of medical school graduation, and sex. American Journal of Preventive Medicine 8(2), 78-85.
- Turner, B.J., Day, S.C., & Borenstein, B. (1989). A controlled trial to improve delivery of preventive care: Physician or patient reminders? Journal of General Internal Medicine 4(5), 403-409.
- Ward, J.E., Boyle, K., Redman, S., & Sanson-Fisher, R.W. (1991). Increasing women's compliance with opportunistic cervical cancer screening: a randomized trial. American Journal of Preventive Medicine 7(5), 285-291.
- Wolosin, R. J. (1990). Effect of appointment scheduling and reminder postcards on adherence to mammography recommendations. Journal of Family Practice. 30(5), 542-547.
- Zapka, J. G., Chasan, L., Barth, R., Mas, E., & Costanza, M. E. (1992). Emphasizing screening activities in a community health center: A case study of a breast cancer screening project. Journal of Ambulatory Care Management. 15(1), 38-47.
- Zapka, J. G., Costanza, M. E., Harris, D. R., Hosmer, D., Stoddard, A., Barth, R., & Gaw, V. (1993). Impact of a breast cancer screening community intervention. Preventive Medicine. 22(1), 34-53.
- Zapka, J. G., & Berkowitz, E. (1992). A qualitative study about breast cancer screening in older women: Implications for research. Journal of Gerontology. 47 (Spec), 93-100.
- Zapka, J. G., Costanza, M. E., Stoddard, A., & Green, H. L. (1990). Breast cancer screening: Perceptions and experience of primary care physicians, radiologists and women. In Advances in cancer control: Screening and prevention research. Alan R. Liss, Inc.: New York, NY.
- Zapka, J. G., Harris, D., Hosmer, D., Costanza, M. E., Mas, E., & Barth, R. (1993). Effect of a community health center intervention on breast cancer screening among Hispanic American Women. Health Services Research. 28(2), 223-235.

# Health Promotion Tips for Older Medically Underserved Women

## Introduction and Overview

Surveys of older adults indicate that one of their main concerns with aging is the loss of the ability to care for themselves (Simmons et al. 1989). It is important in all adult education encounters to assess individuals and approach them on their terms and from their backgrounds. Many older women were not raised in the era of prevention. They often prefer not to know if something is wrong with their health. The following section discusses implications for reaching the older medically underserved woman.

## Barriers

- In many low-income populations, concerns about other urgent life priorities such as safety and earning a living take precedence over concern about cancer prevention or early detection.
- For many women, care of their families is the top priority, with their own health care taking second place. To reach certain older women, messages must focus on the importance of remaining healthy to maintain the caregiver role.
- Cost also is often a barrier for cancer screening, particularly because of the price of mammograms. The cost barrier is eliminated for eligible women in the NBCCEDP.
- Often health care facilities that are accessible to lower income populations have heavy patient loads and crowded conditions. Providers have little time to discuss preventive health issues.
- The general public often has limited knowledge about cancer prevention and early detection. Frequently knowledge is based on a friend's or relative's experience with a cancer that may have been diagnosed at a late stage.

For a health promotion program to address barriers, it is important to consider that women often prefer programs with more than one focus and that interpersonal efforts are often successful although they are labor intensive (Lacey 1993, p. 1079).

## Guiding Principles

- Promotions to reduce risk factors must foster empowerment. Individuals must believe their action will have a benefit and that they are capable of making a change (Aguirre-Molina et al. 1993).
- Materials, delivery methods, and providers must be culturally sensitive and linguistically appropriate for audiences.
- The intended audience should be contacted where it is located rather than being expected to come to you (Lacey 1993).
- Before promoting a program, you must look at the entire system (particularly the system of care that will be accessed) to assess and correct barriers.
- Include social support services in your message, particularly themes related to family.

- When working with different ethnic or racial groups, do not assume everyone is the same. Be sure to account for intragroup diversity.
- To enhance the effectiveness of outreach efforts, work with groups (community-based organizations) already working with and providing services to the intended audience (Aguirre-Molina et al. 1993).

### **Example: Beauty Parlor Intervention** (Howze et al. 1992)

Hair stylists were trained to give a personal message about mammography to women participating in the study. Clients of the beauty salons were randomly stratified to receive the intervention or be in the control group. The hair stylists told the women that they were concerned about their clients' health and gave the clients an educational packet with information about BSE and breast cancer screening and a letter endorsing mammography from the chief of radiology at the local hospital. Hair stylists being trained were concerned about how to discuss breast cancer and mammography with their clients, and they were concerned about their limited knowledge of breast cancer and mammography.

Training was conducted in three stages:

1. A visit to the radiology department with one stylist getting a mammogram.
2. Role-playing scripts: Messages were based on the health belief model addressing susceptibility and seriousness.
3. Rehearsal of the protocol in the presence of researchers.

Throughout the training, the stylists' issues were addressed. Clients were given a questionnaire 2 weeks after their encounter and 1 year after the intervention. The majority of women in this intervention had annual incomes above \$35,000 and had high levels of education. Women in the intervention group indicated greater intention to get a mammogram than those in the control group.

**Findings and Conclusion:** Informal caregivers can be used to deliver health promotion messages. This intervention occurred in a higher education, higher income group than NBCCEDP's intended audience, but it could be tried for other populations.

### **Example: Strategy To Overcome Lack of Physician Referral**

To overcome the fear or barrier of not involving a woman's physician, the screening promotion program can give the woman a letter for her physician that explains the program (Rimer et al. 1992). This will help alleviate the woman's fear and may get the physician involved in supporting the program or signing up to be a provider.



The Fox Chase multistrategy intervention at retirement communities included

- A \$10 copay for mammogram;
- A letter from medical director at a retirement community announcing the upcoming education session and a mobile unit to perform mammograms;
- A letter for a woman to give to her physician describing the program;
- An educational session 1 week before the mobile van visit;
- A reminder letter to women about appointments; and
- A mobile van to reduce access issues.

**Results:** Women in the intervention group were six times more likely to get mammograms than those in the control group.

### **Example: Georgia Department of Human Resources Increasing Pap Test Screening Resource Guide**

This was a 5-year demonstration project to increase Pap screening among low-income minority women 40 years of age and older. Initially telephone surveys were conducted to identify barriers to screening and facilitators of screening. The project staff concluded that a survey was not necessary to implement a screening project because there was already enough information regarding cervical cancer barriers and so forth. The advantage to a local survey is that it may help in convincing local groups of the need. From the information collected from the survey, focus groups were conducted to further identify the barriers and facilitating factors. A “woman-to-woman” intervention was conducted. One part-time health educator and two part-time community liaison workers were hired. A community coalition was formed.

The intervention team learned it was important to provide coalition members with specific tasks and to involve more community leaders in the coalition. The intervention was implemented in beauty salons, churches, and community clinics. Women were given a questionnaire to test the screening adequacy. Adequately screened women were recruited as volunteers to call inadequately screened women to encourage them to get a Pap test. Inadequately screened women also were mailed educational materials. The beauty shop intervention was not as successful as the implementation staff had hoped. The beauty shop operators were to identify inadequately screened women and counsel them about benefits of Pap testing. Many operators were uncomfortable with this aspect. It was difficult to train the operators because they wanted to be trained between clients, which did not allow enough time. Patrons did not always complete the surveys, making it difficult to access patrons in need. Few women older than 40 were identified. Followup with the operators was difficult.

Suggestions from the implementation team included conducting focus groups with operators, spending more time training operators, and offering incentives to operators to maintain interest and participation. Church intervention worked best in African American churches. Project staff members attended church services, and the pastor asked women age 40 and older to stay after services. Church members completed brief questionnaires, and project staff members later gave presentations to women's groups. Adequately screened women from the church called inadequately screened women. They conducted activities quickly after initial orientation sessions and conducted followup on inadequately screened women every 2 to 3 months. For the clinic intervention, staff members gave questionnaires to all women age 40 and older. A Pap test was offered to inadequately screened women. This approach worked well. Suggestions were to solicit volunteers to follow up with inadequately screened women to make sure they keep appointments and get Pap tests. The problem with this approach was that very few women 40 and older were served by health department clinics.

## **Channels Used To Communicate or Implement the Intervention**

Johnson and colleagues conducted a study to examine which factors affect channel selection for cancer-related information among women 40 years of age and older. Four channels were examined: doctors, friends and family, organizations, and media. The authors (Johnson et al. 1992) posit that “three major classes of factors affect channel selection: triggers, impediments, and demographics.”

An example of a trigger is “an individual’s degree of personal experience with cancer.” This refers to that person or a friend or family member’s having been treated for cancer. It might be predicted that this person would utilize multiple channels for cancer information, including physicians and organizations. Health consciousness and healthful lifestyle indicators are triggers for seeking cancer information.

Locus of control is a factor in the “impediment” triggers. An internal locus of control can positively affect seeking cancer information, but people with an external locus of control will probably use fewer channels, such as physicians and organizations. Fear is also an impediment. It can inhibit information-seeking behavior, and it also can create avoidance of taking the next step.

The demographics of the intervention included women, higher education, higher social class, urban residence, and younger age, all factors that contribute to information-seeking about cancer.

In this study, “the strongest impact across all channels was related to the respondent’s personal experience with cancer” (Johnson et al. 1992). The study focused on women age 40 and older in relation to breast cancer information-seeking.

Two types of channels were used to obtain information: interpersonal and mass media. The interpersonal channel consisted mainly of face-to-face contact. For cancer information, those contacts were primarily friends, family members, and physicians. Interpersonal communication is considered to be more effective in conveying complex, serious information, changing behavior, and providing social support. It allows for immediate feedback through discussion. Mass media have the advantage of providing information to a large audience quickly and efficiently. Information conveyed through mass media usually is of a general nature. Another channel for information is organizations, for example, the American Cancer Society, National Cancer Institute's Cancer Information Service, local cancer support groups, and local hospitals.

# Media Strategies

## Definition of Terms

Typically, there are two ways media are used in outreach strategy. They are either “mass” or “targeted.”

### Mass Media

Mass media generally include television, radio, newspapers, and magazines. The strength of mass media is that they have the potential to reach large audiences; the weakness is that the audience is diverse and heterogenous. Mass media messages delivered through public service announcements (PSAs) may cost less than interpersonal strategies because interpersonal strategies are usually more labor intensive.

There are two audiences PSAs target:

- The public for whom behavior change is intended; and
- Decisionmakers (media gatekeepers) at the broadcast stations.

Most radio and television stations are given many more PSAs than they can use. PSAs are generally run when stations cannot sell air time (11 p.m. to 8 a.m.), which means they are aired during time periods with less viewer draw.

To monitor PSA exposure, three methods are used:

1. *Bounce-back cards.* These are sent to public service directors (media gatekeepers). These cards usually ask about projected play, not actual play. They can provide feedback regarding what the director thought about the message.
2. *Commercial monitoring services.* There are commercial services that monitor television stations. The stations are monitored from the time they go on the air until signoff. Reports are published monthly indicating what spots are aired and when. This is an expensive service.
3. *Audience response.* The message in the PSA may ask the audience to write or call as part of the campaign. However, there is generally a low response to this type of request.

Media gatekeepers are decisionmakers who are either public service directors or persons responsible for all programming at smaller stations. Often engineers and technicians may make decisions regarding the airing of PSAs (Hammond et al. 1987).

## **For Example . . .**

In one study, Gantz and colleagues (1990) found that although two-thirds of Indiana residents were exposed to the Indiana Seat Belt Campaign's messages, there was no increase in seat belt usage. Gantz and colleagues found that, although all cars had seat belts, people did not perceive a need to wear them. The reasons they gave were:

- Generally do not believe they would get in an accident;
- Find seat belts uncomfortable;
- Think seat belts wrinkle clothes; and
- Think seat belts sometimes make clothes dirty.

A telephone survey was conducted with a random sample of Indiana residents. The authors concluded that “usage differences based on reported exposure to messages tended to be positively associated with media offering high immediacy (e.g., radio, a medium most often listened to while in a car) or relevance to respondents (e.g., one's place of work where posted notices sometimes reflect company policies)” (Gantz et al. 1990, p. 7).

This PSA campaign depended on donated time and space for ads. In the end only one-third of the intended audience was reached. When considering a PSA campaign, it is critical to consider the potential reach. For example, a radio campaign might be more effective because it offers drivers the opportunity to buckle up immediately.

## **Targeted Media**

Targeted media are designed to reach specific segments of the population. They include newsletters, booklets, self-help kits, videos, and computerized information systems. People in the mass media field use the term “narrowcasting” when referring to “selecting media channels” to reach specific segments of the population (Flora et al. 1989). Narrowcasting is best illustrated by network television that targets its programs to reach specific audiences at certain times of the day and night.

Media-based initiatives that aim to change health-related behaviors are commonly referred to as “health communication campaigns.”

