Cervical Cancer Prevention

Issues in Depth 4

Improving Screening Coverage Rates of Cervical Cancer Prevention Programs: A Focus on Communities

ACCP Alliance for Cervical Cancer Prevention

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Cervical Cancer Prevention Issues in Depth #4

Alliance for Cervical Cancer Prevention (ACCP)

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About the Alliance for Cervical Cancer Prevention

The Alliance for Cervical Cancer Prevention (ACCP) consists of five international health organizations—EngenderHealth, IARC, JHPIEGO, PAHO, and PATH—with the shared goal of preventing cervical cancer in developing countries. Alliance partners work to identify, promote, and implement cervical cancer prevention strategies in low-resource settings, where cervical cancer prevalence and mortality are highest. For more information on ACCP's work and publications, please visit www.alliance-cxca.org.

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Improving Screening Coverage Rates of Cervical Cancer Prevention Programs: A Focus on Communities

Introduction

Assuring high levels of participation in screening (i.e., coverage) and follow-up is essential for effective cervical cancer prevention[1,2]. However, obtaining high levels of coverage is challenging in both developed and developing countries. For example, in Europe, coverage ranges vary widely between and within countries: England, Iceland, and rural areas of Sweden and Denmark have coverage rates greater than 80 percent, while coverage rates are at or below 60 percent in Austria, France, Italy, and Spain. In Spain, reported coverage for women aged 40 to 70 years ranged from 25 percent in Castilla-La Mancha to 61 percent in Madrid. In developing countries, variation is also wide, with very high coverage rates in Chile (68 percent) and Costa Rica (77 percent), and very low or nonexistent coverage in most Asian and African countries.[3] However, for the most part, screening coverage in developing countries is extremely low, resulting in high morbidity and mortality due to cervical cancer.

These low screening rates suggest that coverage strategies are not always optimized, particularly for women who are hard to reach. Various strategies for increasing screening coverage, primarily in developed countries, have been evaluated in the literature. They include strategies targeting individual women with invitation letters, face-to-face communication, and educational interventions; strategies targeting health care providers, such as physician reminders or incentive programs; and strategies involving the community, such as mass media campaigns and outreach to family and community members.[3] These strategies have had different degrees of success, depending on the populations addressed, the settings where they were implemented, initial screening coverage levels, and the way in which the health system was organized. However, transferring some of these strategies from developed to developing countries has also been problematic. For example, the lack of population registry and postal systems will remain an obstacle to increasing screening coverage with invitation letters. Furthermore, low-literacy levels and prevalence of inaccurate information relating to cervical cancer prevention in developing countries may mean that the effectiveness of other communication strategies may be compromised.

In developing countries, barriers to cervical cancer screening uptake include absence of knowledge about the disease, lack of familiarity with the concept of preventive health care, geographic and economic inaccessibility of services, poor quality of services, and lack of support from families and communities. This paper will discuss how strategies to increase coverage should focus on

the community to address such issues. Focusing on the community in cervical cancer prevention activities matters because a woman's ability to make an informed decision—and act on that decision—to receive cervical cancer screening and treatment services is influenced not only by her own beliefs and behavioral patterns, but also by existing social networks and institutions, or community. Social networks include a woman's partner, family, friends, neighbors, members of women's groups, religious groups, or associations with which she may be affiliated. Institutions include local administrative structures, health delivery structures, schools, or other civic associations that could support a woman's decision and ability to seek services.

Figure 1 illustrates the elements of the community focus used in Alliance for Cervical Cancer Prevention (ACCP) projects. Strategies to increase coverage that utilize a community focus include: (1) listening to, and learning from, the community; (2) involving community stakeholders in program development and implementation; and (3) responding in a way that addresses the needs of the community. These strategies were designed to increase and sustain demand and improve the quality of services, resulting in increased participation in screening and compliance with treatment recommendations.

This paper describes the community focus taken by ACCP projects from 1999 to 2004 in eight countries: El Salvador, India, South Africa, Thailand, Ghana, Kenya, Peru, and Bolivia (Table 1). We include an overview of the strategies mentioned above that were used to increase screening coverage, and we present lessons learned about how to meet women's needs effectively by having a community focus.

Figure 1. Community-Focused Strategies to Increase Screening Coverage

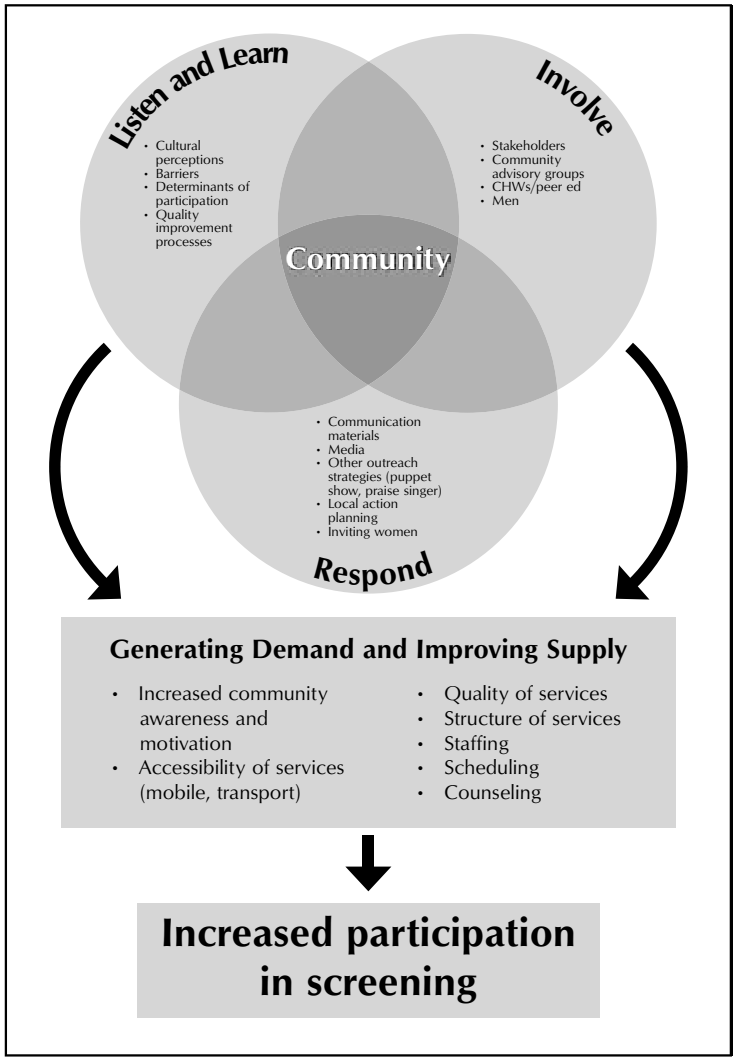


Table 1. List of ACCP cervical cancer prevention research and demonstration projects and related program information.

Alliance partner **Name of project**	**Project location** **Project type**	**Screening test** **Treatment protocol**	**Target age group** **Size of eligible population**	**Client participation strategies**
EngenderHealth Khayelitsha Cervical Cancer Screening Project	**South Africa** Randomized clinical trial in a periurban informal settlement (Khayelitsha) to explore the safety and efficacy of cervical cancer screening using visual inspection with acetic acid (VIA) or HPV testing followed by treatment with cryosurgery for women with positive results ("screen-and-treat" approach)	*Screening*: VIA or HPV DNA testing *Treatment*: cryotherapy	Women 35 to 65/eligible population: 7,123	• Community health workers • Promotion at health fairs • Messages through local praise singers • Photocomic • Radio plays (or dramas) • Banners
EngenderHealth CHIP: The Cervical Health Implementation Project	**South Africa** Implementation of cervical screening as part of national health care services in South Africa	*Screening*: cervical cytology (Pap) *Treatment*: LEEP	Women 30 to 60/eligible population: 160,000	• Materials distributed at clinics and in communities • Information, education, and communication task teams • Mass media • Banners

Table 1. (continued)

Alliance partner Name of project	Project location Project type	Screening test Treatment protocol	Target age group/ Size of eligible population	Client participation strategies
EngenderHealth & PAHO Strategic Assessment of Cervical Cancer Screening and Treatment Services in Bolivia (Diagnóstico Estratégico sobre los Servicios de Prevención y Control de Cáncer de Cuello Uterino en Bolivia)	**Bolivia** Participatory assessment to identify how cervical screening and precancer treatment might be enhanced to strategically improve reproductive health in communities	N/A	N/A	• Interviews
PAHO & PATH TATI: Screening and Immediate Treatment of Precancerous Cervical Lesions (Tamizaje y Tratamiento Inmediato de Lesiones Precancerosas Cervicouterinas)	**Peru** Service delivery demonstration project being conducted in one department of Peru	*Screening*: VIA with cervical cytology (Pap) [and liquid cytology-based Pap and HPV on sub-sample] *Confirmation*: visual inspection with acetic acid and magnification (VIAM) (or colposcopy, biopsy) *Treatment*: cryotherapy (cold-cone, LEEP, and hysterectomy available at tertiary colposcopy and treatment centers when cryotherapy not appropriate)	Women 25 to 49 eligible population: 90,000	• Community promotion teams that carry out community meetings, education sessions, home visits • Client-centered quality of care

Table 1. (continued)

Alliance partner Name of project	Project location Project type	Screening test Treatment protocol	Target age group Size of eligible population	Client participation strategies
PATH WKCCPP: Western Kenya Cervical Cancer Prevention Project	**Kenya** Service delivery demonstration project in 3 health clinics and 1 district hospital	*Screening*: VIA (with Pap, colposcopy, biopsy) *Treatment*: cryotherapy	Women 30 to 39/ eligible population: 18,000	• Community health workers • Client-centered quality of care
JHPIEGO SAFE Project: Safety, Acceptability, Feasibility, and Program Effort	**Thailand** Demonstration project in 4 districts of Roi Et province, Thailand; included mobile clinics to health centers throughout districts	*Screening*: VIA *Treatment*: cryotherapy (colposcopy available at provincial hospital; conization, LEEP, and hysterectomy available at provincial hospital; chemo/radiotherapy available at university hospital and regional cancer center)	Women 30 to 45 eligible population: 35,062	• Health education sessions in FP and outpatient clinics • Loudspeaker announcements • Letters and brochures • Village health volunteers
JHPIEGO SAFE Project: Safety, Acceptability, Feasibility, and Program Effort	**Ghana** Demonstration project in 1 urban regional hospital (Accra) and 1 semi-rural health center (Amasaman)	*Screening*: VIA *Treatment*: cryotherapy (conization at regional and teaching hospitals, simple hysterectomy and chemo/radiotherapy at teaching hospital)	Women 25 to 45 eligible population in Accra: unknown; eligible population in Amasaman: 38,000	• Health education sessions in FP and outpatient clinics, and at churches • Community health nurses (rural site)

