Background Reading

Outreach To Increase Screening for Breast and Cervical Cancer

Part 1

Community Analysis Background Reading

DEPARTMENT OF HEALTH & HUMAN SERVICES USA

CDC
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Background Reading

Introduction

This section provides an introduction to the principles and practices of community analysis, focused specifically on planning outreach programs for older medically underserved women. Beginning with a general orientation to the concept of community and a review of techniques used to collect information, this background reading provides a step-by-step guide through community analysis.

Definition of Terms: The Function and Structure of Community Analysis

Overview

Community analysis is a process that guides program planners in defining and describing intended audiences and the changes in these populations that are expected to be produced by outreach programs. Community analysis is important to the development of effective outreach programs because it provides a *systematic* way of collecting information that is needed to make certain that program plans are developed with an appreciation of the needs, interests, values, and resources of and barriers faced by the intended audience.

It is important to realize that community analysis is not a product but a process. Although it is necessary to temporarily stop the process to draw tentative conclusions and develop program plans, it is important to recognize that the process of collecting information should never really end and that new information should be integrated into programs whenever possible.

Communities and Intended Audiences

One of the basic distinctions that should be made in beginning community analysis is between the terms *community* and *intended audiences*. We focus on the "community" in community analysis for convenience, but it is important to realize that the true focus of our attention should be on intended audiences in the context of the community.

Community

A community can be defined from a number of points of view. One approach is to view a community as a *structural community*. Structural communities are defined by geographic boundaries or physical characteristics. Examples of structural communities include cities, counties, States, school districts, and municipalities. Although a structurally defined community may be convenient for analysis, this definition is usually too limited for planning. Older medically underserved women often have important interactions and relationships that extend beyond geographic boundaries such as city limits, or exist within subunits of a structural community.

An alternative way of defining a community that addresses such concerns is to consider the definition in functional terms. A *functional community* is one that can be defined in terms of the interactions of people. In this case, a functional community would be one

that includes women who share common interactions as they engage in their daily activities. These interactions can take place in the context of a common interest, concern, and/or a particular characteristic. Other examples of functional communities include faith communities, social groups, and people who identify with one another because of language, race, ethnicity, sexual orientation, or physical ability. Interactions of such functional communities may take place within or outside the structural community, so the geographic boundaries of community may be of little importance.

For Example . . .

Women may obtain health services from institutions that operate outside their structural community. In such case, limiting the notion of community to the structural concept would fail to include the health service delivery component in the analysis.

In practice, a definition of community should include both structural and functional components. Eligibility for health services such as cancer screening may be defined by the structural community in which women live, but the means of reaching women who need cancer screening may be better defined by their functional community.

Example Illustrating the Importance of Structural and Functional Concepts

Consider the case of the Forsyth County Cervical Cancer Prevention Project (Michielutte et al. 1989). This project was developed to address the need for increased cervical cancer screening among low-income African American women. In this case, eligibility for low-cost Pap tests and followup care was defined by the governmental structure of Forsyth County, North Carolina.

The local health department provided services to women who were residents of Forsyth County. Other services that supported access to health care services (for example, low-cost transportation) were also provided at the county level. Forsyth County includes women of many races, however, and women who were members of the African American population functioned in distinct ways. They tended to reside in specific areas of the community, frequented specific churches, and received the bulk of their health care from specific sources. Thus, recognition that the community of African American women functioned in characteristic ways in their daily lives was an important element in the community analysis.

Focusing on the county as a whole would have diluted the analysis and failed to elicit important characteristics of the population of African American women. For even though all the older medically underserved women of the county were eligible for low-cost cervical cancer screening, the African American segment of the population shared a social and cultural structure that held specific attitudes toward such services. Because the community analysis recognized the importance of the structural and functional concepts of community, it was possible to collect information that assisted

the program in reaching women as they functioned within the community at large, as well as how they functioned within the African American community.

In some cases, the distinction between structural and functional communities is faint, whereas in others the differences are clear and important. Regardless, it is critical that community analysis consider these two points of view and strike an appropriate balance that includes elements of both.

Intended Audiences

An intended audience includes the individuals, service providers, and organizations that will be the focus of outreach programming. Intended audiences are usually determined through government mandates (e.g., legislation), organization or institution goals, and availability of funding.

It is critically important to outreach planning that distinctions between community and intended audiences are clear and well defined. In the context of this document, intended audiences will be limited to older medically underserved women but will usually extend to include the health services institutions and voluntary community organizations that are concerned with cancer prevention, early detection, treatment, and rehabilitation.

As familiarity with the process of community analysis increases, it will become clear that identifying intended audiences is suggested only after much of the data collection activities are complete. *The placement of intended audience identification in the process of community analysis is purposeful, and premature designation of targets is one of the most common mistakes in outreach planning.*

Example Illustrating Premature Designation of Audience Segments

This mistake involved the designation of ministers of churches as part of the intended audience for outreach to African American women in the Forsyth County project mentioned earlier. Community analysis suggested that more than 80 percent of African American women in the county were regular church attenders. However, the analysis should have proceeded further and focused greater attention on the church structures themselves before including them in the intended audience. After several failed attempts to work with the churches, it was recognized that making contact with the ministers was only the first step in reaching the congregation. The appropriate intended audience members were not the ministers but often individuals within the church hierarchy who facilitated health-related activities. The ministers were far too busy to focus on single programs but functioned as gatekeepers for many church activities. The community analysis should have included activities such as key informant interviews with those knowledgeable about interactions with churches because the information about how to work effectively with churches was known to practically everyone in the community except the program planners!