## **Principles of Media as an Effective Strategy**

### **Campaigns**

Backer and colleagues (1992) interviewed 29 communication experts when writing *Designing Health Communication Campaigns: What Works?* They found that there are several basic principles behind successful media campaigns. Those principles are not content specific but apply across all content areas.

Backer and coworkers (1992) suggest that preventive health campaigns have a higher likelihood of success when

- They are based on social science theories;
- Formative research has been used to modify the campaign before it begins; and
- The objectives are reasonable.

They believe that health communication campaigns “typically have interpersonal (training, counseling) and community (neighborhood group, advocacy) components as well, and in the more sophisticated campaigns these various elements are carefully interwoven through an overall strategic design” (Backer et al. 1992, pp. 3-4).

Rogers and Storey (1988) define a media campaign as

- Purposive and seeking to influence individuals;
- Aimed at a large audience;
- More or less specifically defined (limited in time); and
- Involving an organized set of communication activities.

Campaigns must use a variety of media to maximize reach.

“An important message not emphasized enough in current models, though, is the degree of message repetition required in a successful campaign. Seldom can goals be achieved with only one campaign message. The advertising community does not think it can achieve brand shifts for a product within 1 day or with one message. They know it takes a long time, several months or years” (Coleman in Backer et al. 1992, p. 61).

### **Role of Incentives**

Incentives can be used to create awareness of a project but generally are not the motivator toward behavior change. For example, a T-shirt may entice a teen to listen to a message or participate in a focus group, but it will not convince that teen to stop smoking.

### **Message Development**

The Rhode Island Department of Health conducted a media campaign for its breast cancer screening program from November 1987 to December 1988. The following suggestions from the program (Fulton et al. 1992) state that media messages for recruiting women for breast cancer screening should

- Describe the screening procedure and its recommended frequency;
- Explain the need for screening procedures;

- Assure the women of effectiveness and safety;
- Suggest safe and appropriate sources of screening; and
- Deemphasize susceptibility to breast cancer and emphasize the effectiveness of screening mammography.

## Roles of Media

Flora and colleagues (1989) distinguish four roles of media:

1. *Media as educator.* In this role, the media serve as the main method of obtaining health promotion goals.

The Stanford Three-Community Study for cardiovascular risk reduction made a comparison study using media and media with interpersonal counseling and found that the use of media alone was able to achieve “changes in risk behavior over the short term but that the addition of face-to-face interaction enhances long-term change” (Flora et al. 1989, p. 183).

### For Example . . .

The National Cancer Institute has used this approach in a public-private partnership with the Kellogg Company. Kellogg designed a national campaign to promote NCI’s recommendation to eat a high-fiber/low-fat diet and to promote NCI’s Cancer Information Service number. Kellogg promoted the consumption of bran cereal as a way to meet dietary recommendations. Seven television commercials were developed as well as educational materials and messages on cereal boxes to highlight the preventive advantages of bran. In the population surveyed, it was found that awareness of fiber as a preventive for cancer increased from 9 to 32 percent within 2 years.

2. *Media as supporter.* “In the role of lifestyle supporter, media can reinforce old messages, support health changes, encourage maintenance of change, or keep issues on the public agenda” (Flora et al. 1989).

Media messages that use role model testimonials can be designed to support specific behavior change messages. For example, breast cancer survivors can mention the use of mammography for early detection to prolong life; an ex-smoker can talk about quit attempts and successful completion; persons with cardiovascular disease can talk about the use of medication for peace of mind and better health.

3. *Media as promoter.* Often media are used to promote existing programs. This goal is accomplished because media have the ability to “familiarize audience members with health behavior change products and services, and encourage the audience to call, write, or participate in programs” (Flora et al. 1989). This is the most common role of the media in health behavior change initiatives. For breast and cervical cancer, media can be used to

promote the availability of free or low-cost programs, to list screening sites, or to promote writing Congress for increased funding for breast cancer research.

4. *Media as supplement.* Media can be used as a supplement to face-to-face interventions and other forms of interventions such as printed materials, social support groups, worksite interventions, and so forth. Media generally have a more powerful effect when used in combination with other interventions. The A Su Salud program in Texas uses media as an intervention but supplements the use of local media with role models in the community.

## Uses of Media at Different Levels of Audience Organization

Media are used at several levels of audience organization: individual, network, organizational, and societal.

### Individual Level

The outcomes of media-based interventions aimed at the individual level are changes in health behaviors, physical indicators, and health status of individuals. To achieve outcomes, programs focus on “awareness, knowledge, attitudes, self-efficacy, and skills for behavior changes” (Flora et al. 1989, p. 186).

#### *Awareness*

Individuals may be aware that their behavior is detrimental to health, but they may not know of any programs that address their specific need. For media campaigns to raise awareness:

- Audience segmentation must be done.
- Messages must be based on formative research.
- The message must generate interest from the audience.

#### *Knowledge*

Dissemination of basic information to large numbers of people is the basic tenet of mass media. Although the acquisition of knowledge can contribute to behavior change, the level of audience interest also has an effect on knowledge gain. People who are highly involved with a health issue will gain knowledge, whereas those with low involvement may not increase their knowledge from the message.

#### *Attitudes*

Health attitudes influence health behavior and information seeking; “however, behavior-specific attitudes are more predictive of health behaviors than general health attitudes” (Flora et al. 1989, p. 188). As stated above, media can be effective in changing health attitudes, especially when supplemented by face-to-face instruction. Attitude change also can be demonstrated through the use of role-modeling.



### ***Self-efficacy***

An individual's belief about his or her ability to change a behavior and that the behavior change will have a positive health benefit is a key influence on behavior change adoption. Media can be used to enhance and stimulate self-efficacy by “modeling the behaviors of interest, teaching the skills necessary for enacting low-level health behaviors, encouraging simple interim behaviors such as trial or low-level behaviors, and reducing dysfunctional arousal associated with the enactment of a health behavior” (Flora et al. 1989, p. 188). Unfortunately, messages designed to enhance self-efficacy often are underutilized in media-based interventions.

### ***Skills***

Although skills are generally taught in interpersonal face-to-face settings, the media can be used to demonstrate skills. For example, they can demonstrate ways to respond to peer pressure for drugs.

### **Network Level**

Social networks have a major influence on health. An individual with established social networks, such as a spouse, close friends or relatives, memberships in formal or in formal groups or a religious institution, has better health outcomes. Networks have two types of variables, structural and interactional:

- *Structural variables* describe the relationships of the people who make up the social system and how they are linked (Flora et al. 1989).
- *Interactional variables* describe the qualities of the relationships and linkages (Flora et al. 1989).

Members of an intended audience can be reached in two ways:

- Directly; and
- Through opinion leaders and influentials.

Through the use of *targeted media* such as newsletters and electronic mail, programs *can reach community opinion leaders and gatekeepers who often influence and control the ability to reach the community and may help establish links to information, goods, and services.* The community influentials can in turn influence the intended audience for behavior change and health promotion. Media can be used to promote the message of communication and interaction within family members and friends.

### **Organizational Level**

Interventions aimed at an organization include but are not limited to the use of worksites, primary health care settings, supermarkets, or schools to promote health.

“By using organizations as channels for delivering health programs, health educators can:

- Reach defined target audiences;
- Tailor interventions to specific contexts;
- Multiply their efforts by utilizing existing organizational resources (e.g. social support, instructional expertise, facilities);
- Influence organizational structure in ways that will support individual-level behavior change; and
- Influence organizations to become healthful models for other community institutions” (Flora et al. 1989, p. 192).

Furthermore, *mass media* can encourage organizations to implement health promotion interventions by publicizing efforts in similar organizations.

### **Societal Level**

Societal factors include laws and policies, behavior norms, and the physical and information environments, all of which strongly influence health behavior. Mass media can form or maintain societal factors. They strongly influence the way we think as a society. For example, Mothers Against Drunk Driving has successfully used public information campaigns to influence public policy, opinion, and social norms regarding drunk driving.

Mass and targeted media can have a profound effect on health. Media efforts are intensified when used in combination with other strategies.

## **Techniques for Enhancing a Media-Based Intervention**

### **Formative Evaluation**

Formative evaluation documents the procedures and tasks involved in the development of a program. Formative evaluation methods include pretests, focus groups, and pilot tests, all of which are designed to solicit feedback on a campaign before it actually begins.

In writing *Designing Health Communication Campaigns: What Works?* Backer and colleagues (1992) interviewed many health communication experts, asking the same set of questions of each expert. The overall opinion from many of the communication professionals interviewed was that *formative evaluation is very important to the design of a successful media campaign*. According to Backer and colleagues, some people believe formative evaluation is not conducted because it is time consuming and not viewed as traditional research methodology. Others think formative evaluation is not utilized because the results may not reflect an outcome or product.

### ***Agenda-setting Process***

The agenda-setting process occurs when an issue receives more media coverage, which generates greater public opinion about an issue that, in turn, often influences policymakers.

Examples of agenda-setting are interspersed throughout the media attention to drunk driving. The MADD campaign started when one woman's daughter was killed by a drunk driver, although at that time, there was no increase in the number of actual drunk-driving accidents. However, the campaign engendered considerable public concern and change in public policy. It resulted in raising of the legal drinking age and lowering of the legal limit of blood alcohol content as a criterion for drunken driving.

## **Media Channels**

Communication systems to consider for delivery of messages (Flora and Farquhar 1988) include

- *Mass media*: radio, TV, newspapers, magazines;
- *Social networks*: local clubs, churches, sport groups, unions, health professional networks;
- *Lifepoint paths*: grocery stores, restaurants, drugstores, banks, beauty and barbershops, shopping centers, and service sites such as clubhouses, libraries, clinics, and churches;
- *Employee networks and worksites*: employee newsletters, bulletin boards, E-mail;
- *Schools*: special products and services prepared and delivered through school systems (e.g., English as a second language); and
- *Households*: health promotion targeted to individuals in their homes.

### **For Example . . .**

Gagliano (1988) conducted a literature review to identify studies using video as a method of patient education. She reviewed only methodologically sound studies that used video alone as a method, not in conjunction with other activities as part of an overall educational package. Several studies compared the use of video with other delivery methods: video plus written material, written material, patient instructions, and individual counseling.

There were no differences found among methods. In some cases the video was more effective in increasing short-term knowledge.

One study found that patients' structured viewing in a separate room was much more effective in increasing knowledge than their watching the same video in waiting rooms. For long-term knowledge, the few studies conducted indicated that video was

no more or less effective in increasing this type of knowledge and that knowledge in most participants had fallen back to the level before intervention.

With respect to compliance with health behavior change in the initial months after viewing the video, there was an increase in compliance (with diet, smoking cessation attempts, and alcohol reduction); however, at later followup, all behaviors were back to baseline. The authors proposed that other emotional factors override thought processes with regard to behaviors that are ingrained.

Several studies found the use of role-modeling in videos improved education and coping skills among viewers. It appears that video has an advantage over other educational methods in its use of modeling.

### **For Example . . .**

Both African Americans and Hispanics obtain cancer information more from television and radio than does the white population (Yancey and Walden 1994). Video allows behaviors to be modeled in a culturally appropriate style, indicating to the intended audience that people like them have these problems. It also facilitates the use of the intended audience in the design and as role models in the story. Videos are a good vehicle to use in clinic waiting rooms, particularly if a prompt for cancer screening is included at the end of the video. It is important to use culturally appropriate professionals as spokespersons. Video works best when it is used in clinic waiting rooms or outreach settings and followed with discussion.

Video development should include

- A literature review; solicitation of already developed videos on the content area;
- Conducting focus groups with members of the intended audience;
- Themes generated from focus groups guiding the development of the video; and
- Information presented in “short, moving, minimally didactic presentations [which are required because of] the short attention spans of humans in settings with multiple distractions” (Yancey and Walden 1994).

# Long-Term Care and Retirement Communities

In one study of women in retirement communities, King and coworkers (1993) found that 48 percent of the women who present with metastatic breast cancer at initial diagnosis are age 65 and older. A survey (Kenny and Keenan 1991) of 79 long-term care facilities in Long Island found that only 6 of the facilities had any type of breast cancer detection procedure in place.

Historically, older women have been neglected when it comes to breast and cervical cancer screening. Long-term care facilities present a good opportunity to offer screening programs to a captive audience of this population. Although some States have laws requiring that breast examinations be offered to residents of nursing homes and other long-term care facilities, States vary in their definition and interpretation of what is meant by “breast examinations.” For example, breast self-exam often is taught in lieu of offering mammograms. The inconsistency in services offered throughout the Nation creates an opportunity for NBCCEDP staff to educate and train clinicians in these facilities on screening procedures that will support, enforce, and facilitate implementation of the law.