Table 1. (continued)

Alliance partner Name of project	Project location Project type	Screening test Treatment protocol	Target age group Size of eligible population	Client participation strategies
IARC-WHO Evaluation of Comparative Efficacy of Visual Inspection With Acetic Acid (VIA), Cytology and HPV Testing in Cervical Cancer Prevention	**India-Barshi** Randomized controlled trial to evaluate the efficacy and cost-effectiveness of VIA, cervical cytology, and HPV testing in reducing incidence of and mortality from cervical cancer in Osmanabad district, Maharashtra state	*Screening*: VIA, cytology or HPV. *Treatment*: cryotherapy, LEEP, or hysterectomy as appropriate at regional hospital	Women 30 to 59 eligible population: 86,558	• First home visit during project enumeration • Second home visit for personal invitation letter • Health education talk via women's meetings and community/video • Screening by female health workers • Mobile clinics

Table 1. (continued)

Alliance partner **Name of project**	**Project location** **Project type**	**Screening test** **Treatment protocol**	**Target age group** **Size of eligible population**	**Client participation strategies**
IARC-WHO The Efficacy of a Single Round of Screening of Visual Inspection With Acetic Acid (VIA)	**India-Ambilikai** Randomized controlled trial to evaluate the efficacy and effectiveness of VIA in reducing incidence of and mortality from cervical cancer in Dindigul district, Tamil Nadu state	*Screening*: VIA *Treatment*: cryotherapy, LEEP, or hysterectomy as appropriate at regional hospital	Women 30 to 59 eligible population: 48,225	• First home visit during project enumeration • Second home visit for personal invitation letter • Health education talk via women's meetings and community/video • Screening by female health workers • Mobile clinics

Table 1. (continued)

Alliance partner Name of project	Project location Project type	Screening test Treatment protocol	Target age group Size of eligible population	Client participation strategies
PAHO Continuous Quality Improvement Project in Cabañas, El Salvador (17 clinics and 2 hospitals)	**El Salvador**: Demonstration project in the Department of Cabañas undertaken in coordination with the Ministry of Health to improve quality of national health care services and laboratories and disseminate new national guidelines for preventing cervical cancer with a Pap-based system; the project targeted hard-to-reach women (those never screened before or with limited access to services)	*Screening*: Cervical cytology (Pap) *Treatment*: Cryotherapy conization, LEEP, and hysterectomy available at rural hospital; Chemo/ radiotherapy available at cancer institute in the capital city	Women 30 to 59 eligible population: 20,386	• Educational materials developed and distributed at clinics and in communities • Community health workers trained and mobilized to assist women with access to clinics • Improvement in service quality

Listening to, and learning from, the community

Formative research is an essential tool in understanding the cultural, social, and economic factors that affect cervical cancer screening coverage. Formative research is carried out before a program is designed and implemented or while a program is being conducted. Formative research includes both qualitative and quantitative social science research methods: focus group discussions, structured and semistructured interviews, needs assessments, and participatory workshops and surveys, among others. In the context of cervical cancer prevention, formative research has been widely used to expand knowledge of cultural myths, attitudes, and practices related to prevention and screening in both developed and developing countries.[4,5]

ACCP projects carried out formative research to: (1) understand cultural perceptions about cervical cancer and prevention, (2) determine barriers to women's participation in screening, (3) identify the characteristics of underserved women, and (4) increase the quality improvement of cervical cancer prevention services with continuous quality improvement processes. Results from these activities have allowed ACCP projects to better meet the needs of women in ways that are harmonious with the cultural values and norms of their communities.

Exploring cultural perceptions about cervical cancer and prevention

Cultural and societal differences among distinct populations make it hard to design and implement appropriate health programs. Conducting formative research is a way to understand the interests, attributes, and needs of the community and its members before program development takes place. Research results help program planners define and understand the target populations, create programs that are specific to the needs of those populations, ensure that programs are acceptable and feasible to clients and community members before launching, and improve the relationship between clients and implementing institutions. Formative research can also be used when a program is already underway to refine and better tailor activities to the population and its needs.

In Kenya, project staff conducted key informant interviews and focus group discussions with women older than 30 years, men with spouses older than 30 years, community health workers, traditional birth attendants, women's village leaders, religious leaders, educators, and government administrators. Data were used to determine how women learned about health issues; the most effective way to educate women and men about cervical cancer prevention; how community leaders can be involved in cervical cancer prevention activities; and quality of care issues, including the type of provider preferred by women.[6]

In South Africa, formative research uncovered the Xhosa belief that the health of a woman's womb reflects the health of the woman as a whole and that healthy wombs are associated with virginity, pride, and motherhood. Care of the womb was associated with cleansing rather than seeking health, especially for older, less sexually active women past their childbearing years.[7] This information helped project staff to understand women's perspectives and ultimately to provide more sensitive care. Research results also indicated that gender norms among the Xhosa people inhibited women who had undergone treatment for precancerous lesions from negotiating the recommended four-

week period of sexual abstinence after treatment. Project staff helped clients develop strategies for approaching their partners and mitigating opposition, such as asking a woman's friends to be witnesses who could confirm that the woman had undergone treatment. Project staff also wrote letters and made phone calls to husbands and partners to explain the reason for treatment and the period of abstinence.

Determining barriers to women's participation in screening

Program managers can use information about the barriers women face in seeking cervical cancer prevention services to guide implementation of new services and improvements in currently available services. The results of research studies that explore and identify these obstacles can inform the design of messages and services. Barriers can differ according to the social, political, economic, and cultural contexts of a specific program, although studies in developing countries have shown that some barriers are consistent across settings. For example, several studies have shown that a lack of awareness about cervical cancer and how to prevent it is an important obstacle to improving screening coverage.[8–11]

Five qualitative studies on barriers and benefits in Latin American countries (Mexico, Peru, El Salvador, and Ecuador) used focus groups and in-depth interviews with women and health care providers to provide background information for an ACCP cervical cancer prevention project in El Salvador.[12] These studies found that the main barriers to service delivery were the lack of accessible and available high-quality services, the lack of comfort and privacy in facilities, discourtesy on the part of facility staff, and the prohibitive cost of services. Most women experienced anxiety while waiting for test results, which contributed to their overall fear of cancer. Women also said, however, that screening had some benefits, such as giving them peace of mind and a sense of being in control of their health. These results were used countrywide in El Salvador to prepare educational materials and job aids and to improve communication strategies.

Women from all ACCP project sites reported similar barriers to accessing cervical cancer prevention services. These included shyness, embarrassment, and shame about the pelvic examination; fear of pain or the test result; and in Ghana, Kenya, and South Africa, concern that the screening test was actually a test for human immunodeficiency virus (HIV). The women also reported concerns about the cost of the screening test and transportation to the screening service, inconvenient appointment schedules, and lack of partner support.

Factors affecting service delivery were also determined through the use of needs assessments. Almost all of the ACCP projects used needs assessments to familiarize program planners with specific cultural influences and possible barriers, allow incorporation of community perspectives and needs into program design and implementation strategies, and to help planners identify key community members and stakeholders. For example, in Bolivia, local health care providers, program managers, health authorities, and social scientists conducted interviews with clients, community members, health care providers, and local authorities to get a "snapshot" of screening and treatment services at all levels. Although the foundation for a successful Pap smear-based program existed,

these interviews indicated that a number of improvements—in sample transport, standardization of procedures, treatment of precancer, follow-up, and provision of palliative care—were needed.

Identifying the characteristics of underserved women

Identifying the characteristics of women who participate in screening assists programs in tailoring their services to reach all women and increase coverage rates. Evidence published in the last ten years (primarily from developed countries) has shown that, in general, women who were older and single; had lower educational and income levels, no previous contact with the health system, a negative perception of the quality of care offered by the health system, and little knowledge of screening; and were most anxious or fearful about screening were least likely to participate in screening opportunities.[3]

Five studies conducted by ACCP partners in South Africa, Peru, Kenya, and India (Table 2) investigated the determinants of screening participation. These studies highlighted the characteristics of underserved women in developing countries and enabled a comparison of these characteristics with those of women from developed countries. This information was used to develop and refine strategies oriented toward increasing screening participation.

Results indicated that women in India and South Africa who were less educated, had lower socioeconomic status, and had less contact with the health care system were least likely to participate in screening. This is consistent with results from similar studies conducted in developed-country settings. Results from the study in South Africa indicated that women who did not access screening services tended to be older (45 years or older), poorer, less educated (less than ten years of education), unemployed or working in the informal sector, living in nonpermanent dwellings without a partner, not familiar with other women who had undergone screening, and were not regular clients of health care or family-planning services.[13]

In Ambilikai, India, quite unexpectedly, higher income was inversely associated with screening participation. This atypical pattern differed from results from most studies evaluating determinants of participation. The reason for this pattern may be that in India use of rural public services is quite low, mainly as a result of the low quality of services, and higher-income women in Ambilikai may tend to seek out private-sector services. Organizing screening clinics in public institutions, such as health centers or schools, may have deterred higher-income women from attending screening services because of their perception that low-quality services were being provided.[14]

Unlike the other studies reported here, Peruvian and Kenyan studies sought to explain why women in the target age range who were directly exposed to community promotion activities chose to participate in screening or not Women who did not participate in community promotion activities were not included in the study. This study design may in part explain why demographic factors such as age, marital status, educational attainment, socioeconomic status, or contraceptive use, had no effect on screening participation (A. Bingham, A. Bishop, I. Chami, P. Coffey, W. Handwerker, E. Muthuri, J. Winkler, unpublished data, 2004; J. Winkler, A. Bingham, A. Bishop, P. Coffey, W. Handwerker, A. Palomino, unpublished data, 2004). Instead, variables related to health care were the

Table 2. Synopsis of studies conducted by the ACCP on the determinants of participation in screening for cervical cancer.