## Guiding Principles

- Older women lack knowledge of the fact that breast cancer risk increases as one ages.
- A physician recommendation is the key to getting older women to get a mammogram.
- Older women need written materials in large type on white or buff paper.

## Techniques

There are promising techniques for educating and counseling older women who are confined to home; these techniques include the following:

- *Friendly visiting.* A means of informing seniors about community health-related services. Friendly visiting can be accomplished by seniors already volunteering for other agencies (e.g., Meals on Wheels, Retired Senior Volunteer Program), or the visitors can be recruited. Visitors convey health-related information in an informal setting; community outreach can be done in the home. Friendly visitors need to be trained about available resources for seniors (Keller et al. 1988).
- *Geriatric peer counseling.* Local BCCEDP coordinators can identify individuals confined to home by contacting Meals on Wheels or religious organizations providing care for them. Training about breast and cervical cancer can be offered to individuals working in these organizations so they can spread the message when they make visits. Check local organizations to determine whether there are any peer-counseling programs in existence (Grossman et al. 1992).

# Direct Mail

Direct mail is a piece of information delivered by mail to an individual's home or office. Various approaches are used for direct mail. Often a message is addressed to "occupant." However, other direct mail campaigns send a piece of information directly to a person with a personally addressed message and often different messages to different people receiving the mailing. Several studies using direct mail to encourage breast or cervical cancer screening have been conducted in Australia, Scotland, and England (Hurley et al. 1994). Hurley and colleagues report that most interventions through a personally addressed letter to a woman signed by her provider offered scheduled appointment times at the provider's office.

## Guiding Principles

- Direct mail is generally a low-cost intervention.
- The letter can be saved to be reviewed occasionally.
- The letter can be shared with friends as a discussion point.
- Targeted letters that are based on overcoming barriers previously identified by older women, are signed by a personal physician, and include appointment times have highest results in screening. A followup letter also can be sent to women who are no-shows for appointments (Skinner et al. 1994). Appointment-time studies have been conducted mostly in Australia, Scotland, and England.
- Name-specific (personalized) mailings generate a better response than form letters.

## Techniques

Following are examples describing a variety of programs' experiences using direct mail.

### **For Example . . .**

A study was conducted among women ages 40 to 65 who had visited a North Carolina family practice group within the previous 2 years. Women were randomized to receive either a general reminder letter or a letter tailored to their own background, barriers, and beliefs. Before randomization, a baseline telephone interview was conducted to determine each woman's behavioral stage based on the stages-of-change model and to solicit information on beliefs and barriers to mammography. After randomization, half the women received a letter signed by their physician that was tailored to their individual profiles, including graphics of women who were similar in race and age. The letter "was framed to sound as though [it was] written for general audiences" (Skinner et al. 1994, p. 45).

The control population received a standard form letter. The intervention and letters were based on the health belief and stages-of-change models. The type of letter sent was associated with stage movement for black women but not for white women. Women without telephones were excluded from the study.

The figure on page 58 illustrates how the authors utilized the stages-of-change model.

### **For Example . . .**

The Minnesota Heart Health Program used direct mail as a prompt for followup care to a randomly selected sample of individuals who had been identified through the screening program as having high blood pressure. The mailings were personalized to individuals and sent via first-class mail. The letter was signed by the director of the Heart Health Program and a prominent local physician. One group received a single mailing, one group received multiple mailings, and one group served as a control. The packet included a letter, a newspaper article, and a printed piece on blood pressure control. The multiple mailing group received five additional mailings over a 10-week period.

The program found that there was not much difference in impact between single mailings vs. multiple mailings. Both prompted patients to discuss blood pressure with a physician. The single mailing may have been better at promoting this action. The single mailing cost 50¢ per person, including postage. The result was a 28-percent increase for this group in discussions with their physician (Murray et al. 1988).

### **For Example . . .**

The Essenden Breast X-Ray program (Hurley et al. 1994), a pilot project conducted in Victoria, Australia, evaluated several recruitment strategies to determine the best. Women ages 50 to 69 were selected from the electoral roll, in which participation is compulsory. Recruitment activities included placement of articles in free local newspapers, displays of information in public places, contact with health information organizations by an education officer, promotion of the program to primary care physicians, and invitation letters to women who had not been screened. Some letters had appointment times; some did not.

The invitation letters were not introduced until 6 months after the start of the program. Random samples of women who had not responded or made appointments within 4 weeks after the mailing of the first letter were sent a followup letter. “The most important predictor of attendance was receipt of an invitation letter, and attendance varied markedly with the type of letter” (Hurley et al. 1994, p. 1675). *After women received the letter with the appointment time, attendance increased 132-fold in the first 7 to 14 days. Attendance increased 12 times over baseline initially for the women*

*receiving the letter without the appointment time. The most cost-effective strategy was the letter without appointment time with a followup letter. Local newspaper articles and community participation also increased screening rates. There was no effect of increased screening as a result of promotion to physicians.*

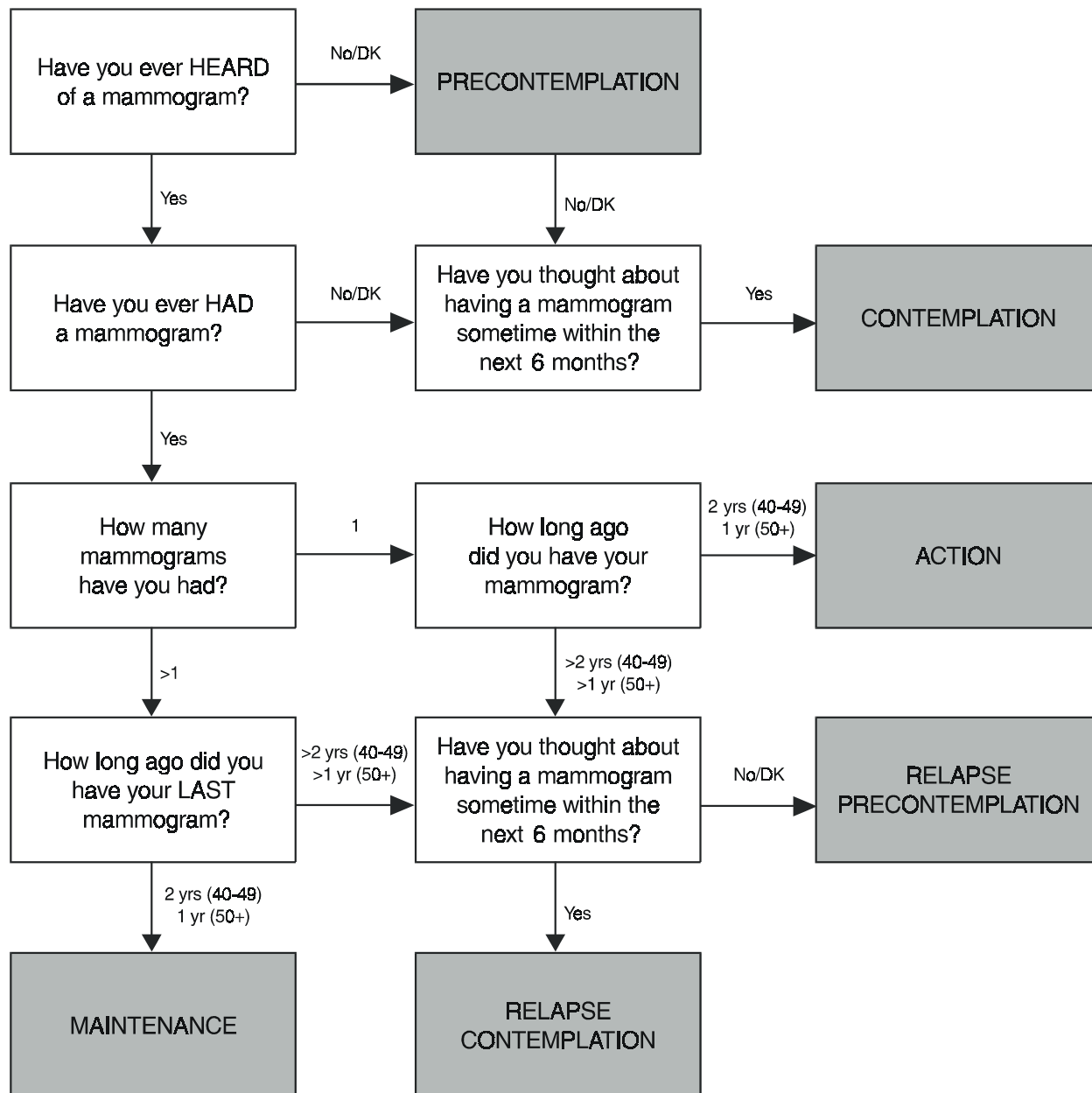
## **Channels of Communication**

Direct mail often is delivered via interpersonal contact through a letter signed by a woman's personal physician or a physician prominent in the local area.

Skinner and colleagues (1994) found that tailored letters were associated with more favorable followup mammography rates among women with incomes below \$26,000 and for African American women. This could influence provider interaction. If providers are taught to identify a stage of change in a woman with a few simple questions, they could then tailor their recommendations according to her own beliefs and readiness to change.

The figure on the next page shows how Skinner and colleagues utilized the stages-of-change model.





DK = don't know

Skinner, C.S.; Strecher, V.J., Hospers, H. Physicians' recommendations for mammography: do tailored messages make a difference? *Am. J. Public Health* 84(1): 44; 1994. Reprinted with permission from the American Journal of Public Health. Permission for additional reproduction, or inclusion in other publications, must be obtained from the copyright holder.

# Coalitions and Partnerships

## Definition of Terms

*Coalition.* “An organization of independent organizations who share a common social change goal and join forces to influence external institutions, while maintaining their own autonomy. Coalitions are usually formed for a limited or specific purpose and ultimately terminate or transform themselves into other forms or organizations when that purpose is met. Coalitions are characterized by both conflict and cooperation, and inherently experience dynamic tensions. Unlike collaborations, coalitions may be either short-term or long-term, single- or multipurpose, approaching several goals simultaneously, e.g., working for policy or legislative change” (American Cancer Society 1993; p. 23).

*Collaboration.* “The process by which several agencies or organizations make a formal, sustained commitment to work together to accomplish a common mission or develop a specific project. Like coalitions, collaboration requires a commitment to participate in shared decisionmaking and allocation of resources related to activities responding to mutually identified needs. Unlike other interagency formats, collaborations are always established for very specific purposes, and directed toward tangible, measurable outcomes, e.g., producing model projects” (American Cancer Society 1993; p. 23).

### For Example . . .

Lovejoy and coworkers (1989) described a breast cancer screening program for Chinese American women living in San Francisco. This program used the Havelock guide to educational innovation (1973), which suggests that if planners involve clients in the development of the plan, the chance of success increases. Following is a description of the steps implemented in this approach.

- *Building a relationship.* Build a relationship with your clients. Involve the intended audience in initial meetings to establish the planning phase. Offer refreshments or a location appropriate to the intended audience.
- *Diagnosis and resource acquisition.* Set goals to overcome the problem or issue. Identify the barriers to the goals. Determine activities that will combat or minimize the barriers.
- *Choosing the solution.* Choose a solution that benefits the clients, and ensure that the solution is practical, adaptable, and diffusible.
- *Gaining acceptance.* Be sure the clients accept the new system or intervention.
- *Self-renewal.* Help the clients or community determine how to continue the project.

The project described by Lovejoy and colleagues used the process of planning an educational innovation outlined above to develop a breast cancer screening day for Chinese American women living in San Francisco. A variety of people and organizations contributed to the event, including American Cancer Society staff members and volunteers, the Chinatown YWCA, physicians (Chinese and other), oncology nurses, and community leaders who formed a task force. Each member of the task force made a unique contribution to the planning and implementation of the event. The organizers found it important to have buy-in from so many diverse members of the community.

### **Example: De Madres a Madres**

McFarlane and colleagues (1994) describe an intervention in an inner-city Hispanic community in Houston. The intervention was “based on the concepts of community awareness, volunteerism, empowerment of women, and community coalitions” (p. 467). The program was called “De Madres a Madres” (“From Mothers to Mothers”) and was designed to increase awareness of the importance of early prenatal care.

Part of the community assessment involved a community health nurse who identified and then visited community leaders (mostly men) to discuss the program’s goals and objectives and to solicit names of volunteer mothers. The leaders’ buy-in helped legitimize the program. There were formal presentations about the program made at community sites, such as schools, churches, and civic organizations, and informal presentations at bazaars, fiestas, and health fairs. The volunteers attended an 8-hour training session that focused on resources in the community, communication and support skills, health resources, quality prenatal care, family dynamics and interpersonal relationships, and the volunteer’s role as advocate.

Eventually, the mothers assumed a larger role. They lobbied the city council for longer “clinic hours, more bilingual staff, shorter waiting periods for first-time appointments, and simplified forms” (p. 471). De Madres a Madres now has its own center in the community and is focusing on issues other than prenatal care.