Institution/ Country	Study type	Study population	Key findings: Less likely to participate	Key findings: More likely to participate
IARC/ India, Dindigual district, Tamil, Nadu, Ambilikai	Prospective study of women invited for screening; objective measure of screening	48,225 women aged 30 to 59 years	Demographic: older, not married, high-income	Demographic: younger, higher educational level, married, multiparous status, and low-income Health care: having had tubal sterilization
IARC/ India, Osmanabad district, Barshi	Prospective study of women invited for screening; objective measure of screening	86,558 women aged 30 to 59 years	Demographic: older, unmarried, less educated, fewer pregnancies, living in households with fewer numbers of people.	Demographic: younger, more educated, high parity, belonged to households with higher number of people
EngenderHealth/ South Africa	Population-based cross-sectional household survey, reported screening	664 women aged 35 to 65 years	Demographic: older, poorer, less educated, unemployed or working in the informal sector, living in nonpermanent dwellings without a partner Health care: not familiar with other women who had undergone screening, not regular clients of health care or family-planning services	Demographic: younger, higher income and educational levels, employed, living with a male partner in a permanent dwelling Health care: know somebody who had a cervical smear; recently accessed the health system for other reasons; previous use of contraception
PATH/ Peru	Retrospective study of women invited for screening, reported and objective measure of screening	308 randomly selected women aged 25 to 49 years (156 screened and 152 unscreened)	Health care: no experience with cervical smear; less satisfaction with services received at prior contacts with health system	Health care: previous experience with cervical smear; satisfaction with services received at prior contacts with health system Outreach effect: attendance at an awareness-raising session
PATH/ Kenya	Retrospective study of women invited for screening, reported and objective measure of screening	344 randomly selected women aged 30-39 years (184 screened and 160 unscreened)	Health care: heard reports that clients were being turned away because providers were too busy; travel to screening site was difficult (cost and time)	Sociocultural: number of screened people a woman knows Outreach effect: first heard screening message during home visit; group-based outreach at least as effective, if not more so, than home visits

strongest predictors of screening participation. Secondly, Kenyan women were from a narrow age range (30 to 39) and almost exclusively lived in small, rural agricultural communities and relied on subsistence farming as their primary livelihood (A. Bingham, et al., unpublished data, 2004).

In Peru, the strongest predictor of screening attendance was prior experience with screening. Women's perception of quality of health care received at prior visits as indicated by a composite client satisfaction scale was also a strong predictor of screening attendance (J. Winkler, et al., unpublished data, 2004). In both Kenya and Peru, the number of screened people that a woman knew significantly predicted screening status (A. Bingham, et al., unpublished data, 2004; J. Winkler, et al., unpublished data, 2004). In Peru, screened women reported knowing an average of nearly ten screened women while unscreened women knew, on average, just under six other women who had been screened (J. Winkler, et al., unpublished data, 2004). In Kenya, the strongest predictor of screening status was the number of screened women that a woman knew; the odds of a woman being screened increased 1.7 times for each extra woman (up through five, and leveling off after that) she knew who had been screened (OR 1.7; 95% CI: 1.4–1.9) (A. Bingham, et al., unpublished data, 2004).

The place where Kenyan women first heard the screening message also had some affect on the likelihood that they would actually go for screening. Although numbers were small, women who first heard about screening at a health center were most likely to be screened (OR 7.1; 95% CI: 2.2–22.9). Among the various outreach approaches, church or school group meetings (OR 2.1; 95% CI: 0.98–4.5), and possibly women's group meetings, were at least as effective venues as home visits, and possibly more so. The effect of negative reports circulating in the community about the availability of screening services was also evident among Kenyan women; the odds that a woman was screened diminished by nearly half (OR 0.59, 95% CI: 0.35–0.98) if she had heard reports of women being turned away by providers because they were too busy. Not surprisingly, in this impoverished rural setting, the odds that a woman was screened also dropped by nearly half if the level of travel difficulty (in terms of time and cost) was rated as high (OR 0.59, 95% CI: 0.35–0.98) (A. Bingham, et al., unpublished data, 2004).

Results from ACCP studies exploring the determinants of participation in screening suggest that involving community networks may be necessary to reach marginalized women (e.g., women living by themselves, women living in transitional housing or in poorer areas, and women who are less educated or unemployed). More traditional approaches to women's participation, such as the use of invitation letters or reminders, have proven unsuccessful. Finding innovative ways to work with the community to support access to and use of screening and treatment services by all women is imperative.

Increasing the quality of cervical cancer prevention services with continuous quality improvement processes

Meeting women's needs by providing high-quality services can contribute to an increase in screening coverage. Women who are satisfied with the services that they receive are more likely to describe their experience positively to family members and friends. In Ghana, for example, 36 percent of

women (1,255 of 3,467) who received screening reported that the person who referred them was a woman who had already been tested, and 31 percent of women (1,088 of 3,467) reported that a family member, friend, or neighbor was the source of the suggestion to seek screening.[15] When satisfied clients refer other women to screening services, it builds confidence among all community members in the quality of the screening procedures and motivates women who have not yet done so to seek screening services.

Improving the quality of services often requires investing in the development of staff capacity, enhancing coordination of key players, and troubleshooting logistical challenges. It also requires that providers listen and learn from clients about what they perceive as high-quality services and how the health system might meet their needs. ACCP projects have used a variety of processes to listen to and learn about issues related to the quality of screening services from different stakeholders in the community.

Baseline assessment in El Salvador

In Cabañas, El Salvador, an extensive baseline study was conducted to evaluate existing services. Project staff administered a survey to health personnel in the intervention area and undertook a countrywide study of public cytology laboratories, and also conducted user satisfaction surveys to collect the views and perceptions of 341 women who received screening services in 16 health facilities.[16] Survey results pointed to some dissatisfaction with access to services, in particular the distance from women's homes to health centers and with time spent waiting to see clinicians (Table 3). To address these issues, staff implemented a continuous quality improvement program and pilot testing of new national guidelines.

Table 3. Results from a survey of user satisfaction with cervical cancer screening services, Cabañas, El Salvador (n = 341).

Index Variables	Rating (average)
Access index	
Time it took to travel from home or work to the health center	3.6
Cost of travel to the health center and cost of health services	3.8
Convenience of the health center location	3.7
Length of time spent waiting in the health center	3.7
All access variables	**3.7**
Patient-staff contact index	
Personal manner (courtesy, respect, sensitivity, friendliness) of the health center staff	4.1
Technical skills (thoroughness, carefulness, competence) of the health center staff	4.1
Personal manner (courtesy, respect, sensitivity, friendliness) of the physician or nurse	4.4
All patient-staff contact variables	**4.25**

Note: 1=very poor, 2=poor, 3=average, 4=good, 5=very good.

Respondents were considerably more satisfied with patient/staff contact (average response of 4.25) than they were with access to services (average response of 3.7). There was a strong positive correlation between satisfaction with patient/staff variables and access variables. This may suggest that the access experience affects perception of personal treatment by staff and staff's technical abilities. Women who received care in hospitals generally were less satisfied than women who attended small clinics. Satisfaction with information correlated positively to receiving information from a nurse rather than a nurse's aide or doctor. Similar results were found in repeat surveys in nearby regions.

Participatory quality improvement in Peru

In the TATI project (the Spanish acronym for Tamizaje y Tratamiento Inmediato de Lesiones Cervicouterinas, or Screening and Immediate Treatment for Cervical Lesions) in Peru, participatory quality improvement using a client feedback process was established at clinics in the project area providing cervical cancer prevention services. Women who received screening or treatment participated in an exit interview at each facility to provide data about their experiences with services, specifically, access to services, quality of the physical setting, quality of the provider interaction, aspects of informed consent, and overall satisfaction. These data were then shared with health center staff, who participated in examining the strengths and weaknesses of service delivery at their facility and in discussing the results. They developed a local action plan and timeline to address any aspects of service delivery with which more than five percent of clients expressed dissatisfaction.

COPE® process in Bolivia

COPE® (Client-Oriented, Provider-Efficient) is an ongoing process used by health care staff to continuously assess and improve the quality of care that they provide.[17] COPE® is both a process and a set of tools designed to assist health care providers and site staff in examining their performance of daily tasks, identifying problems and their root causes, and developing practical solutions. In addition, COPE®provides clinic staff with the opportunity to identify with clients and understand their needs as consumers of health care. Among the cervical cancer-specific issues addressed in the tools are:

- Screening tests and examinations.
- Laboratory services.
- Treatment of precancerous lesions.
- Appropriate follow-up of clients and management of client cases.
- Referral and feedback between different service components.
- Equipment and supplies.

The COPE® tools are practical and easy to use with data collection and analysis forms that are designed to be flexible so that each facility can adapt them to meet its particular needs. There are ten self-assessment guides for cervical cancer prevention services, which are based on a framework of internationally recognized clients' rights and staff needs.[18] In addition, the COPE® toolbook includes a client interview tool (for use by providers), a record review checklist, a client flow analysis exercise, and an action planning guide. The tools have been field tested in four sites in Bolivia, and a series of COPE® exercises with the staff of the cervical cancer prevention program in the Caja Nacional de Salud (social security system) in La Paz, Bolivia, is currently underway.

Involving the community

ACCP projects have attempted to involve the community in the planning and implementation of cervical cancer prevention programs by working closely with four groups: key stakeholders and local organizations, community advisory groups, community health workers, and men.

The role of key stakeholders and local organizations

Key stakeholders include representatives from local women's organizations or community-based organizations; local and regional government officials; representatives from local religious and educational institutions; community leaders, such as village elders and leaders; and health workers and local health institutions. Because cervical cancer prevention programs must address the cultural, emotional, and practical factors that influence whether women use screening services, key stakeholders can provide critical input in the design and implementation of program activities to make the activities culturally relevant.[9] Interacting with these individuals and including them in program efforts helps ensure that important factors influencing service utilization and acceptability are not overlooked. For example, involving community leaders so that they recognize and sanction the need for a pelvic examination during screening can help deflect potential problems with community acceptance of screening procedures.

Effective linkages with key stakeholders can also dispel rumors that may arise. In Kenya, several rumors related to cervical cancer screening emerged once screening activities were initiated in previously underserved areas. One rumor suggested that the screening service was a form of devil worship because of the red color used in the project logo (which was hung above the screening room at each participating screening facility and included the colors red and blue). Another rumor claimed that the screening test involved removing the uterus, cleaning it, and then putting it back in the woman's body. Others claimed that the screening test was actually an HIV test. As these rumors emerged, community health workers notified their supervisors who worked to identify the source of the rumors by speaking to key stakeholders, including clerics and civic leaders, and dispel the rumors with correct information. Community health workers, in turn, were briefed on how to respond to these rumors with factual information.

Linking and working closely with the national and regional ministries of health (MOH) representatives from the start of the project is another way to involve key stakeholders and ensure sustainability. For example, in the Cervical Health Implementation Project (CHIP) in South Africa, four task groups were created to focus on health worker training: client management, information, education and communication activities, and health information distribution. Each task group included Department of Health officers from the MOH, representatives from local nongovernmental organizations, and clinicians and technologists who were or could be involved in various aspects of cervical screening. These task groups made all decisions about the implementation of project activities and were supported by the project team.

Another way to involve key stakeholders is to use knowledge and community structures and/or existing community networks. In Peru, two local nongovernmental organizations worked with

the MOH and project staff to design the project's approach to community involvement. Existing knowledge was tapped by hiring women who were well acquainted with the community through their work as local community health activists. They advised project staff about the best ways to structure and implement community involvement activities to promote cervical cancer prevention.

These women were well connected to community networks and proved vital in identifying community leaders who could motivate women to participate in screening. Key stakeholders were identified in several different settings, including the national and regional Peruvian MOH structure, women's groups, and local authority figures within communities where the project planned to make cervical screening and treatment services available. Each of these individuals was a conduit for understanding the cultural nuances associated with cervical cancer prevention in a specific community.

In India, the involvement of community leaders in project activities was essential to ensuring high levels of participation. In Ambilikai, meetings were held with district administrative and health authorities, the president and members of local civic bodies (panchayaths), village community leaders, teachers, and representatives from other local organizations to discuss project objectives and ways of reaching women before the start of project activities. As a result, most community leaders participated actively in outreach activities. For example, during the community health education event that took place before each screening clinic, leaders openly expressed their strong support for screening activities and personally encouraged men to convince women in their families to participate.[14]

The role of community advisory groups

Advisory group members are people in the community who share a common goal or interest and who are brought together as part of a broader community health promotion effort. Community advisory groups can be useful in strengthening linkages between communities and public institutions, such as health facilities. Furthermore, they can advocate for new health services and work with local health authorities to improve service delivery.[19]

In Peru, TATI project staff developed linkages with community leaders who had received previous health promotion training. These leaders were paired with personnel from the Information, Education, and Communication Department of Peru's MOH to form a regionwide network of community promotion teams that focused on outreach on cervical cancer prevention.

A key responsibility of these community promotion teams was to organize and support the activities of community advisory groups (comités de salud or grupos de apoyo) in each subregion. The teams conducted a community assessment to identify individuals and organizations that would support the promotion of cervical cancer prevention activities. If an organization was already functioning as a health advisory group in the community, members of its staff were asked to incorporate cervical cancer prevention into ongoing activities. When no such organization existed, the teams identified key community leaders and institutions and invited them to form an advisory group. In some instances, promotion teams organized more than one advisory group in their coverage area, particularly if the geographic area was extensive.

The overall aim of the community advisory groups was to secure the commitment of community authorities and local public health officials to promote cervical cancer prevention and other health-related efforts. Their principal function was to guide, support, and facilitate community-based awareness-raising and education activities of health promotion teams. Advisory group members were selected during a meeting at which residents or representatives from public and private community organizations participated.

Results from a multiple regression analysis of key indicators affecting coverage at 57 health networks in the TATI project of San Martín, Peru, highlighted the contribution that community groups made to improve screening coverage. Study results indicated that an increase in the frequency of advisory group meetings, an increase in the number of education sessions held, the presence of mobile campaigns, and the availability of static services each had a strong, independent positive predictive affect on screening coverage. In addition, smaller health networks were more effective at achieving higher coverage than were larger health networks (Table 4). Organizing key stakeholders through community advisory groups and educating women about the importance of screening also contributed significantly to increasing screening coverage (A. Bingham, J. Winkler, V. Tsu, unpublished data, 2004).

Table 4. Results from multiple regression analysis of factors affecting cervical cancer screening coverage (final model components) for the TATI project in Peru (*n*=57 health networks).

Factor	T value*	*p* value
Number of mobile campaigns	3.719	<.01
Presence of static services	3.191	<.01
Number of educational sessions	3.089	<.01
Number of advisory meetings held	2.119	<.05
Size of eligible population	–6.178	<.001

Note. Ordinary least-squares multiple regression was used to carry out the modeling analysis. Adjusted R^2 = .518; $F_{(5,50)}$ = 12.870; p < .000.

* T regression coefficient is used to test model predictability to the wider population.

The role of community health workers

Almost all ACCP projects used community health workers with varied backgrounds and skill levels as links to the broader community. Many of these workers performed their duties on a volunteer basis. In some cases, project staff were able to work with preexisting community health worker infrastructures to reach local populations and ensure that community members had access to information. Community health workers with minimal skill sets were trained in cervical cancer prevention and health promotion in all project sites except Ghana and India. In Ghana, auxiliary nurses referred to as "community health nurses" functioned as community health workers. In India, the community health worker role was filled by health workers who had at least secondary-level education and medical social workers who had a postgraduate qualification in social/community work.

Although community health workers had different titles in different countries ("peer educator" in South Africa, "health promotion worker" in Peru, "village health volunteer" in Thailand), all workers used a peer-education approach. Such trust-based relationships are effective in dispelling myths about cervical cancer and allowing women to speak about their own experiences. For example, community health workers in Kenya and South Africa facilitated motivational sessions in which women who had already been screened met with women who were eligible for screening and addressed their concerns, answered their questions, and exchanged information with them. In Peru, community promotion teams carried out intensive community-based group education sessions with women who were eligible for screening. The topics they covered were not limited to cervical cancer prevention; they also shared information about reproductive anatomy and self-esteem.

Busia District, Kenya: Partnership with a women's organization.

The ACCP project in Kenya was implemented through a partnership with the Maendeleo Ya Wanawake Organization, a national grassroots women's organization with an estimated individual membership of 2 million that includes more than 25,000 women's groups. Thirty-five members in the project area volunteered to act as community health workers to inform and motivate women in the community to come for screening. Group-based approaches included addressing women's groups, religious groups, school-based parent groups, and barazas (local administrative meetings). In addition, community health workers met women individually in their homes to provide a more private setting where women could discuss any concerns or confusion they had about the screening service and where they could receive additional information and encouragement from trained community health workers.

In general, community health workers are able to connect with the local population in a way that outsiders cannot. They foster an atmosphere of trust and comfort by speaking the local dialect, using local mannerisms, and drawing from similar life experiences. They may also have greater opportunities to relate positively to other health workers already at work in the local community, with whom they must maintain a good working relationship. Examples of how community health workers functioned in ACCP projects are presented below.

In the Cabañas project in El Salvador, community health workers from the MOH were involved in increasing demand for services in a variety of ways. They were trained in basic issues related to cervical cancer prevention, including risk factors and the priority age range for screening, and took a census in their communities so that they could focus promotion efforts on women who had never been screened. The community health workers also helped to mobilize community resources to assist at-risk women in accessing often-distant services.

In the rural Amasaman subdistrict area of Ghana, community health nurses educated women and men about cervical cancer prevention. The community health nurses integrated cervical screening activities into their existing child welfare clinic activities. This outreach effort was evaluated for a five-month period to determine whether there was a change in screening participation before and after

the inception of outreach activities.[20] Participation data were collected from the project's monitoring and information system, and population data for coverage calculations were obtained from the Ghana Statistical Service.

A large majority of the women who attended screening had been informed about the opportunity by community nurses at outreach sessions (Figure 2), and screening coverage levels exhibited an upward trend, from 4.62 to 6.56 percent, during the same period (Figure 3). The incremental increase (1.94 percentage points over 5 months) in coverage during this outreach period was relatively high compared to past achievements. This evaluation demonstrated that community health nurses could deliver compelling messages about cervical cancer prevention and that such outreach was related to an increase in the number of women attending screening, resulting in increased coverage.

Figure 2. Percentage of women receiving VIA in Amasaman subdistrict, Ghana, who were recruited at outreach sessions, by month of screening.

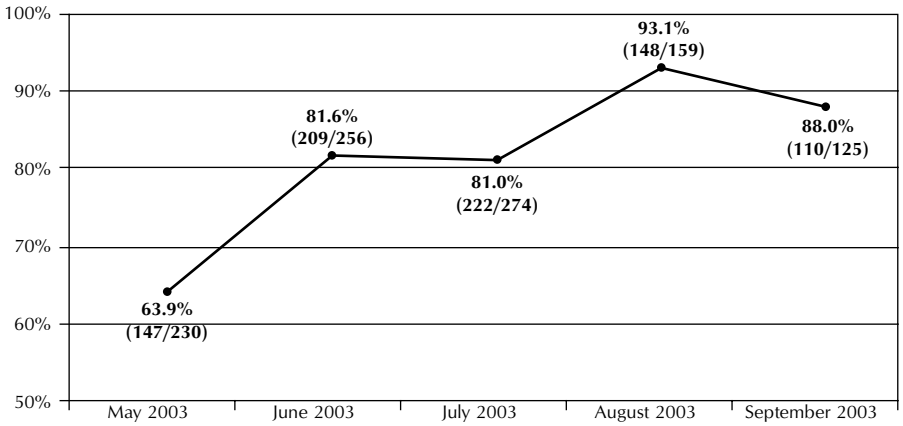
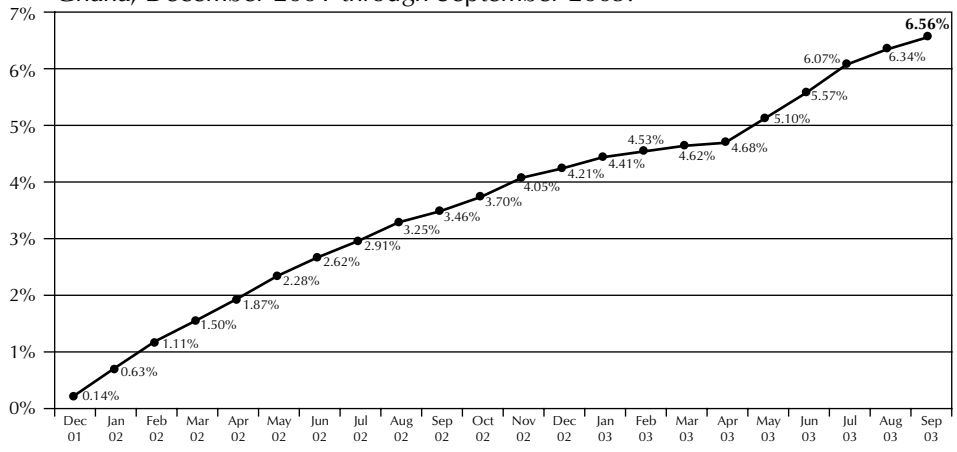


Figure 3. Cumulative percentage of 33,025 women aged 25 to 45 who underwent visual inspection with acetic acid (VIA) in Amasaman subdistrict, Ghana, December 2001 through September 2003.