## **A Step-by-Step Process To Developing Partnerships**

1. Develop memos of understanding.
2. Define roles of each partner.
3. Establish trust.
4. Each partner should provide background information on its organization.
5. Skills and attitudes necessary for success (American Cancer Society 1993; pp. 6-7):
  - a. Both organizations must believe in the value of each organization and the value of working together.

- b. Collaborators must establish a trusting relationship that is articulated and verified through actual experience.
  - c. Negotiating skills are necessary:
    - Participants must know how to work collaboratively on common issues.
    - There must be an openness to explore the noncommon ground and the problems that may exist between the two organizations. Each organization must be comfortable with differences between the two groups.
    - Listening skills will enable each organization to hear the needs of the other.
  - d. Salesmanship will be necessary to sell the project to American Cancer Society volunteers and Department of Health staff members.
  - e. Project directors must have assessment skills that enable them to appraise where their organization fits into the project with the minimum expenditure.
  - f. Organizational skills will be required for arranging productive meetings.
  - g. Throughout the collaboration, good communication skills will constantly be necessary at each level of the project so that all participants stay current on project activity.
  - h. Project directors should model communication and collaboration skills for local coalitions.
  - i. Project directors will need personality assessment skills to independently evaluate what each has to offer the project in terms of personnel.
6. Give appropriate credit.
  7. Involve leaders and get a buy-in from leaders of partner organizations.
  8. Devote time to the planning process and getting to know each partner.
  9. Principles (American Cancer Society 1993; pp. 15-16):
    - Make planning a priority.
    - Know yourself and your partners.
    - Appreciate your strengths and the strengths of your partners.
    - Utilize the strength of partners.
    - Establish a consistent atmosphere of shared leadership.
    - Lead as a team.

In working with communities or other organizations, it is important at the beginning of the relationship to work out details of the relationship, including how disagreements will be handled, and to set up mechanisms to handle those disagreements. This foundation establishes a

commitment to resolving issues and helps build trust. Memoranda of understanding or agreement between agencies are helpful for role delineation (Centers for Disease Control and Prevention. *The Cancer Prevention and Control “Thinkbook”* 1995). Processes must be included to continually evaluate and reassess efforts, stop efforts that are ineffective, and focus more heavily on efforts that are working.

To facilitate outreach plan development, program outcomes should be defined; for example, increase the number of Hispanic women screened to 20 percent above the current rate. To decide on implementation activities, a community assessment first must be conducted to determine what is currently occurring in the community. All activities and resources should be tied to outcomes.

In deciding what items (data) to include as part of the evaluation, ask “What will I do differently in the program on the basis of this information?” If there is not a firm answer, do not collect that piece of information.

# Community Interventions

“Intervention at the community level, including mobilization of the community with formation and maintenance of a community advisory board, has been viewed as a promising approach to promoting cancer prevention behavior change, in part because it addresses needed changes in social norms” (Urban et al. 1995, p. 477).

*Healthy Communities 2000: Model Standards* (1991) offers a list of implementation activities to help guide health education professionals in the attainment of the national health objectives. It is suggested that we

1. Assess and determine the role of the health agency.
2. Assess the lead health agency’s organizational capacity.
3. Develop an agency plan to build the necessary organizational capacity.
4. Assess the community’s organizational and power structures.
5. Organize the community to build a stronger constituency for public health and establish a partnership for public health.
6. Assess the community’s health needs and available resources.
7. Determine local priorities.
8. Select outcome and process objectives that are compatible with local priorities and *Healthy People 2000* objectives.
9. Develop communitywide intervention strategies.
10. Develop and implement a plan of action.
11. Monitor and evaluate the effort on a continuing basis.

To increase breast cancer screening in women 50 years of age and older, community-based interventions are needed. Community-based interventions generally include multiple components.

## **For Example . . .**

In an NCI-funded intervention in Massachusetts (Zapka et al. 1993a), outreach activities included educational sessions at church groups, senior centers, and housing units for the elderly; newspaper stories; radio talk shows; and direct mail. The group used the PRECEDE model as a planning framework. Program messages emphasized that screening was important regardless of symptoms. A physician intervention was

conducted simultaneously. After the 3-year intervention was complete, there was not much difference between the intervention community and the comparison community. The authors believe this was attributable to increased screening that occurred everywhere during that time. However, the physician intervention may have had an effect: More women stated that their doctor had recommended a mammogram after the intervention than before it.

### **Example: Fred Hutchinson Cancer Research Center**

The Fred Hutchinson Cancer Research Center received NCI funding as one of the six interventions that were part of the NCI Breast Cancer Screening Consortium. The Consortium was funded and established to explore methods for increasing mammography usage.

The project utilized a community organization design based on the PRECEDE/PROCEED model to address barriers to physicians' and women's use of mammography. Two communities received the information, and two communities served as controls. The intervention was undertaken to change physicians' and women's behaviors. The approach included locating key players in the physician and lay communities, "building coalitions, forming physician and lay advisory boards and their task forces, facilitating decisionmaking, educating and mobilizing the provider community, and promoting regular breast cancer screening among women" (Urban et al. 1995, p. 478).

Two community advisory boards were established in each community, one of health care workers and physicians and the other of lay community leaders. It took about 1 year to mobilize the community and form the advisory boards. Twelve promotional activities were undertaken during the study period to increase the number of women getting mammograms: training primary care physicians in implementing patient reminder systems; personal history wallet cards; ads in newspapers; encouragement by physician office staff; displays; local videos; BSE shower cards; fashion show; promotion by a local group; presentations; a breast cancer screening bingo; and a direct mail campaign that was conducted with medicare recipients to educate them about the medicare benefit and encourage them to talk to their physicians about mammography. Physicians were offered the chance to participate in office staff training in breast cancer screening and development of patient reminder systems.

**Results:** "Although several activities were useful in promoting mammography use, organization of the community did not enhance efforts undertaken spontaneously by comparable communities." Some activities were effective: "Exposure to patient reminders from physicians, wallet reminder cards, and newspaper advertisements were consistently related to mammography use." Reminders by physicians were significantly related to mammography use in both of the intervention communities and the combined comparison communities (Urban et al. 1995, p. 481). Women who reported being exposed to newspaper ads and reminders, which are relatively

inexpensive interventions, were more likely to be screened. The authors concluded that diffusion of the approaches rather than community level activities may increase mammography rates (p. 482).

### **Example: The South Florida Screening Project**

(Zavertnik et al. 1994)

A breast and cervical cancer screening intervention (McCoy et al. 1991) was conducted for low socioeconomic status (SES) women ages 40 and older in Dade County, FL, who attended 10 community health care centers. The program was started by the Sylvester Comprehensive Cancer Center at the University of Miami. The program relied heavily on a mobile mammography van to provide screening.

Several types of educational activities were conducted. Three activities were more successful than others: a program on a gospel radio station that aired once a month and was a mixture of news, music, and 20- to 30-minute segments on cancer information and education; health fairs at community centers, churches, and swap meets; and the Cancer Education Program in churches serving the African American community.

Six years after the intervention program, staff members perceived there were four elements necessary to minimize barriers for breast cancer screening in socioeconomically disadvantaged populations:

1. *An education and recruitment phase with recruitment of the intended audience most important:* an education program that involves community media (newspaper and radio stations). Presentations were given at meetings of various church and missionary groups, choir rehearsals, and meetings of nurses' guilds, as well as at Department of Housing and Urban Development tenant association meetings.
2. *Low-cost mammography service available, accessible, and acceptable to the community.*
3. *One-stop breast diagnostic center that minimizes diagnostic barriers.* Previously patients with a positive finding had an average of 3.5 visits to a surgical clinic before a biopsy was performed. Now in some cases there is no more than a 2-week wait before biopsy.
4. *Multidisciplinary evaluation and treatment plan and team.*

**Results:** This project found "that approximately \$9,800 is saved per cancer found [through] the procedures and methods" described, because cancers are now found earlier (Zavertnik et al. 1994, p. 2044).



### **Example: Chicago Project-Loretta Lacey**

(to increase both breast and cervical cancer screening)

This project (Lacey et al. 1989; Whitman et al. 1994) was guided by the principle that health education is best disseminated by women to women and at places that women frequent. Recruitment included both inreach to the current patient population at the health center and outreach to the community. The project was implemented in 10 community areas that were populated predominantly by African Americans in the poorest areas of Chicago. Outreach was delivered by two trained registered nurses and two trained community outreach workers. The nurses offered educational sessions, and the outreach workers distributed information. At contact sites for distribution of information, color-coded fliers were distributed (a different color for each site).

Contact sites included

- Human service agencies working on reduction of infant mortality;
- Center for Inner City Studies—part of Northeastern University that offers parenting classes and community-based programs;
- Businesses—beauty shops, grocery stores, laundromats, clothing stores, currency exchanges, pharmacies;
- City agencies—Department of Human Services, Department of Aging and Disability, food assistance, and so forth;
- Chicago public libraries;
- Religious institutions;
- Schools—information sent home with students twice a year; and
- Public housing facilities.

Many women found program materials in areas other than the areas where outreach workers had distributed them, indicating that other community women photocopied the fliers and brochures to distribute where they saw fit. The program was originally funded by NCI. The program was so successful that the city of Chicago continued the funding after the grant ended, thus continuing the program.

### **Example: The Atlanta Community Cancer Screening Demonstration Project**

This initiative was one of six demonstration projects funded by the American Cancer Society (Curry et al. 1994) to increase the availability of cancer screening and surveillance in the intervention areas. This project focused on two areas of Atlanta served by neighborhood health centers. The community was involved in all aspects of program planning. The project was based on a community activism approach and had

both inreach and outreach components. “Democratic procedures, voluntary cooperation, training of indigenous outreach workers, and educational self-help methods are the hallmarks of such an approach” (Curry et al. 1994, p. 258). A survey of the women attending the participating neighborhood health centers found that 76 percent of the women received Pap tests every 2 years, but only 37 percent of the physicians examined breasts.

#### Interventions included

- Inreach activities—computerized chart reminders and distribution of culturally sensitive, low-literacy materials;
- Educational activities geared toward clinic providers and support staff. Education focused on barriers to screening and sensitivity to patients’ issues;
- Established Partners for Life—a program consisting of a buddy system designed to help get women with positive or suspicious test results through the diagnostic system;
- Hospital-based followup clinic for women with positive test results; and
- Community health promotion and education; community coalitions formed.

This project brought into the system more than 3,000 women who had not been a part of the primary health care center. There was an increase in screening after the intervention that was not associated with other demographic or socioeconomic factors but believed to be attributed to the increased awareness of women about breast cancer screening and the provider’s emphasis on screening. The most important lesson learned was to involve the intended audience in the intervention. This involvement helps increase the chance for the success and sustainability of the program.

#### **Conclusions and Recommendations**

- Time must be built into the project to allow for community involvement. It takes time to establish trust with the community before the necessary work of the project can begin.
- It is important to have survivors help promote the program because there is a strong view in the community that cancer is fatal and is God’s will.
- A positive image must be presented.
- Community coalitions help to ensure sustainability of the project. Coalitions should include health professionals.

# Provider and Community Health Center Interventions

When women are asked why they do not get mammograms, the main reason given is lack of physician referral or discussion (Zapka et al. 1989, 1992, 1993a, 1995; Fox and Stein 1991). Grady and colleagues (1992) found that physician encouragement was more strongly associated with screening mammography than any other factor. Women who received physician encouragement were four times more likely to have had screening mammography. The researchers also found that only 29 percent of physicians encouraged BSE and mammography, with 37 percent encouraging neither. Physicians encouraged BSE more than mammography (Grady et al. 1992, p. 778).

## Example: Impact of Physician and Practice Characteristics

A study conducted among primary care physicians in three different SES communities in Los Angeles found that 73 percent of physicians agreed that women ages 65 to 74 years should have annual mammography screening, whereas only 24 percent reported actually screening most women in this age group (Roetzheim et al. 1995).

- “Race/ethnicity of physician and physician specialty were the two strongest predictors of high self-reported referral rates” (Roetzheim et al. 1995, p. 1398).
- One purpose of the study was to examine the physician’s race as a predictor for screening. The study population included “significant numbers of minority physicians and physicians with patient populations that were predominantly minority” (25 percent of physicians were African American and 10 percent were Hispanic).
- Obstetrician/gynecologists had the highest reported screening rates.
- “Non-white physicians were significantly less likely to report high screening rates in both the 65 to 74 and 75 and older age groups” (Roetzheim et al. 1995, p. 1400). “Non-white physicians were only one-tenth as likely [as white physicians] to screen the majority of patients in either age group” (Roetzheim et al. 1995, p. 1400). Interpret this carefully: Additional completed studies are needed for comparison.
- Older physicians were less likely to agree with screening guidelines and had lower referral rates.
- Caution should be used in interpreting these results because screening rates were based totally on self-reports, not on chart audits.