The role of men

Some women reportedly do not seek cervical cancer screening or attend follow-up visits because their male partners provide little support or actively oppose their participation in screening services.[6] Involving men in cervical cancer prevention activities is essential because it allows them to understand cervical cancer screening so that they can be supportive in their communities and to the women in their lives who decide to participate in screening. In addition, men must be supportive if their partners are treated for precancerous lesions and respect the four-week abstinence period that follows cryotherapy. In Kenya, data from follow-up interviews with women who received cryotherapy treatment indicated that emotional or financial support by a male partner was essential to women seeking treatment and complying with posttreatment recommendations (P. Coffey, A. Bingham, J. Winkler, A. Bishop, J. Sellors, unpublished data, 2004).

Several ACCP projects developed strategies for increasing men's involvement in cervical cancer prevention activities by reaching out to men in their communities. For example, in El Salvador, workshops were designed to train community health workers on masculinity issues, gender roles, and risks related to cervical cancer so that they could work with men on cervical cancer issues more effectively. In India, men were integrated into counseling at health facilities where social workers and medical staff conducted group meetings to which eligible women and their husbands and families were invited. Information about the importance of cervical cancer prevention was presented and the times screening was offered, transportation arrangements, and what to expect during screening were discussed. In Kenya, project staff sought the support of church pastors, who were predominately men, because they were able to link community health workers with women's church groups.

In Ghana, men are directly involved in women's decisions to obtain screening and treatment because they often are required to give their wives permission to seek care. Some men were reluctant to allow their wives to be screened, and others acted as barriers to obtaining treatment for detected precancerous lesions. Qualitative research results revealed that men wanted to become educated about their wives' health. Although activities did not specifically target men, they sometimes joined their female partners in attending educational sessions about cervical cancer held at local child welfare clinics. During a five-month period in which project staff evaluated the outreach effort, 422 men (eight percent of all attendees) were reported to have attended educational sessions.[20]

South Africa: Men and women working together to prevent cervical cancer.

The ACCP project team in Khayelitsha recognized the important role that men can have in encouraging women's participation in and compliance with screening and precancer treatment.

The team implemented several interventions to educate and mobilize male community members. A curriculum was developed to train peer educators to teach men about cervical cancer prevention (in addition to other reproductive health issues) and motivate them to support women in seeking screening and complying with posttreatment instructions. Peer educators conducted six four-day workshops in Western Cape and Gauteng, and a total of 118 men completed the workshops. An evaluation demonstrated that the educational workshops had a substantial impact on men's attitudes and knowledge, particularly immediately after completion of the workshops.[22]

To complement the training of peer educators, the project collaborated with a South African playwright and local actors from Khayelitsha to develop, write, and produce a play, "Diaries of my Womanhood," that focuses on how men can be supportive of women's choices to seek out preventive health care, such as screening for cervical cancer. The play was performed in community spaces throughout Khayelitsha and was filmed for use with a broader audience.

Responding to the community

ACCP projects responded to community information needs by creating information and education (I&E) strategies for raising awareness about cervical cancer prevention among women and their communities. Strategies included creating and delivering culturally appropriate messages through print materials, audiovisual media, and other types of outreach. A method called "local action planning" enabled communities to help strengthen the quality of cervical cancer prevention and treatment services. In addition, strategies for inviting women to atttend screening were designed on the basis of community needs and perceptions.

Print communication materials

Print communication materials can be expensive to produce but are useful for providing information to women, their families, and their communities. The availability of print informational materials, especially in the home, can help persuade women and their families of the need to attend screening. Results from a program evaluation in South Africa demonstrated, however, that although educational materials are needed in all programs, they are no substitute for receiving personalized information through direct contact.[23]

All ACCP projects involved the community in some way in the creation of print materials. Most often, projects used results from formative research to understand the information needs of the community and to create appropriate messages for specific subgroups. In all projects, communication materials were developed for women eligible for screening, as well as for other community members (many of these materials can be accessed on the ACCP website at http://www.alliance-cxca.org). Some projects developed job aids to provide a way for health workers to standardize their educational messages about cervical cancer prevention and reduce the possibility of spreading false information and associated rumors. The types of materials developed included:

- Informational brochures, leaflets, pamphlets, and flyers.
- Posters and banners.
- Photocomics (also called comic books).
- Women's educational guides/manuals.
- Men's educational guides/manuals.
- Educational flip charts.
- Outreach worker job aids.
- Training manuals for community health workers.
- Counseling job aids for health personnel.

In Kenya, Peru, South Africa, Ghana, and El Salvador, materials were developed in collaboration with local partners. In some cases, local partners assisted with identifying and crafting suitable messages and local artists created culturally appropriate images. These materials were then pretested

with representatives from the local target population. In many cases, materials were designed and produced at a low-cost using locally available resources.

San Martín, Peru: Educational materials developed in collaboration with the community.

The ACCP project team in San Martín developed a variety of educational materials. These materials included a guide for community facilitators, a pamphlet with general information about cervical cancer screening, a pamphlet with postcryotherapy care recommendations, and information for health care providers about visual inspection and cryotherapy. In developing each of these materials, the project team used a participatory process.[24,25]

Experts in cervical cancer prevention reviewed materials for technical accuracy, and images and text used in cervical cancer prevention materials were shown separately and in combination to members of the target group. This pretesting process allowed accurate measurement of the comprehension and acceptability of each image and text message. For example, feedback about the community facilitators' guide was incorporated into the final version of the guide after review by a group of community facilitators who had used a preliminary version for one year. For each of these materials, project staff used feedback about what the users understood and how they interpreted the information presented to create culturally relevant materials.

Almost all ACCP projects distributed print materials by either community health workers or peer educators, although the extent of distribution varied considerably. Informational brochures were handed out at individual meetings with community leaders, public meetings, talks with men's and women's groups, churches, funerals, and home visits. In some projects, such as the CHIP project in South Africa, flyers and brochures were displayed in public settings that included libraries, local markets, and shops. In Khayelitsha, South Africa, daily outreach activities that involved print materials were held in public places such as the post office and train stations. In addition, a banner was designed and displayed from a trailer to publicize screening services.

El Salvador: Developing counseling job aids and training health providers.

ACCP staff reviewed the materials used by the El Salvador MOH, assessing language use, graphics, suitability for the space constraints of a small clinic, and women's understanding of key messages. ACCP project staff and the MOH prepared and field-tested a new job aid for health personnel, among other materials. The product has illustrations that depict local people and has a standing, three-dimensional format. It includes information for women about cervical cancer screening, diagnosis, and treatment of precancerous lesions. Public clinic health personnel throughout the country were trained in the appropriate use of the new materials for cervical cancer prevention counseling.

Audiovisual and mass media

Some ACCP projects selected video as an appropriate channel for providing information about cervical cancer prevention to communities. For example, in Barshi, India, a video about cervical cancer prevention developed in the traditional Hindi cinematography style proved enormously popular. It played in villages the day before mobile services arrived. In South Africa, a video told a story of two women overcoming cultural barriers related to screening. The video, entitled *Nokhwezi's Story*, was projected in community and service delivery settings to encourage women to undergo screening. Once written, the script was pretested with actors, clinic staff, and clients, and modified in response to their feedback.

"Mass media" refers to radio, television, video, cable networks, newspapers, and magazines. It is an attractive option for communication because the message is disseminated to a large number of people simultaneously and may reach people in remote locations. ACCP project staff in India and South Africa used mass media approaches, including radio, television, and newspapers, to deliver information to a broad audience. In Khayelitsha, educational radio interviews and press releases about cervical cancer prevention and project activities helped spread the message about cervical cancer prevention.

The impact of mass media interventions, however, is not clear. For example, in Khayelitsha, a randomized, controlled trial compared the effect of a photocomic about a Xhosa woman and her experience with cervical cancer prevention with that of a placebo comic, among a stratified household sample of women aged 35 to 65 years. Results indicated that the photocomic did not increase cervical cancer screening uptake (Table 5). Of the 269 women who received the photocomic, 176 (65.4 percent) recalled the story. Seven percent of women who received the photocomic (18 of 269), compared with six percent of women who did not receive the photocomic (25 of 389), reported undergoing cervical cancer screening within six months after the intervention. At the same time, a local radio station aired a weekly drama about cervical cancer. Relatively few women reported hearing the radio drama, and yet it seemed to have some impact, given that 17 percent of women who recalled the radio drama (9 of 53), compared with 4 percent of women who

did not recall the radio drama (19 of 429), reported undergoing cervical cancer screening within 6 months after the intervention.[26] These results are consistent with evidence from other randomized, controlled trials of screening undertaken in developed countries; three such studies found that the mass media interventions had no significant impact on rates of screening participation.[3]

Table 5. Results of a logistic regression analysis of the impact of mass media approaches to increasing cervical cancer screening in Khayelitsha, South Africa.