**Conclusion:** Physicians need to be educated about the importance of screening and their role in facilitating screening of older medically underserved women. The use of reminder systems should be encouraged.

The following examples illustrate provider or community health center-based interventions.

### **Example: Racial or Ethnic Characteristics Affecting Mammography Screening**

A random-digit-dial telephone survey was conducted among women living in Los Angeles (Fox and Stein 1991). “Hispanic women were more likely than black or white women to have serious concerns about all barriers.” Hispanic women were much more likely to report fear as a barrier than were African American or white women. Hispanics also were concerned about radiation, as were African American women (Fox and Stein 1991, p. 1072).

Results from several studies have indicated that “physicians with . . . 50% or more black and Hispanic patients were less likely to follow mammography guidelines than physicians with 50% or more white patients” (Fox and Stein 1991, p. 1066).

White women were more likely to get care in a doctor’s office than were African American or Hispanic women. Care was obtained in a variety of settings: doctors’ offices, hospitals, health centers and clinics, and prepaid group health centers. African American women were more accepting of getting a mammogram through self-referral than were white or Hispanic women (Fox and Stein 1991, p. 1072). Most women (more than 80 percent) “regardless of ethnicity would get a mammogram if their doctor recommended one” (Fox and Stein 1991, p. 1073).

Hispanic women had many attitudinal barriers that may have prevented them from getting a mammograms: fear, embarrassment, anxiety about mammograms, concern about radiation. Language was also a big factor for Hispanic women. If they preferred to communicate in Spanish, they were much less likely to have had physicians discuss mammography with them.

For women who use clinics and health centers for acute care, every opportunity should be explored to encourage routine screening and referral for mammography. If physicians had discussed mammography with the patient during a visit, the results were that white women were eight times more likely to have had a mammogram, African American women were six and one-half times more likely to have had a mammogram, and Hispanic women were almost eight times more likely to have had a mammogram. The fact that mammography was mentioned was enough; it did not have to be a referral. (Caveat: The majority of Hispanics in this study were of Mexican origin, and all patients were from an urban setting.)

## **Example: Intervention at a Primarily Latina Community Health Center**

(Zapka et al. 1993b, 1992)

Community health centers play a crucial role in providing health service to medically underserved populations. As they are often the only providers of health care for the underserved, there is an excellent opportunity to include them in screening programs. With this in mind the National Cancer Institute sponsored a demonstration project with the University of Massachusetts and the Greater Lawrence Family Health Center. The intervention took place at a health center in a predominately Latino community. The goal of the intervention was to increase the rate of clinical breast examination and mammography referrals by the clinic staff and to increase patient completion of mammography screening.

The health delivery structure to the poor includes the processes and the priorities of the staff, which influence delivery structure (Dutton's theory, Zapka et al. 1992, p. 46).

There were three types of implemented interventions based on the PRECEDE/PROCEED model:

### **1. Client-Centered Educational Strategies**

- Posters, pamphlets, individual patient counseling, and information programs for community groups;
- Messages focused on screening taking only a few seconds and providing a feeling of security once the exam was completed and results known;
- Patient counseling conducted by the nursing assistants (NAs) at the health center (mostly community health workers). NAs stamp the patient's chart indicating that they had spoken with the patient about the three breast health topics. The NA also stamped the chart to remind the physician to do a CBE and make a mammography referral. Role-plays in training were important to allow the NA to feel comfortable both with the topic and in talking with older women.

### **2. Staff Training Strategies**

- Physician participation in grand rounds, inservice training on inreach education, and expanded roles for Hispanic-American clinic aides.

### **3. Management Systems Intervention Strategies**

- The mammography referral log was restructured to monitor referrals (the new version documented no-shows) and to log in receipt of the radiology report. A mammography appointment-reminder letter was mailed to clients, and records were stamped as a reminder cue for physicians to encourage screening. The appointment letter helped to reduce no-shows from 27 percent in 1987 to 17 percent in 1989.

**Results:** Postintervention women were more likely to have had a CBE (1.4 times) and were 4 to 8 times more likely to have had a mammogram (Zapka et al. 1993b, p. 230). (Caveat: The screening experience at this center was higher at baseline than screening rates generally found among poor minority populations. [Zapka et al. 1992, 1993b].)

### **Example: Indian Health Service Clinic**

A study at an Indian Health Service unit in the Southwest found that only 57 percent of women who needed a Pap test actually received the test. The women were required to go to a special clinic to get the test, which meant that they had to make an additional trip.

#### **Intervention**

- One clinic decided to abolish the women's clinic and hire a female provider for the afternoon walk-in clinic, giving women the chance to get a Pap test while they were at the clinic for another service. Also during the diabetes clinic, women were given the opportunity to obtain a Pap test. The women's clinic traditionally had a long waiting list.
- A computer-based records system was also in place. The system included completion of an encounter form and an interview with a nurse when a woman entered the clinic. The nurse discussed the current problem and reviewed the record for "health maintenance needs" (Landen et al. 1992, p. 175).

**Results:** There was an increase in the number of Pap tests performed at the intervention site; however, the increase was not statistically significant (Landen et al. 1992).

### **Example: Fox Chase Intervention With Women and Providers (primary physicians and radiologists) in an Independent Practice Association-Model Health Maintenance Organization** (Rimer et al. 1993)

#### **Interventions**

- More than 50,000 women ages 50 to 74 who were members of the health maintenance organization (HMO) were sent packets of health education materials and were offered free referrals (Rimer et al. 1993, p. 444). This was a stepped intervention. Women who did not have a mammogram within 45 days were sent a brief reminder letter. After 95 days each woman was "randomized to receive either a telephone call from a telephone counselor, second reminder letter, or letter from her physician's office encouraging her to schedule a preventive office care visit in which breast cancer screening would be discussed. . . . The counseling telephone

call was designed to elicit and overcome the woman's personal barriers to obtaining a mammogram" (Rimer et al. 1993, p. 444).

- Intervention to primary care physicians and radiologists:
  1. A self-paced tutorial to primary care physicians called "Concepts in Cancer";
  2. Office-based training in the Mammacare method of CBE at physicians' offices; and
  3. Tailored feedback for physicians about mammography utilization by women in their practices

### **Physician Characteristics**

- Physicians who were in group practice, were obstetrician/gynecologists, or who were board certified were more likely to report ordering mammograms (Rimer et al. 1993, p. 445).

**Conclusion:** Women in the intervention group were more likely to get a mammogram than women in the control group. For women with annual incomes less than \$30,000, this effect was more prevalent.

- It is not possible to discern the impact of physician intervention from the impact of women's intervention.
- The study team recommended that physician reminder systems be implemented.

### **Example: Cook County Hospital Intervention**

The intervention took place in the Cook County Hospital General Medicine Clinic, which is the largest primary care clinic at the hospital, serving about 20,000 adults. Sixty-five percent of the patients are women, and 70 percent are age 50 or older. They are predominantly African American and medically indigent. Patients attend breast cancer detection classes while in the clinic waiting room. The classes include BSE instruction and emphasis on CBE and mammogram. Each patient is given an appointment to return to the breast clinic on the same day as the next scheduled general medicine clinic; the woman then receives a CBE by a nurse, and a mammogram can be ordered if indicated. Clinic physicians were given refresher updates about the importance of breast cancer screening.

**Results:** Women referred through the breast cancer screening program had cancer detected at earlier stages than women with referrals from other hospital clinics. The "percentage of women having mammograms increased from 2 percent to 41 percent" for women in the General Medicine Clinic (Ansell et al. 1988, p. 427).

### **Example: Georgia Department of Human Resources: Increasing Pap Test Screening Resource Guide**

A 5-year demonstration project to increase cervical cancer screening among low-income minority women, 40 years of age and older, was conducted in two Georgia counties. The project included both a patient and a physician intervention. The physician intervention began with a mailed survey conducted to solicit physician input into an educational program. Physicians suggested a short video to show their role in cervical cancer prevention, up-to-date patient education materials, and use of hospitals to reach physicians. A patient education packet was compiled and marketed to physicians during staff meetings at hospitals. The packet included a prescription pad for health that contained a checklist for cancer screening and health promotion activities adapted from the Dartmouth Project, which was designed to increase referrals for cancer screening by primary care physicians. Physicians were then followed up at their offices to determine whether they needed more information or whether they had implemented the reminder system.

Results of the project indicate the desirability of getting the American Cancer Society involved so the activity continues after the study period. The project also included an intervention with residents at a clinic of Grady Memorial Hospital. The intervention provided breast and cervical cancer information to hospital residents and gave them the opportunity to perform supervised examinations on clients at the clinic. Breast models used during instruction were from Mammacare. In addition, the project staff learned how critical physician office staffs were to the implementation of the project.

### **Example: Reminders for Followup Annual Exams**

King and colleagues (1994) conducted a four-step intervention for women to schedule and receive an annual mammogram. This was implemented in an individual practice model HMO.

- Step 1: Women in the HMO were mailed a packet with breast cancer information, including a mammography referral form.
- Step 2: After 45 days, if no mammogram report was received, the women were mailed a brief reminder letter.
- Step 3: A brief telephone survey was conducted 95 days after the first mailing to assess mammography status of the women at days 45 and 90.
- Step 4: The women who had not received a mammogram after the 95 days were randomized to receive either a second reminder letter, a preventive office visit letter, or telephone counseling based on the Health Belief Model, stages-of-change, and conflict model of decisionmaking.



**Results:** Twenty-nine percent of the women in the telephone counseling group obtained subsequent mammograms, compared with only 12 percent of those in the second reminder group and 14 percent in the preventive office visit letter group (King et al. 1994, p. 105). Interventions were not expensive: the letter cost \$0.91 per appointment, telephone counseling cost \$4.92 per appointment, second reminder letter cost \$2.73, and the preventive office letter cost \$3.68. The majority of the HMO population had a high school or higher education level.

## Barriers and Facilitators to Implementation

Burack and Liang (1987) looked at inner-city residents receiving primary care through an internal medicine training practice. The residents completed a patient encounter form at the end of a visit to recommend cancer screening procedures. They found that 73 percent of patients initially accepted all recommended procedures, but only 50 percent completed colon cancer screening. About one-third were unable to complete breast or cervical cancer screening.

Provider-based intervention is important; however, there are still barriers to compliance that must be addressed and lessened. Less invasive procedures are accepted more fully.

### Women's Beliefs

- Zapka and colleagues (1989) found that incorrect beliefs (for example, that bruising or bumping the breast causes cancer) were associated with having a CBE in the past year. She also found that women who used primary health centers received cancer screening services at a higher rate than the general population.

### High-Risk Women

- Women at highest risk for breast cancer (family history and older than 65) did not have discussions with physicians. Physicians need to initiate the dialog (Roetzheim et al. 1995).
- Women with benign breast disease had higher rates of physician-generated discussions.

**Conclusion:** “In communities where the majority of women have not been recently screened, interventions aimed at medical care providers will be the most effective in increasing screening participation. Programs aimed at clinicians can first address knowledge, motivation, and skills. Second, they can address aspects of the practice environment that enable and reinforce inreach behavior” (Zapka and Estabrook 1995, p. 67).

Note: Please see the supplemental material at the back of this section for information on the inreach program conducted by the Northcoast Breast and Cervical Cancer Screening Programs.

# Community Health Workers

## Background

Community health workers (CHW) recruited from indigenous populations have been utilized in developing countries for years. The U.S. International Cooperation Administration promoted use of CHWs in community development programs in the 1950s (Heath 1967). Many terms are used for this type of worker. They include

- Community health advisor;
- Community health advocate;
- Community health aide;
- Community health representative;
- Community health worker;
- Community health helper;
- Family health promoter;
- Health facilitator;
- Health promoter;
- Health visitor;
- Health liaison;
- Home visitor;
- Indigenous health aide;
- Indigenous paraprofessional;
- Informal helper;
- Lay community health worker;
- Lay health worker;
- Lay volunteer;
- Natural caregiver;
- Natural helper;
- Paraprofessional;
- Parent befriender;
- Peer counselor;
- Peer health advisor;
- Peer health educator;
- Promotora;
- Resource mother; and
- Volunteer health educator (Centers for Disease Control and Prevention 1994).

Characteristics and qualities of CHWs generally include

- Sharing with the client of a verbal and nonverbal language;
- An understanding of a community's health beliefs and barriers to health care services;
- Enhanced empathy with a community" (Giblin 1989, p. 361).

In addition to the theoretical support for the use of CHWs found in Diffusion of Innovations Theory (use of early adopters to convince others) and Social Learning Theory (use of role models), a primary reason for using CHWs is the limited time for interpersonal communication between patients and formal health care providers.

## **A Comparison of Community Health Advisors and Community Health Outreach Workers**

"Community health advisors" is a term often used in North Carolina to refer to the "natural helpers" (Watkins et al. 1994, p. 75). According to Watkins, a community health advisor (CHA) is defined as a person who "naturally provides unplanned assistance to those persons familiar to them. CHAs are viewed as internal to the community" (Watkins et al. 1994, p. 76). They are not part of the formal health care delivery system.

According to Watkins, "Eng and Young describe the strategy of using CHAs as working through existing social networks to achieve change at multiple levels to improve health" (Watkins et al. 1994, p. 76). They believe it is important to distinguish between the terms used to describe natural helpers and the terms used to describe "indigenous persons in the community who serve as paraprofessionals or extensions of the health care system" (Watkins et al. 1994, p. 75.)

For the National Breast and Cervical Cancer Early Detection Program, the use of CHWs refers to both types of workers as both are used in the programs.

Eng (1992) suggests that CHAs usually do not offer counseling to individuals they do not know. She proposes that CHAs are extending their natural relationship with people they know. This differs from the use of CHWs or outreach workers or CHWs who serve a counseling function that may include strangers. Eng distinguishes between outreach workers or CHWs and community health advisors in this way: "Outreach workers, whose role is to persuade residents to accept services offered within or beyond the walls of an agency . . . . As extenders of the health care system, the driving force behind the actions of outreach workers is to teach and motivate the population to use and comply with existing regimens of care.

"The work of CHAs, on the other hand, is to educate their constituencies and mobilize their resources to advocate for improvements in the health care system. Unlike outreach workers, CHAs are not expected to serve as a substitute for a professional. They are, however, expected to function as an advocacy group, meeting together to initiate interaction among their respective networks on a regular basis for the purposes of carrying out communitywide activities. These

activities may include organizing a speaker's bureau [or] a health fair, or serving as an advisory body to a local agency" (Eng and Young 1992, p. 29).

For a more indepth discussion of the difference between community health advisors and outreach workers, see Eng and Young (1992). The article provides an overview and description of community health advisors that explains their differences from outreach workers.

Israel (1985, p. 68) defines community health advisors as "lay people to whom others naturally turn for advice, emotional support, and tangible aid. They provide informal, spontaneous assistance, which is so much a part of everyday life that its value is often not recognized. Natural helpers are most often characterized as persons who are respected and trusted, and who listen well and are empathic, sufficiently in control of their own life circumstances, and responsive to the needs of others."

## Barriers to Implementation

- Community health workers ideally should be members of the intended audience and exhibit similar characteristics. These characteristics may pose problems in program implementation because the CHWs' work habits may differ from those of people in the mainstream culture. CHWs may not be accustomed to work schedules, report forms, time restraints, or other requirements. Training should focus on these issues, but a supervisor also should be trained to be aware of these issues and to value the CHW skills, perspectives, and background.
- Initially professionals are hesitant about working with community persons, but once an CHW establishes her credibility, a respectful working relationship can be developed.
- Because CHWs are from the intended audience, they may have special considerations. For example, they prefer to have their gas mileage paid in advance or quickly after use, because they cannot always wait a long time for paychecks.
- Assuming a short training period will make an effective educator. CHWs need time to learn, practice, and become comfortable with their roles.
- CHWs serve in paid and nonpaid positions. Salary may affect productivity of the workers.

### **For Example . . .**

Project Elderly Neighbors was a program of volunteers trained to serve as block workers to visit their neighbors on a regular basis and to promote the health and social well-being of persons who were age 60 and older in the neighborhood (Wolf 1985).

Some block workers were offered a monthly stipend of \$100 for working 3 half-days each week. AARP also was interested in the program and paid minimum wage to another group of workers for a commitment of 20 hours per week.

The productivity of the two types of workers was compared. The AARP-funded workers had higher productivity than the other workers, and their enrollments and penetration were higher. (However, the block workers receiving a stipend may not have recorded all their activities.) The stipend workers contributed many more services (cooking meals, administering eye drops, helping bathe someone, and so on) than did the AARP-paid volunteers.

It was hard for some volunteers to make a transition from helping as needed to being expected to help. Two volunteers resigned after the first year because they wanted to work on their terms and not be obligated to work.

- Community health advisor programs in North Carolina generally do not offer a salary to their CHAs because they believe “this would be seen (by the community) as an extension of the clinic staff, and therefore activities would stop if payment were discontinued. . . . Financial remuneration did not appear to have any relation to attrition rate in the training program” (Watkins et al. 1994, p. 80). Other programs across the country offer compensation to community health workers.

## Guiding Principles

- CHWs need a lot of support from supervisors. They also need to support each other.

### For Example . . .

The Santa Barbara County program found that one professional person was needed to adequately supervise four part-time aides, especially in the beginning stages of their jobs. Once the workers gain experience, they can work independently and need less supervision (Heath 1967).

- CHWs often work 20 hours or fewer per week because their time is committed to family and other personal issues. They need flexible work schedules.
- CHWs need some type of self-report form for their activities. It is important for evaluation of efforts and funding sources.
- Training should
  - Emphasize CHWs and supervisors to facilitate mutual valuing of skills and perspectives;
  - “Avoid initial rigid didactic training [that] may undermine the natural skills for which CHWs were selected” (Giblin 1989, p. 364);
  - “Emphasize the enhancement of interpersonal skills” (Giblin 1989, p. 364);

- “Rely primarily upon continuous on-the-job training to reduce anxiety before assuming program responsibilities and provide a format for [CHWs’] contributions to evolving program goals and procedures” (Giblin 1989, p. 364);
  - Be held in a location and facility that is convenient to the CHWs; a variety of trainers should be used to maintain interest and to utilize different training styles;
  - Focus on the content area and communication skills; training uses a variety of methods but should rely heavily on group interaction, role-playing, and sharing information about life experience among trainees; and
  - Be acknowledged with some type of certificate presented to CHWs in some type of ceremony.
- It is important to ensure that each CHW understands the time commitment to training and to the job after training. It may be helpful to have CHWs sign a consent or commitment form. No matter the background of the CHW, the most important aspect of training should focus on communication skills.
  - Staff development and supervision concerns:
    - How can programs enhance the ability of CHWs to represent their community’s needs?
    - How can acceptance of CHWs by professional staff be fostered?
    - How does participation as a CHW affect the paraprofessional as an individual? (Giblin 1989, p. 364).
  - Indigenous characteristics can play havoc with acceptance of the CHW by health professionals. CHWs “who express community concerns as criticisms of the project’s objectives may antagonize professionals but may well represent their clients, while those who identify with professional and program values may distance themselves from their communities” (Giblin 1989, p. 366).
  - “To identify natural helpers, the ‘reputational method’ was used” (Watkins et al. 1994, p. 78). The staff went to clinics serving the target population to conduct interviews and gather the names of women possessing the desired qualities.
  - A nutrition program for seniors, using peer educators, found that seniors preferred to receive information through personal contact rather than from written materials. After several years, the program was modified to reduce home visiting and increase the provision of information at community sites (Ness et al. 1992).
  - It is important to recognize the uniqueness of each individual and what each individual offers to the program.
  - Provide CHWs with plenty of opportunity to practice skills before they go into the field.
  - Selection should be based on “personal characteristics including warmth, ability to learn, evidence of natural leadership, demonstrated ability to help others, and a knowledge of

community resources” (Giblin 1989, p. 363). Other qualities include “leadership ability, empathic and caring attitudes, interest in learning more about the health of themselves and their children, and an understanding of the importance of sharing that knowledge with family and friends” (Watkins et al. 1994, p. 78).

- Persons selected have characteristics similar to the population they are serving, and formal education may not be required. Persons should be mobile to move around the community.
- Successful strategies in social mobilization programs include the use of community residents as outreach workers; emphasis on face-to-face, personal communications; assistance with arranging and keeping appointments; assistance with negotiating in the health care system; and personalized followup.
- It is important to let all workers know that one attempt may not work, and they must go back to the same place over and over again. CHWs sometimes find this tedious.

## **Suggested Techniques for Community Health Worker Interventions**

Specific techniques community health advisors and outreach workers used to recruit women include, but are not limited to

- Door-to-door recruitment in public housing (Lacey et al. 1989, 1991; Sung et al. 1992). This technique can allow CHWs to immediately assess program eligibility and make appointments for clients (if a phone is available or if the CHW has an appointment time block to fill).
- The CHW project of the Morehouse School of Medicine and the National Black Women’s Health Project (NBWHP) found its least successful intervention to be followup of medical center clients and women referred from NBWHP. This program included a 10-week training program for the CHWs and biweekly followup meetings. The project attempted to recruit women using patient records at a community health center. This was not successful because 34 percent of the records with information 1 to 2 years old had address and phone number information that was out of date or incorrect (Sung et al. 1992).

## **Measuring Effectiveness**

- Evaluations can examine changes in health beliefs, attitudes, knowledge, health outcomes, number of clients screened and followed, number of people reached by CHW, and the change in CHW’s view of herself and her role.
- Action research may be a valid method for conducting evaluation. “Action research asks questions such as ‘How well is a program meeting its goals and objectives? Which aspects of a program are most effective, desirable, and useful? How do program goals and objectives aid clients in the program?’” (Giblin 1989, p. 365).

- North Carolina CHAs working with a migrant farmworker program found that they were effective because a social network already existed and women formed supportive relationships (Watkins et al. 1994).
- The same study of migrant farmworkers in North Carolina also found that recruitment and retention of Latina CHAs was successful and that payment was not needed to retain women in these positions.
- Evaluation also can consist of direct observation of CHWs at work, especially if they give presentations. Presentations should be monitored for accuracy, delivery, and sensitivity.

## **Resources for Community Health Worker Training**

- Rhode Island Department of Health Women's Cancer Screening Program. Three Capitol Hill, Providence, RI 02908-5097. *Woman to Woman: A Breast and Cervical Health Training Manual for Outreach Workers and Peer Educators*, 1995. 401-277-6957.
- North Carolina Comprehensive Breast & Cervical Cancer Control Program Community Health Advisor Training Manual. For more information, contact Karen Strazza Moore, North Carolina Department of Environment, Health and Natural Resources, Division of Adult Health Promotion, P.O. Box 27687, Raleigh, NC 27611-7687. 919-715-0121.
- The Maine Breast and Cervical Health Program Peer Education Training Manual. Contact Barbara Leonard, Maine Department of Human Services, State House Station 11, 151 Capitol Street, Augusta, ME 04333. 207-287-5180.
- *Ladies FIRST*. Vermont Department of Health Outreach Workers' Public Relations Handbook, Module 1 and Module 2. Contact Kerri Frenya, Vermont Department of Health, P.O. Box 70, Burlington, VT 05402. 802-863-7331.



# Church-Based Interventions

## Background

Churches fulfill a social and service role particularly in low-income and minority communities. Hypertension programs through churches have been successful. Because of the significant role the church plays in many people's lives, it has the capability to inspire and support behavior change. Church-based interventions have been tested extensively in the African American population. Additional church-based interventions need to be tested in other populations to determine the replicability of this strategy.

The church offers a system of social networks that occurs on its own. Church members often are able to reach community people more easily than professionals. Furthermore, the church fulfills several functions, including

- A unit of identity:
  - Providing “one of the few formal structures that Black people have been able to use to confer titles of honor and respect on their own people” (Eng et al. 1985, p. 85);
  - Providing persons with the opportunity “to feel a sense of achievement and worth” (Eng et al. 1985, p. 85); and
  - Offering opportunities for individuals in leadership, taking charge of projects, and providing support to others.
- A unit of solution:
  - Offering rituals and structure for life events: birth, death, marriage, illness;
  - Exploring the meaning of life;
  - Offering support in a time of crisis; and
  - Generating the formation of many other organizations (e.g., fraternal, social, educational) (Eng et al. 1985, p. 86).
- A unit of practice:
  - Encouraging each other to comply with health behavior change; and
  - Reaching significant persons.

Church members and other community members who can be contacted through or by the church are the focus of church-based interventions. Although this is an effective way to reach some segments of the population, it also is important to use more than one location for an intervention. For example, do not look at African American men needing hypertension control and think the

church will be the sole solution. You must look at broader context of how African American men respond to interventions and work with significant persons in their lives to influence men.

**Barriers** (Olson et al. 1988)

- Issues other than health have a greater priority for the intended audience (poverty, crime).

**For Example . . .**

A project in Chicago surveyed 176 inner-city churches. The clergy identified their leading community problems: lack of jobs, teenage pregnancy, gang crime, school dropout rates, and hunger were listed in that order. Poor child health and poor elderly health (Olson et al. 1988, p. 249) were mentioned closer to the bottom of the list.