Intervention recalled	Total number of women	Number (%) of women who reported screening participation	X^2	*p* value
Radio program alone	53	9 (17.0)	13.6	<.001
Photocomic alone	142	11 (7.8)	2.4	.12
Both	34	4 (11.8)	3.6	.08[a]
Neither	429	19 (4.4)	—	—
Total	658	43 (6.5)	—	—

[a]Calculated using Fisher's exact test.

Other outreach activities

Other types of outreach activities are particularly important in developing countries, because the population may not be highly literate and may have limited access to audiovisual or mass media. Such activities are often able to build on traditional methods of information dissemination, such as storytelling, songs, and theater. These activities are, therefore, easily accessible and acceptable to the local population.

Public venues for carrying out community awareness varied across projects and included community workshops (El Salvador), public meetings (India), health carnivals (Khayelitsha, South Africa), a community "durbar" festival (Ghana), public markets, funerals, and barazas (Kenya) where village elders gather to discuss administrative issues. In India, puppet shows and street plays were used to involve eligible women and their husbands in cervical cancer prevention activities. In Kenya, community health workers created songs about cervical cancer prevention using traditional melodies and sang them during group education sessions. In Thailand, almost all villages have one or more loudspeaker posts stationed throughout the community to disseminate important information. These loudspeakers were used to transmit messages about cervical cancer prevention and the availability of screening services to the women and their families in a community setting.

Identifying and supporting respected community members who can convey key messages related to both screening and treatment is another approach to community outreach. For example, a praise singer (a highly revered figure in Xhosa culture who serves as a liaison between the ancestors and the community) wrote and performed several praise songs that addressed cervical cancer prevention

during health carnivals in South Africa. These songs reflect the "truth" in the voice of the ancestors, encouraging women to reflect on their womanhood, take care of themselves, be autonomous, and take advantage of health screening opportunities.

Ghana: Using a community festival for outreach.

ACCP staff undertook community awareness-raising efforts in Amasaman, a rural area outside of the capital city of Ghana, in partnership with a local Rotary International club. The keynote event in the awareness-raising effort was a community festival, called a "durbar." Street theater and music were used to educate and inform community members, with particular emphasis on encouraging male partner support for screening and posttreatment abstinence requirements. As a result of this festival, which local community leaders such as chiefs and queen mothers endorsed and attended, recruitment at the rural project site increased dramatically.

Local action planning

Local action planning is a way to enhance coordination of disjointed or isolated services into a well-organized prevention program. In Bolivia, the Caja Nacional de Salud (the country's social security system) embarked on a process of action planning. Initially, program managers, planners, and supervisors from all regions of the country participated in a three-day orientation workshop that updated and informed them about issues associated with planning and implementing cervical cancer prevention programs. Then, a small group of those leaders met for two days to develop an action plan to identify obstacles, solutions, next steps, persons responsible for specific tasks, and deadlines.

One challenge to the implementation of a cohesive and effective program that was identified during these two-day meetings was the lack of a systematic supervisory process. The group resolved to develop a proposal to structure facilitative supervision activities and assigned one person to ensure that it was completed by the agreed-on date. Another outcome of this process was the creation of a La Paz regional committee that meets monthly to coordinate various services, raise and discuss issues and challenges, and exchange pertinent information.

Local action planning was also used in Cabañas, El Salvador, to improve the quality of services using existing resources. The results of a baseline study carried out by ACCP staff were supplied to local clinicians and local- and national-level MOH officials, who prioritized problem areas and designed and implemented an improvement plan.

Inviting women to participate in screening

Women may not always be motivated to attend screening just because a new service is established. For example, in South Africa, women often participated in screening because they viewed it as an entry point for access to other sorts of care. Carefully targeted messages and strategies can be used to encourage women to take advantage of new services.

Health care providers can be an important source of information for women and can motivate women to attend screening. In Thailand, 41 percent of women who were screened (2,458 of 5,994) reported that the suggestion that they seek screening originated with health care facility staff. In Peru, 26 percent of women (8,465 of 32,839) reported that individual contact with a health provider had the most influence on their decision to participate in screening. In other cases, however, women relied much less on health providers for information and more on other women who had already been screened, family members, friends, and neighbors.

Cervical cancer prevention services typically focus on women who are older (aged 30 to 50 years) and in need of other health services. Women's participation in screening can be improved by seeking out eligible women when they come to the health services to attend to other problems. For example, in Khayelitsha, providers talked to all women in the waiting room about cervical cancer screening services every morning, regardless of what type of care the women were seeking.

Many ACCP projects used home visits as a means to invite women to participate in screening. These home visits allowed personal contact to be established between the health system and women and reinforced the message that women are valued. They also provided a means of reaching out to women who do not frequent health care establishments. Perhaps most important, home visits strengthened the likelihood that follow-up would be successful, because they allowed the health worker to repeatedly explain the importance of follow-up visits and presented the opportunity for women to ask questions privately.

Home visits with women eligible for screening were a high priority for health promotion teams in Peru and community health workers in Kenya, El Salvador, Thailand, and India. Health workers distributed information about services and addressed concerns and questions and often assisted women in making arrangements to attend a health facility. If a male partner or other family members were present, these individuals also received information about the services and were able to get answers to their questions. In rural south India, medical social workers made home visits to couples and personally invited the couples to attend screening camps. This approach was part of a multifaceted project that contributed to a participation rate of 63.4 percent of eligible women (30,577 of 48,225); no individual evaluation of each aspect of the project was made, however.[14] Home visits in Khayelitsha helped the project achieve high one- and six-month follow-up rates (96.6 and 86 percent, respectively) among women who required further management.

Generating demand and improving supply

Listening to, learning from, involving, and responding to communities in the ways described above can result in an increased demand for and improved supply of cervical cancer prevention services. Raising demand of screening services focuses on increasing community awareness and motivation. Improving the supply of cervical cancer prevention services includes addressing accessibility to services, the quality and structure of health services, and approaches to staffing, scheduling, and counseling.

Increasing community awareness and motivation

A recent literature review confirms that women who learn or perceive that a screening test is necessary or beneficial are more likely to participate in screening. As mentioned earlier, data from studies conducted in developed and developing countries about the determinants of participation demonstrate that women with greater knowledge about cervical cancer screening are more likely to participate.[3] On the basis of project experience, it appears that face-to-face contact via word of mouth or direct invitation from health care providers or satisfied clients and audiovisual methods have more impact on women's participation in screening than do printed materials such as pamphlets, photocomics, posters, and brochures. Because developing materials is often a costly component of a cervical cancer prevention program, it is important to assess the value of these materials before investing in them.

Scientific evaluation of the effects of educational interventions on coverage levels is sparse, especially in developing countries. Data from developed countries are inconclusive with regard to the effect of print materials, video/slide presentations, face-to-face contact, and combinations thereof. Data show, however, that mailed print materials do not appear to increase women's participation in screening.[3]

Several ACCP projects evaluated the effect of educational approaches. The TATI project in Peru found that significant factors, such as the intensity of community promotion efforts, affected coverage. Among the indicators examined, women's educational sessions contributed to increasing coverage levels in both large and small health networks, and in networks with static services or mobile campaigns (A. Bingham, J. Winkler, V. Tsu, unpublished data, 2004).

Roi Et Province, Thailand: Aiming for 80 percent coverage.

In Roi Et Province, health authorities established an official provincial target for screening (using visual inspection with acetic acid [VIA]) of 80 percent coverage within five years among women aged 30 to 45 years. Efforts to achieve the 80 percent coverage goal are coordinated at the district level and rely heavily on community outreach. Nurse provider teams based at the district hospitals collaborate with district health officers to organize mobile units in the primary health center. These visits generally occur on two to five days each week, depending on the district. Village health volunteers, each assigned to 6 to 12 homes in their villages, assist by informing eligible women about the days and times when the mobile unit will visit the local health center. Some health center directors keep a registry of eligible women, note whether they have been screened, and distribute letters to encourage participation.

The results of these efforts have been very positive. In Atsamat, the focal expansion district, the project achieved nearly 60 percent coverage of women aged 30 to 45 years (of 10,061 eligible women) in the district after only 20 months of services. Overall, 25 percent of all eligible women living in Roi Et Province (181,420 eligible women) had undergone screening by March 2004, only four years after the program was launched.

Improving accessibility

ACCP projects identified inaccessibility of screening services as a major obstacle for women. In some cases, it was difficult for women to travel to clinics where screening was offered because of the long distance or the cost of local transport, or because they were unable to postpone domestic responsibilities. To address this, mobile services—a mobile clinic traveling with trained personnel, equipment, and the supplies needed to screen women in remote areas—were provided in Thailand, India, Peru, and El Salvador.

In Thailand, mobile services were more heavily utilized than static services, which suggests that mobile services are more accessible and acceptable to women. During one assessment, it was calculated that districts offering exclusively static services performed 63 VIA tests per month; by contrast, those districts offering mobile services at least three times per week performed 226 tests per month, an increase of more than 300 percent.[21]

Osmanabad, India: The mobile clinic.

A fully equipped van traveled to 32 primary health care clinics in Osmanabad, as well as other settings, such as municipal offices, classrooms in local schools, or women's club buildings that could be used to screen women by means of visual inspection with acetic acid (VIA). Project staff met with district administrative and health authorities, the president and members of the local civic bodies (panchayaths), village community leaders, teachers, and others to explain the details of the study and to seek their cooperation. All eligible women were personally invited to participate in screening.

On the evening before the services were to be available, an information and education(I&E) meeting was organized in each village. Eligible women, their partners, and elders in the village were invited to this meeting, where a film about cervical cancer prevention was shown. On the screening day, medical social workers were on hand to explain the screening and treatment procedures to women waiting to be screened, and afterwards, female health workers explained screening results and organized appointments for women who had positive test results.

Quality of health services

Poor-quality services can result in dissatisfaction, and dissatisfied women may discourage their neighbors and relatives from participating in screening.[8] Because formative research shows that poor service quality is a barrier to participation in screening, ACCP projects implemented continuous quality improvement processes (see pages 14–16). Results from the use of these processes are presented below.

ACCP staff evaluated the continuous quality improvement approach implemented in Peru and measured the impact of that approach on provider performance at screening sites through a time-series analysis of client exit interviews at 13 sites. Exit interviews were conducted with 1,058 women aged 25 to 49 years who had participated in screening during one of three data-collection periods over the course of 18 months. Commonly identified problems included lack of privacy, poor access, lack of understanding about informed choice, and difficulty in obtaining clear and accurate information. Results indicated that even after one feedback session (where exit interview findings were discussed with health staff) most teams showed a significant reduction in overall dissatisfaction levels, and these levels remained lower after the third session. Dissatisfied clients tended to have attended two particular facilities and these two facilities performed poorly at all observation points. In general, dissatisfaction levels decreased over time (Figure 4); significant improvements were noted with room privacy and explanations about the informed consent form and content of screening services (Figure 5).

These results indicate that use of a client-feedback process can improve provider performance as well as enhance client satisfaction. Ultimately, these improvements in service delivery can result in improved quality of care and subsequent increases in screening coverage and decreases in loss to follow-up among women in need of treatment. For example, these interviews showed that privacy

Figure 4. Reduction in dissatisfaction levels over time, expressed as the mean number of "dissatisfied" responses expressed by women who had just undergone screening for cervical cancer (n=1,058).

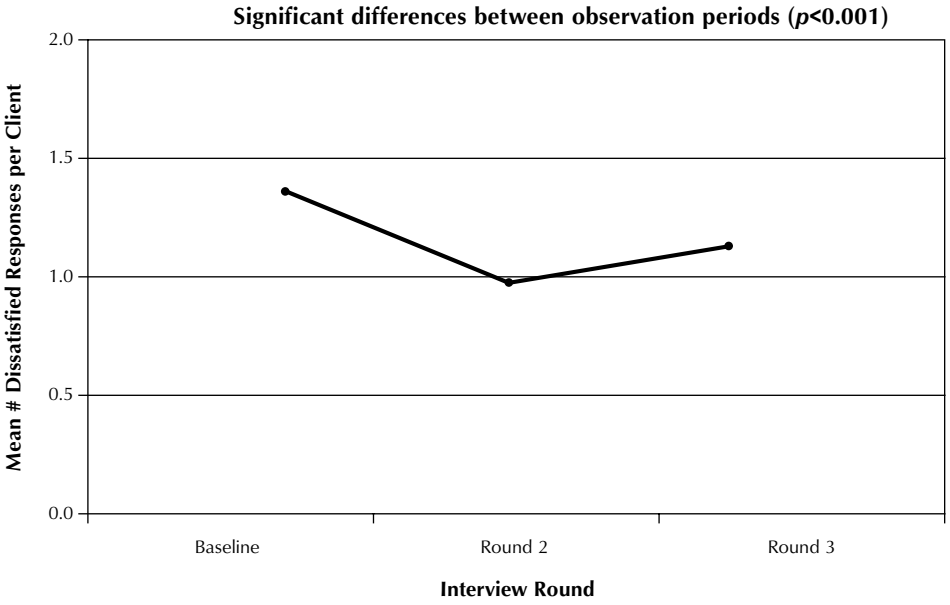
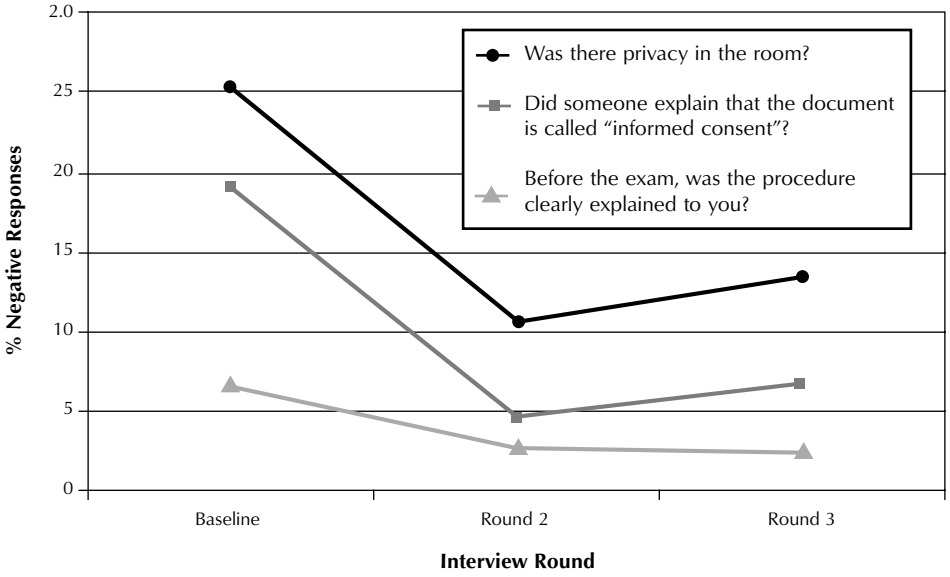


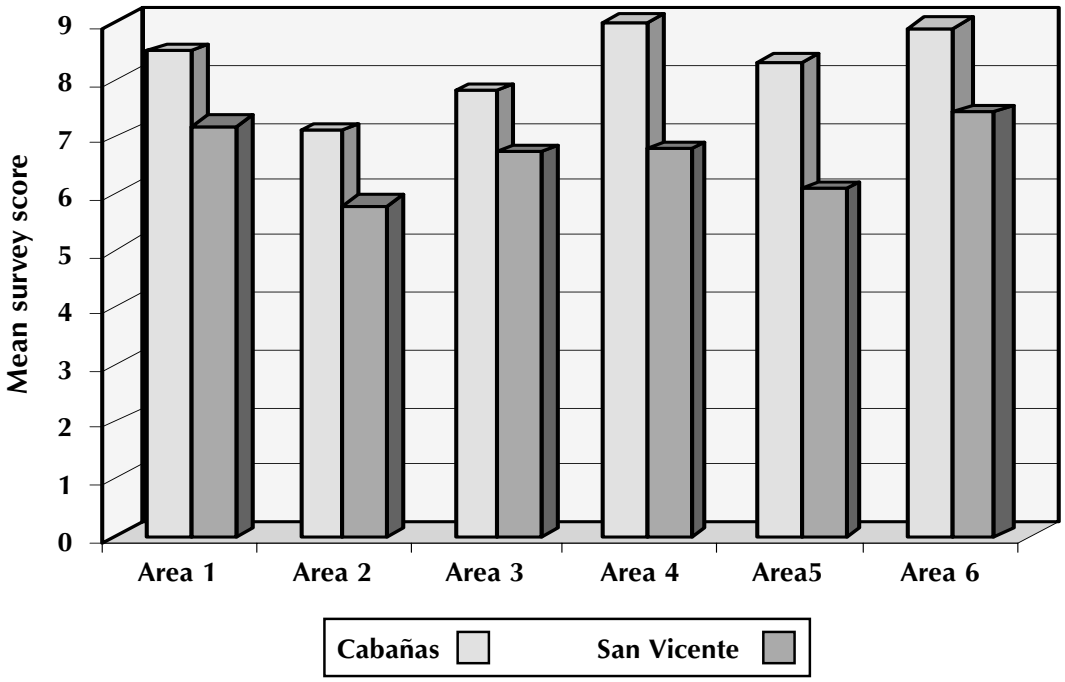
Figure 5. Changes in quality of care over time, as indicated by the responses expressed by women who had just undergone cervical cancer screening, by key performance area (n=1,058).



was an important user concern at many project sites. The provider teams at those centers responded by putting locks on doors and placing envelopes for client charts on the outside of examination rooms to reduce unnecessary interruptions. Because this continuous-improvement approach requires active involvement of staff, their continued willingness and commitment to engage in the process is critical to the sustainability of the effort.

Results from an evaluation among 31 cervical cancer teams working in health clinics in Cabañas, El Salvador, demonstrated the impact of a community-based project to improve quality of care.[27] To evaluate the project, ACCP staff adapted the Assessment of Chronic Illness Care Survey to measure six elements of quality in a demonstration area (Department of Cabañas) and a control area (Department of San Vicente).[27] Respondents in the area where the project had taken place gave higher ratings on all six elements (on a scale of 1 to 10) than did respondents in the control area (Figure 6).

Figure 6. Mean scores on a modified version of the Assessment of Chronic Illness Care Survey* in a cervical cancer prevention demonstration area in Cabañas, El Salvador (n=17), and a control area in San Vicente (n=14).[28]



* Six elements of quality were scored: (1) organization of the health system, (2) cooperation with communities, (3) follow-up of patients, (4) guidelines for prevention and control of cervical cancer, (5) technical support, and (6) information systems. Scoring scale is from 1 (least favorable response) to 10 (most favorable response). All differences were statistically significant ($p<0.001$).

Staffing

Maintaining a staffing pattern that meets the expectations of the community is an important aspect of improving screening participation. Evaluations of opportunistic cancer detection clinics in Osmanabad, India, carried out between 1982 and 1987 highlighted the importance of staffing clinics with female doctors and nurses. Based on these results, ACCP projects in India employed female doctors and nurses for cervical cancer screening clinics. On the other hand, both male and female staff are needed for effective communication with women and men in the community.

In recognition of this, the projects hired three types of workers: male health workers, female health workers, and female medical social workers. These groups had different responsibilities that were related to their training, background, and gender. Female workers had primary responsibility for providing counseling to women attending the screening clinics and organizing educational sessions for women on treatment procedures; male health workers participated mainly in community educational and promotion activities. Male health workers also communicated with husbands and male community leaders because these audiences are likely to accept information more easily when other men provide it. Similarly, in Khayelitsha and Thailand, the project teams saw that female providers were preferred by the community and, therefore, established culturally appropriate services staffed by female providers.

Scheduling services

Women may find it difficult to attend appointments during working hours. They are an important component of the labor force in both urban and rural settings and often have inflexible working hours that they have to respect to keep their jobs. Very often they have to travel long distances to get to their jobs, so they leave early in the morning. In rural areas, women will leave for the fields early in the morning and, in some cases, may be away for several days—for example, when they have to travel to neighboring villages to sell products during market days.

In addition, in some regions in developing countries, transportation is unreliable and telephone services are poor or nearly nonexistent. As a result, women are difficult to contact and often unable to communicate their need to change appointment times. In some places, such as Kenya, women were able to come to the clinic only when they could arrange their schedules to accommodate a visit, regardless of the actual appointment time. These women were sometimes turned away without being seen by a provider because they did not come at the appointed date and time. To alleviate this problem, ACCP project services were organized around women's time constraints. For example, in India, clinics were conducted in the early morning and late evening so that women could be screened before or after their routine work in the fields.