- Lack of volunteers.
- Lack of funds.
- Lack of time to manage the program by church staff. Also the worry that health activities will take volunteers away from traditional church activities. Programs that require minimal clergy involvement have a better chance for acceptance.
- Lack of interest by the congregation; this can be turned to a positive. Some church leaders thought participation in a project would be a good way to recruit new church members (Lasater et al. 1986).
- Lack of cooperation or technical support from government agencies.

Many church members do not live in the community where their church is located (Olson et al. 1988). Often pastors do not live in the community either. This is particularly true in inner-city areas where members become more affluent and move away from the neighborhood but retain their original church membership.

**Guiding Principles** (Lasater et al. 1986)

- Face-to-face recruitment is important after the introductory letter or phone call.
- Ministers or pastors need to grant approval; however, another church member will end up as point of contact.
- Vestry or board approval helps to legitimize the program. It is also important in case the current pastor leaves; with vestry approval the project can continue.
- During the intervention, the program staff needs to offer support and contact.

- “In planning Church-based interventions, there should be a fit between the recommended health-related behavior patterns and the naturally occurring social support patterns within the congregation” (Eng et al. 1985, p. 82).
- Church members must play a significant role in the intervention, including participating in its design.
- Consider the following questions before implementing a church-based intervention:
  - “To what degree do interpersonal networks within the Church operate to fulfill social support and problem-solving functions on a routine basis?”
  - “To what degree does the intervention itself seem to be both appropriate and in harmony with the Church’s sense of mission and organizational structure?”
  - “To what degree does the Church represent and function as a source of identity for the community it serves?” (Eng et al. 1985, p. 82).
- Successful hypertension programs are “characterized by three primary factors:
  - The use of the church as an intermediary
  - The inclusion of members of the church social network as agents of intervention
  - The grafting of program activities onto the natural support systems of the church community (Davis et al. 1994, p. 501).

## Examples of Techniques for Implementing Church-Based Interventions

### Example: HARP (Health and Religion Project)

The HARP initiative was implemented in 20 Rhode Island churches. The purpose of the project was “to test the efficacy of churches as sites for health promotion” and “to test the necessity of training special task forces to coordinate efforts within each church and to test the relative efficacy of high or low levels of professional (paid staff) involvement” (Lasater et al. 1986, p. 125). The program interventions were designed to educate people about cardiovascular risk factors (using the principles of the Pawtucket Heart Health Program as background). Both the Pawtucket Heart Health Program and the HARP used community volunteers to deliver behavior change messages and provide support for new behaviors.

The project was based predominantly on social learning theory, reciprocal determinism, and self-efficacy. “Reciprocal determinism is the recognition of the idea that each individual is both influenced by and influences his or her social and physical environment” (Lasater et al. 1986, p. 129).

- The Catholic Bishop and the President of the State Council of Churches (for Protestant pastors) endorsed the study.

- Churches were contacted initially by mail, and written responses were submitted from those churches indicating interest in participation. Followup letters were sent to the churches selected to be part of the project. The letters were followed by meetings with the clergy of each church.
- Vestry or board approval at each church was necessary before the project could begin.
- The clergy were responsible for recruitment of volunteer task force members and team leaders.
- The project staff trained the volunteers. Training for the task force members occurred in three 2½-hour sessions. Risk factor leaders had a minimum of 12 hours of training during a 1-month period. Two persons per risk factor were trained, meaning that 10 risk factor leaders were trained per church.
- It took 9 months to complete the church surveys and the training sessions for the volunteers.
- Churches were randomized to use task forces and receive high or low involvement for the project team or to no intervention.
- Half the churches used task forces to recruit risk-factor leaders; the other half did not have task forces but relied on the clergy to recruit leaders and assist in arranging training.
- Risk-factor leaders were taught “how to provide reinforcement for others attempting change and avoiding negative reactions such as ‘kidding’”(Lasater et al.1986, p. 130). The leaders also distributed health-related information during the year to church members. In addition they instituted environmental changes in the church, including the use of low-fat and low-sodium foods at church functions.

### **Example: Heart, Body, and Soul**

Heart, Body, and Soul is a smoking cessation intervention trial project in East Baltimore. The program used social learning theory and a communitywide social action model. Both strategies required the active involvement of the pastors. (This program was different from the HARP project, which relied on initial contact and buy-in from the pastor but not much direct involvement from the pastor throughout the program.)

The program “was designed to access the churchgoing population, with its ultimate objective being to enhance church ownership of the intervention and to promote sustainability of the programmatic efforts” (Stillman et al. 1993, p. 338).

Steps included (Note: Timeframe is included when available):

### 1. Formation of a Steering Committee (3 months)

- Determining staff who will be responsible for primary coordination of the intervention.
- Forming steering committee; for Heart, Body, and Soul this consisted of three pastors from three different denominations and the study team from Johns Hopkins Hospital.
- Holding initial meetings establishing the relationship between the “institution” and the community. The steering committee defined their roles, and the pastors on the committee took the suggestions and ideas back to a larger organization of religious leaders in the community for approval. It took a long time to develop the relationship. The community had negative feelings about past relationships with the medical institutions. The researchers thought the study would be compromised if there was too much community ownership.
- Having project staff members attend church meetings, church suppers, and other activities held by the church to dispel suspicions and instill trust. The action “did more to demonstrate our willingness to be active and equal partners in the life of the church and community than any written document or formal proposal” (Stillman et al. 1993, p. 339).

### 2. Conducting a Needs Assessment

- Conducted a community assessment of commercial establishments, health and human service organizations and agencies, schools and recreation centers. Members of the community were interviewed. Elected representatives were contacted. (3 months)
- A random-digit-dial telephone survey was conducted among African Americans adults in the target area to assess smoking rates and to get a demographic profile of the population. (4 months)
- Three focus groups were conducted with former and current smokers to ascertain attitudes and behaviors about smoking from individual perspectives. (2 months)

### 3. Church Recruitment

- An initial letter was signed by each member of the steering committee was sent to 130 churches.
- Project staff called 48 churches identified by steering committee pastors as possibly receptive to the program. On average three telephone calls were made, reaching only five church offices. Staff members then attempted to contact pastors at home with better success rate. Of 23 churches reached, 22 agreed to participate.
- The entire recruitment process took 5 months.

#### 4. Church Orientation

- Project staff met face to face with each church pastor to explain the project.
- The pastor then identified someone from the church (usually the head of the church's nurses' unit or health ministry unit) to be the contact person to coordinate church screening activities.

#### 5. Program Material Development (6 months)

- Steering committee members wanted materials to reflect a spiritual nature.
- Focus group and other needs assessment data indicated that church members used devotional booklets and listened to gospel music.
- A smoking cessation gospel song was created.
- Pamphlets and fliers were developed that highlighted individual churches with the names of churches and pastors.

#### 6. Intervention Strategies

- Churchwide mobilization events including a health fair and distribution of literature: The health fair was held as a baseline to measure and educate about cardiovascular disease risk factors. Announcements were placed in the church bulletin, church-specific brochures were distributed in the community, fans with the program logo were placed in the pews, and lay specialists in smoking cessation were identified.
- Smoking cessation specialists were trained in smoking behavior and addiction and in providing support individual and in groups. (Recruitment and training took 9 months.)
- A special kickoff Sunday with pastor delivering a sermon on smoking: Announcements about the program continued for 3 successive weeks and smokers were recruited into intervention sessions. Smoking cessation materials were distributed.
- The smoking cessation specialist facilitated weekly spiritual support groups.
- Reinforcement and acknowledgment of successful smoking cessation activities were offered by the pastor during regular church services. Volunteers were rewarded with certificates of merit.

#### 7. Barriers

- Smoking has a negative connotation, and it is possible that some church members may not have participated in cessation program because of embarrassment.

**Results:** Through the health fairs, 1,290 church members were screened and counseled. This number was about 20 percent of the total congregation. Twenty-nine

smoking cessation specialists completed training and participated. All church pastors made announcements during service. Half the churches held the minimum of four group smoking-cessation sessions. Evaluation was conducted through followup health fairs during an 8-month period at 1 year after the baseline health fairs. Smokers were reinterviewed 1 year later.

**Lessons Learned:**

- Local churches should be allowed to tailor and personalize intervention and data collection.
- Control of intervention should be shared with intended audience. Do not dictate.
- Institutional factors may contribute to intervention's success: "Pastor's length of tenure, the church's general orientation toward health, the level of congregational support for the pastor, the presence of an active health ministry, the number of health programs previously conducted in the church, and the size of the congregation" (Stillman et al. 1993, p. 347).
- No partner should dominate the intervention.
- This project found that the coordination of the project shifted from the mayor's stations to the church. The steering committee made final decisions regarding program components. This contributed to program sustainability, as did the use of community health workers.

**Example: North Carolina Church-Based  
Community Health Advisor Intervention**

In this intervention (Eng et al. 1985), community health advisors (CHAs), individuals identified by local pastors as people who were natural helpers or people to whom others turned in time of need, were trained in activities to reduce and control risk factors for diseases that were common in their community. They were trained in a group setting with members from different churches to prevent and control risk factors related to common health problems affecting their friends and family. CHAs went to their congregations to help others and to coordinate health activities such as health fairs, which were held in the community. Education, screening, and referral activities were offered. CHAs continued to speak about health issues during church services and meetings and informally with social contacts. CHAs recruited people to facilitate self-help groups on a certain risk behavior. The facilitators then were trained to lead the self-help groups.

### **Example: Witness Program, Arkansas**

In this program (Erwin et al. 1992), African American women who are breast cancer survivors serve as role models to speak (witness) about their experience with breast cancer and to encourage their peers to practice BSE and get mammograms.

- A witness explains how her life has changed through the experience of having breast cancer. The purpose is to help others in the congregation who are struggling with similar issues.
- The breast cancer witness “focuses on a woman’s recognition and discovery of a breast lump, the treatment process, her personal philosophy regarding survival, and the benefits of early detection” (Erwin et al. 1992, p. 313).
- The witnesses talked to women and challenged them on their reasons for not getting mammograms with the intent of persuading them to take control of their own health.
- The witness program is based on the 4MAT® System, a theoretical educational model that is based on learning style and how learners process information (Erwin et al. 1992).
- The witnesses did not have prior public speaking experience.
- Programs were presented at churches. The first part of the program involved witnessing, followed by BSE instruction, practice time, and dissemination of information. Attendees were asked to complete a questionnaire to provide demographic and health history information.

Three months after the witnessing event, a followup questionnaire was mailed to all participants. After 3 weeks, a telephone interview was conducted with those who did not reply.

Although the program is labor intensive, there was a change in mammography numbers (19 percent of the women had one) after the intervention.

### **Example: Los Angeles County Program**

Twenty-four churches participated in the L.A. County program (Davis et al. 1994). Each church leader identified community health leaders who would recruit female church members ages 21 and older for cervical cancer screening. The purpose of the project was “to examine the efficacy of a church-based model of social influence in reaching underserved African American and Latina women for participation in a cervical cancer control program” (Davis et al. 1994, p. 501). The churches were recruited through a letter from Drew University’s cervical cancer control program.



Procedures used during the program included

1. Creating the conditions for church-based cancer control, which included securing pastoral commitment and selecting the lay health leader (this project uses the term “lay health leader” to mean messenger, recruiter, and organizer);
  - Churches that responded to the recruitment letter identified a contact person for the church. Pastors often requested that the initial meeting occur with the contact person rather than the pastor. Program staff members would not begin the program without contact with the pastor. Meetings with the pastors lasted from 1 to 1½ hours and occurred at any time.
  - Proposed activities included pastors’ leadership and support of the program, 5 minutes during services for introduction, selection of a lay health leader from the congregation, a large meeting room for education sessions, and a secluded room in which to conduct the screenings.
2. Establishing network leadership and social supports:
  - Lay health leaders were selected through an ethnographic assessment protocol.
  - The pastors announced selection of the lay health leaders during services.
  - Lay health leaders attended two training sessions. Sessions lasted 30 to 45 minutes and were specifically focused on how to deliver specific messages on cervical cancer screening requirement and how to recruit congregation members to screening.
  - Followup sessions were offered as needed during the 2-year period.
  - Church members organized child care, buses, and lunches (if necessary) for those attending the educational sessions. Seventy-eight percent of the churches offered such support mechanisms.
3. Implementing the interventions:
  - Program staff members were introduced to the congregation before the program began.
  - Lay health leaders used church bulletins, fliers, and word-of-mouth to recruit women to participate in educational sessions. Each session lasted 1 hour.
  - Women 21 years of age and older who had not had a Pap test within the past 2 years were recruited for screening.
  - Screenings were offered onsite immediately after church services. Tables and privacy screens were brought in.
  - One thousand and twelve women attended education sessions. Sixty-two percent were African American and 35 percent Latina. Four hundred ninety women were screened through the program.

- The majority of women screened (53 percent) were between the ages of 21 and 39, and 37 percent were between 40 and 59 years of age.
  - One-third of the women did not have health insurance.
4. Promoting continuity of leadership initiatives: The pastor and lay health leaders were involved in planning for continuation of activities.

**Results:** Fifty-two percent of the churches continued some related activity 2 years after the end of the program. Caution should be used in promoting free services. Often individuals view free service as substandard or a favor to the poor.

# Reaching Women in the Workplace With Breast and Cervical Cancer Early Detection Programs<sup>1</sup>

## Background

In 1992, the Office of Disease Prevention and Health Promotion released the results of its National Survey of Worksite Health Promotion Activities, which assessed the “nature and extent of worksite health promotion activities in private worksites with 50 or more employees.” The good news was that 81 percent of the 1,507 worksites surveyed with 50 or more employees offered at least one health promotion activity in 1992 (1992 criteria: 92 percent). However, only 12 percent of those with 50 or more employees offered at least one type of cancer screening activity. Eight percent offered mammography and 3 percent offered Pap tests to their employees. Overall 23 percent offered information or activities such as literature or classes or workshops on cancer. With few exceptions, the larger the worksite, the greater the chances it offered some sort of screening activities, referral, followup, or tracking services and cancer-related information and activities to its employees. As the report points out, worksite health promotion programs can be used effectively “to educate employees on high-risk lifestyle choices and environmental factors and provide cancer screenings” (U.S. Department of Health and Human Services 1992).

The workplace is a logical setting for offering early detection and prevention programs related to cancer for a number of reasons. First, *Healthy People 2000* (U.S. Department of Health and Human Services 1990) contains specific goals related to the offering of health promotion programs in the workplace. Although it does not contain objectives related to breast and cervical cancer screening programs in the workplace, it does outline general goals for increasing the percentage of women who have been screened at appropriate intervals for these types of cancer.

Worksite cancer control programs (Glanz et al. 1992a, 1992b) have the potential to

- Improve health;
- Prevent unnecessary medical expense and suffering;
- Prolong life; and
- Improve the quality of life.

---

<sup>1</sup> Adapted from John Lisco’s handout for a roundtable discussion at CDC’s Division of Cancer Prevention and Control Conference (Managing the Breast and Cervical Cancer Program: Changes, Challenges, Commitments, and Communities), April 1994.

Worskite characteristics (O'Donnell and Harris 1994; Kessler et al. 1991; Dejoy and Wilson 1995; Jacobson et al. 1990; Glanz et al. 1992b; Mavis et al. 1992) enhancing opportunities for screening:

- Provide a convenient location for participation in health promotion programs at a reduced expense to both employee and employer;
- May provide opportunities for social support;
- May provide incentives for healthy behaviors or making lifestyle changes;
- Provide relatively stable population over time, enhancing opportunity for evaluation;
- Provide space that can be used for programs; and
- Allow for the possibility to reach out to family members of employees through workplace programs.

## Reaching Women in the Workplace

Reaching women in the workplace can range from simply providing brochures on the importance of early detection and prevention and other information about programs and services that are available in the community, to conducting onsite educational and skills-building programs (for example, BSE), to offering breast and cervical cancer screening, to referral and followup services. Any or all these might be appropriate depending on the setting, resources, needs, and interests of the worksite. Companies do not have to be large or wealthy to be candidates for these programs. Neither do they have to limit themselves to the women onsite; they can extend their offerings to spouses, dependents, retirees, and customers. Worksites can offer screening onsite, via mobile or company-owned units, or provide offsite screening. Many companies have reported that participation in their screening programs surpasses their projections and that they have been able to reach large proportions of their work force (Industries' Coalition Against Cancer 1994).

There are basic standards for screening programs, regardless of where they take place, that apply to worksite-based screening efforts as well as to those in health care settings. Every woman with an abnormal screening examination should receive prompt and appropriate diagnostic evaluation and, if necessary, treatment. *A mammogram never saved anyone's life; rather, it is the treatment of an early cancer detected by mammography that is absolutely necessary.* If you are going to provide screening mammography, you must have available the necessary infrastructure to ensure that women get the followup they need. For example, depending on a woman's individual situation, a referral letter following an abnormal mammogram may not be enough. She may need additional encouragement, the name of a physician, or help with financial concerns. The employer's responsibility should not end with arranging for the mobile mammography van. Rather, there must be assurance that women with abnormal mammograms are followed up.

In addition, all screening efforts should reflect the fact that it is regular *rescreening* that is most likely to reduce a woman's risk of dying from breast cancer. Programs are advised to set up reminder systems to encourage women to return for their annual examinations. Worksite-based screening programs should consider the need for regular *rescreening* in their efforts.

## Tips for Reaching Women Where They Work

- Occupational health departments: Many worksites, large and small, have medical personnel who conduct preemployment physicals, periodic medical examinations, and other clinical services. Employees often turn to them for basic medical information and assistance. Occupational health personnel can distribute information, conduct screenings (mammography or Pap tests), do clinical breast examinations, and teach BSE. This group also is an excellent target for professional education programs. This is significant because tailored messages from a physician are effective in getting women in for screenings, especially women who are “hard to screen” (Skinner et al. 1994).
- Health promotion and wellness programs: As above, many worksites can incorporate cancer prevention and early detection interventions and messages into existing programs. These programs often have the support and infrastructure in place to support this. Time and time again, both researchers and practitioners call for the inclusion of cancer early detection messages and screenings in comprehensive health promotion programs (Cohen and Murphy 1989; Weston 1993; Eriksen 1988).
- Personnel departments: Especially in worksites that are predominantly female, for example, sewing, poultry, cosmetics, garment factories.
- State employee wellness programs: Have participated in early detection and screening programs.
- Medium and small businesses: Especially those that are minority owned or whose employees represent minority groups. These smaller companies typically do not offer the same kind of comprehensive benefits as larger companies. Nevertheless, they may be willing to disseminate information or even offer screening to their employees (Zapka et al. 1993b).
- Schools: Often an overlooked worksite with a large female work force, many of whom are older than 50.
- Nursing homes: Another overlooked worksite, often with employees who have no insurance coverage.
- Service industries: Hotels, fast-food restaurants, office and house cleaning services, and so on.
- Meat-packing plants and farms that employ migrant or seasonal workers: Have successfully been approached and offered education and screening for their employees.
- Other potential sites: Universities, unions, retailers, law firms, manufacturing facilities, hospitals, banks, newspapers, real estate companies, farms, and other settings where women congregate.

## Community Outreach Through the Worksite

- Church-based cancer education and screening: Many religious leaders are interested in offering health education and screening programs to members of their congregations. Ministers, community health educators, health activities committees, health professional “guilds” (e.g., Nursing Guilds), and clergy groups (e.g., Concerned Black Clergy) can be trained to reach out to members of their congregations.
- Department stores: Many have attached messages to clothing in women’s departments or given out educational materials and brochures at the checkout counter. Pier 1 and Liz Claiborne recognized that at least 85 percent of their customers were women and that breast cancer was a leading cause of death for women. Both have brought mobile mammography units to the shopping centers and malls where they have stores and have offered low-cost screening to customers and employees. Liz Claiborne used the proceeds from the screening to pay for free mammograms for underserved women (Industries’ Coalition Against Cancer 1994).
- Pharmacies: Can give out educational materials and brochures as well as information regarding screening sites or phone numbers for more information.
- Hair salons: Many have used the “women working with women” concept to provide information to employees and customers.
- Cooperative agreements with divisions of employment security: Brochures on breast health and the importance of early detection and prevention can be distributed to both women and men coming in for unemployment benefits and counseling.

## Opportunities for Collaboration With Organizations and Partners

- Cancer centers and medical centers: Can provide a variety of services to businesses ranging from education to screening to treatment and referral. Some are willing to accept women who are not covered by insurance. A cancer center in South Florida reported that it had screened employees without health insurance at a McDonald’s Restaurant because the company was willing to pay the costs of screening (it was much less expensive than offering health insurance to employees). This particular cancer center also was willing to cover the cost of followup and treatment for those women who were uninsured or otherwise unable to cover those costs. Many centers, especially those that are university based, are interested in reaching older women, minorities, and other underserved populations (Industries’ Coalition Against Cancer 1994).
- Professional organizations: Often can be a source of speakers, screeners, referrals, or trainers.
- Local cancer leadership summits or conferences: Bring together business and health communities to look at meeting the health needs of the population.

- **Local businesses:** Can be included on task forces and coalitions. Larger ones can apply financial and political clout for health care, screening, and so forth. One State reported working with larger companies to encourage them to underwrite the cost of a much-needed mobile mammography unit that could be used to reach underserved women.
- **Wellness councils (State or local):** Can often provide resources, advice, or technical assistance in setting up health promotion programs (Wellness Councils of America 1993).
- **Business alliances:** Industrial councils, hospital foundations, and bar associations all have been involved in screening programs in a variety of settings.
- **Professional schools:** Nursing, public health, and medical schools can provide speakers or trainers for education programs.
- **Support groups:** Many groups can assist in working with businesses, including the Susan G. Komen Breast Cancer Foundation, Cancer Care, Inc., National Alliance of Breast Cancer Organizations, American Cancer Society, Association for Worksite Health Promotions, and Cancer Research Foundation.
- **Community or peer educators:** Can provide a variety of information to coworkers. Many existing worksite health promotion programs use volunteers to coordinate programs through onsite wellness committees. Coworkers also can deliver prompts that have been shown to be effective in encouraging BSE. They can provide a stimulus for the social support that increases the likelihood of a woman's having a mammogram. These volunteers can be recruited from the employee population, retirees, dependents, or the community.

## **Guiding Principles for Successful Worksite Screening**

- **Convenience:** Offering programs where women are; work release time for screening. Several studies suggest that women are more likely to get mammograms if they have the opportunity during work hours or if screening hours are extended during evenings or weekends (Dejoy and Wilson 1995; Glanz et al. 1992b; Laville et al. 1989).
- **Affordability:** Programs should be inexpensive. Discounted, subsidized, or minimal charges are often preferable to free services.
- **Insurance coverage:** Has been reported by some companies to increase the likelihood of screening. It also may increase the likelihood of a physician's recommending screening (Urban et al. 1994).
- **Management support:** Buy-in to program from all levels of management. Health promotion programs should be tied in with corporate mission or vision statement (Dejoy and Wilson 1995; Glanz et al. 1992b).
- **Employee or intended audience involvement:** Important in all phases of programs (Coyne et al. 1992; Kreuter 1993).

- Quality.
- Easy access: Some businesses have negotiated with providers to extend their hours so that their employees can be screened before or after work or on weekends.
- Cultural sensitivity: Materials should be developed from the perspective of intended audiences (Coyne et al. 1992; Kreuter 1993).
- Communication: Networking, lectures, invitations, newsletters, E-mail, posters, brochures, bulletin boards, restroom literature and posters, followup (computerized or otherwise), buddy systems, shower cards, and so forth.
- Simplicity: Messages and programs must be simple and easy to understand.
- Focused messages: Education should focus on guidelines for screening, efficacy of mammography, and the importance of getting a mammogram in the absence of symptoms.
- Media events and educational activities: Often lead to increases in breast and cervical cancer screening (Zapka et al. 1993a; Shelley et al. 1993).
- Confidentiality: Critical when dealing with women in the workplace whether you are discussing results, financial arrangements, or other sensitive issues.
- Incentives: Offer small incentives for participation (Dejoy and Wilson 1995; Coyne et al. 1992).
- Involve health professionals (Glanz et al. 1992b).
- Tie in with other health promotion messages and programs (Cohen and Murphy 1989).
- Identify barriers (Coyne et al. 1992).
- Build in evaluation to monitor program, make adjustments, and improve in the future.

## Summary and Recommendations

A variety of strategies are needed to successfully recruit older medically underserved women. Strategies should be segmented on the basis of audience characteristics (through a thorough community analysis). The most effective programs use a combination of strategies that includes outreach, inreach, and community development. Zapka and colleagues (1995) have outlined principles for choosing strategies and planning programs:

- In communities where the majority of women have not been screened recently, interventions aimed at medical care providers will be the most effective in initially increasing screening participation.
- Programs aimed at clinicians can first address their knowledge, motivation, and skills. Second, they can address aspects of the practice environment that enable and reinforce inreach behavior.



- The essential decisions about strategy and messages for women’s interventions are those related to which subpopulations should receive priority attention and what the priority objectives are that must be addressed within that subpopulation.
- The choice of strategies directly aimed at women must weigh the important complex and interrelated criteria of relevance and acceptability, likelihood of effectiveness, scope and breadth, feasibility, and cost-effectiveness.
- The selection of messages to be stressed within the strategy should reflect informed, theory-driven choices.
- Combinations of interventions are likely to be more effective than single interventions.