ACCP project experience showed that appointment dates and times for follow-up visits should be flexible and that services should be offered according to a fixed schedule. In Kenya, project staff found that it was often better to commit staff to one day per week or several days per month to provide services, rather than attempting to provide services on demand and then being forced to turn clients away. When clients were turned away, communities began to lose confidence in the health delivery system. Conversely, if clients had confidence that they would be seen that day, regardless of what time they came, they were generally willing to wait until a provider was available.

In some projects, appointments were scheduled on regular market days or at the same time as the woman's next visit to the clinic for family planning or other types of services. In a rural site in Ghana and in Khayelitsha, services were consistently scheduled on specific days each week at particular locations. Women were given appointment cards at outreach sites for a particular day of service. This was done to maintain a manageable number of clients on each clinic day and still allow screening of walk-in clients.

Counseling

Counseling is an important component of service delivery. It satisfies women's information needs, reduces their anxiety and fear, and explores possible barriers to treatment follow-up. Although data about the impact of counseling on women's participation are sparse, evidence from developed countries indicates that counseling is positively related to screening participation.[3]

All ACCP projects utilized both prescreening counseling for women who had not yet been screened and postscreening counseling for women who were referred for follow-up treatment. In low-literacy settings, the use of pictures and graphics to convey information was key to client comprehension. In Kenya, for instance, counseling included using a pictorial flip chart. Specific counseling methods and materials employed by ACCP projects included:

Methods

- Individual prescreening counseling.
- Group education in the clinic.
- Individual counseling about screening results.
- Individual counseling for women who need further care.
- Pre/posttreatment counseling for women with precancer.

Materials

- Cervical photo card.
- Video about informed consent.
- Three-dimensional standing counseling aide.
- Key message counseling aid for providers.
- Client follow-up referral card.
- Posttreatment information leaflet.

Normally, counseling sessions about treatment lasted 5 to 15 minutes. During the counseling session, women typically received a referral or reminder card that was easy to understand and clearly

outlined the next steps that she needed to take. She received additional information about what her results meant and was also given the opportunity to ask questions.

Incorporating women's perspectives into clinic-based counseling and reminder systems helps contribute to effective follow-up. ACCP project experiences show that many women remain silent during counseling sessions because it is not customary to ask questions when being spoken to by a health provider. To address this, staff researched women's most common questions, concerns, and fears about cervical cancer and its prevention. The results informed the development of culturally and educationally appropriate counseling messages.

A draft version of a counseling flip chart that included information about the reproductive system, Pap smears, the instruments used during a pelvic examination, risk factors for cervical cancer, the natural history of the disease, and diagnosis and treatment of lesions was tested in El Salvador. The flip chart was designed for use by health personnel in public clinics during prescreening counseling and, if needed, when the results of screening were positive. The front pages of the chart contained pictorial information for low-literate clients, and the back pages (facing the health provider) contained bulleted points giving information to convey during the counseling session.

The flip chart was tested in two small clinics (one urban and one rural) and two hospitals (one urban and one rural). At each site, the health personnel (doctors and nurses) who performed Pap smears were asked to use the material in their usual prescreening counseling. The counseling sessions were observed and tape-recorded. Both health personnel and clients were then asked (separately) to review the material for appropriateness and clarity of information. Results from the evaluation indicated a variety of obstacles to providing adequate counseling faced by health personnel such as:

- Time shortage.
- Information overload and lack of comprehension.
- Belief that women do not need detailed information.
- Reluctance to deviate from the standard script.
- Uncertainty about how to explain the material.
- Because counseling is given in a conversational style, awkwardness of reading the back page of the flip chart during a consultation.

These results were used to revise the flip chart's content and presentation. A tri-fold format was adopted, and information to be given before screening (about the reproductive system, risk factors, and the examination itself) was separated from information to be given in the case of a positive result (about the natural history of cervical cancer and diagnosis and treatment methods). The new material was distributed nationally and clinicians were trained to use it during prescreening counseling.

Challenges to implementing the community focus

ACCP projects have yielded many insights into the practicalities of focusing on the community. Generally, a relatively high level of effort is needed to create successful community-involvement interventions. Some ACCP projects discussed in this document were clinical research projects, where technical and financial resources do not reflect those available in routine service delivery settings. Therefore, some of these approaches may not be adaptable to programmatic contexts.

Motivating communities and women in the developing world to take preventive action rather than simply respond to health needs as they emerge is extremely challenging. Barriers in the community to participation in screening, such as limited knowledge and preconceived notions about the negative and frightening aspects of cancer and death, may make it relatively more difficult to motivate women to take action. Understanding a community accurately is complex, and the use of formative research methods may not always result in a thorough understanding of key issues related to cervical cancer prevention.

For example, formative research results indicated that the Xhosa community in South Africa believed that the color white was connected with divination and healing. The cervical cancer screening program established in the Xhosa community used visual inspection with acetic acid (VIA) as one of the screening methods. This presented a challenge to traditional Xhosa beliefs, because, during the screening procedure, areas that appear white after application of acetic acid indicate the possible presence of precancerous lesions. Thus, the color white, normally associated with healing, was associated with the identification of precancerous lesions.[7]

Cervical cancer prevention may not be prioritized highly by program planners, and this may be reflected in inadequate resource allocation. It may be difficult to identify resources for community outreach activities such as transportation and incentives for community health workers. In addition, the community's perception about other health priorities may make cervical cancer prevention less attractive. One option for overcoming this is to link cervical cancer prevention with more-desired services, such as services that address general gynecological morbidity.

Programs may recognize the need for community involvement but be unable to implement appropriate approaches. This difficulty can arise when decisions are made and managed by health authorities and program managers who do not have public health training or a community-based perspective. The result can be programs that claim to include the community but do not actually have a strong community focus.

Programs that do have a community focus require dedication and commitment from staff. Providers and volunteers may lack motivation and/or be difficult to retain. Results from a study of 2,300 women eligible for screening in South Africa indicated that peer educators had the potential to reach many women, but because they did not have sustained funding for travel and honoraria, such an approach appeared to be a difficult and unsustainable way of recruiting women for screening.[23]

Determining the level of effort appropriate for reaching the target group is challenging. This can affect programs in two ways. First, it is necessary to decide on the general outreach approach used, which is very dependent on the context and location of services. For example, is it more effective to implement a widespread campaign or to reach out to women who live close to the health center? Will community outreach efforts include men? Second, because motivating underserved women to participate in screening can be costly, it is also necessary to determine the extent and type of community involvement strategies targeting this group. The type of strategy used in each program is also associated with existing coverage levels. If screening coverage is already fairly high, innovative strategies may be necessary to contact the remaining unscreened women who are difficult to reach. If screening coverage is low, it may be necessary to reach a much larger group.

Another challenge related to service provision is the generally poor quality of health services found in many developing countries. Often, the overall quality of health services must improve before the focus can shift to cervical cancer prevention services. Furthermore, high-quality services are linked to supply and demand. If there is not enough demand, quality will usually be compromised. When demand is high, an insufficient supply of services can result in user dissatisfaction. For example, the provision of high-quality counseling demands that sufficient time be allocated within the facility. In a high-demand environment, providers may shorten the length of counseling sessions to meet the demand for services.

Finally, educational materials can be costly to produce and may fall short of the desired effect. Program planners often do not anticipate the needs associated with long-term use of communication materials and therefore cannont maintain access to these materials. In South Africa, for example, local authorities budgeted for the high cost of developing communication materials, but did not plan for reprinting and distribution. In that case, mounting a limited and unsustainable community educational campaign was very expensive and time-consuming and had limited effect on coverage.[23] In addition, evaluation of effective communication strategies generally requires a long time frame and substantial resources to measure impact.

Conclusions

This descriptive analysis of ACCP project components intended to enhance women's participation in cervical cancer screening offers many examples of approaches that focus on the community. The ACCP experience suggests that a community focus can increase women's participation in screening programs. In some areas, such as identification of the determinants of participation in screening, data are robust and firm conclusions can be drawn. In other areas, such as strategies for improving coverage, user satisfaction, and user perceptions about cervical cancer prevention services, data are scarcer and further research is needed.

ACCP experience suggests that an approach that combines several programmatic elements designed to enhance women's participation can lead to success in achieving increased coverage levels. This is demonstrated by the relatively high screening coverage levels obtained at the end of ACCP projects in Roi Et Province, Thailand, and Ambilikai, India. Furthermore, evidence from Peru indicates that community involvement, such as the use of group education and community advisory groups, had a beneficial impact on coverage.

Using a community focus to identify and implement feasible and acceptable strategies is an iterative process that requires listening to, and learning from, the community; involving them; and responding to their needs.

- **Listening to, and learning from, the community.** Strategies to improve screening coverage need to discover and address factors that motivate women to attend screening. These factors necessarily vary according to country and cultural context. The use of formative research before initiation of services has proven to be beneficial in identifying key community perspectives and barriers to participation in screening.

  Women who have been screened for cervical cancer appear to be the best community advocates for enhancing women's participation in screening, and it is important to ensure that these women remain satisfied. Generally, ACCP project experience supports the use of continuous quality improvement processes that include staff self-assessment methods of evaluating client satisfaction such as those undertaken in Peru and Bolivia. These methods enable providers to understand user concerns and provide an avenue for them to actively improve the quality of services. User satisfaction is critical to the success of screening efforts because communities generally will only support participation in high-quality services.

- **Involving the community.** Opportunities to involve community stakeholders, community advisory groups, community health workers, and men should be explored and incorporated into prevention services. The involvement of these groups helps ensure the needed social support for improving the screening participation of underserved women.

- **Responding to the community.** Responses to the community must be based on community input. Various strategies, such as the use of print, audiovisual, and other outreach materials; local action planning; and extending invitations for screening to women can be tailored to meet

community needs if planners listen, learn, and involve community members in the design and implementation of prevention activities. Messages about cervical cancer prevention should be straightforward and should not provide more information than is relevant. All community responses must be linked to appropriate cultural perceptions and attitudes.

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