A shortcut to identifying intended audiences is to consider whether it is necessary to intervene with the entire community to reach the intended audience or possibly to "streamline" the identification process and make contact with the targets with greater efficiency. For example, older medically underserved women might be contacted by tracking their daily habits. Such habits may include such activities as

- Shopping for food;
- Obtaining hair care and beauty services;
- Attending religious organization-sponsored activities;
- Attending civic or social organization functions;
- Receiving Meals On Wheels;
- Being in health care delivery settings (waiting rooms);
- Dealing with financial programs such as social security, medicare, and medicaid;
- Participating in recreation such as bingo; and
- Receiving correspondence from utility companies.

After the identification of activities (through use of key informant interviews, focus groups, knowledge of the community, and attention to the environment) that older medically underserved women are likely to engage in on a regular basis, opportunities for contacting them may become evident, and intended audiences may be identified. Even though all the older medically underserved women may not be contacted with one approach, for example, by having outreach workers focus on patrons of beauty salons, a patchwork quilt-like series of ways of finding them will help identify segments of the intended audience that can be focuses of individualized outreach plans (Dignan et al. 1991).

Description of Major Concepts

Community Analysis Process

Table 1 on the next page presents a summary of the types of information required to facilitate completing an analysis of the community or intended audience. As table 1 shows, the information needed for a comprehensive community analysis is divided into four categories: structural community characteristics, community health status, community health care system, and community social services system.

However, the information shown in table 1 may not all be relevant to specific situations. Deciding on the information needed should be based on being able to envision the circumstances of women in the intended audience and the experiences that they are likely to encounter as they respond to outreach efforts and seek screening, diagnosis, treatment, and rehabilitation services.

Table 1. Types of Information Needed To Complete a Community Analysis

Structural Community Characteristics		
Geographic Identifiers	Climatic	Seasonal variations in temperature, rainfall, and other climatic conditions that affect health and access to services
	Surface features	Terrain, agricultural potential, and natural resources
	Location	Proximity to metropolitan area; relationships to surrounding communities, towns, and neighborhoods; distances to screening services
Business and Commerce	Industry and local economy	Extent of industrial development, types of industry, major employers, status of local economy, and relationship between industry and the economy
	Transportation	Major means of transportation; availability of transportation to screening
Demographic Characteristics	Total population	Total number of residents
	Sex, race, and age distribution	Breakdown of population into age, sex, and racial characteristics
	Migration	Percentages of change in population by age, sex, and race over the past decade
	Racial and ethnic groups	Percentages, by age and sex, of predominant racial and ethnic groups
	Family and household characteristics	Factors including housing types and conditions, single-parent households, and family groups; predominant domestic living arrangements of older medically underserved women
	Educational levels	Educational levels of older women
	Income and poverty	Median income by sex; extent of poverty of individuals and family groups; income levels for those people age 50+
Social and Political Structure	Local governmental structure	Structure of local government; selection of public officials
	Educational system	Description of educational system; how leadership is selected; quality and resources within the educational system; schools; school enrollment; health-related activities
	Recreation	Parks and recreation facilities

	Community religious practices	Predominant religious groups; relationship between religious practice and local decisionmaking; number of churches; role of religion in lives of older women
	Social climate	Racial tension, labor unrest, economic struggle, political upheaval, community accomplishments; extent of community focus on those age 50+
Community Health Status		
Vital Statistics	Infant mortality rate	$\frac{\text{Number of infant deaths}}{\text{Number of live births}} \times 1{,}000$
	Age-adjusted death rate	$\frac{\text{Number of deaths}}{\text{Population of area}} \times 100{,}000$
	Causes of death	Leading causes of death by age, sex, and race; focus on cancer as a cause of death
Morbidity	Infectious diseases	Incidence and prevalence by age, sex, and race; focus on population age 50+
	Noninfectious and chronic diseases	Incidence and prevalence by age, sex, and race; focus on population age 50+
	Occupational illnesses	Incidence and prevalence by age, sex, race, and duration of exposure; classified by causative agent; proportion of women age 50+ employed in workforce
Risk Factors	Behavioral factors	Occurrence of behaviors associated with causes of death, illness, and disability; breast and cervical cancer screening rates over the past decade
	Nonbehavioral factors	Frequency or occurrence of nonbehavioral risk factors associated with causes of death, illness, and disability; cancer incidence and mortality for community compared with county, State, or national rates
Years of Life Lost	Premature deaths	Number or percentage of premature deaths caused by injuries, chronic diseases, homicide, suicide, and congenital anomalies; focus on breast and cervical cancers
Community Health Care System		
Human Resources	Formally recognized professional groups	Physicians and midlevel providers who provide breast and cervical cancer screening; health educators and others who are involved with public health
	Informally recognized professional groups	Folk healers, lay midwives, and faith healers whom women may use instead of allopathic service providers

Organization of Service Delivery	Patterns of medical practice	Number of private physicians, osteopaths, and dentists; ratio of providers to residents; focus on screening and treatment for cancer
	Colleague network among health providers	Description of local medical societies
	Patient referral system	Process for finding a source of personal medical care; process for obtaining mammograms
	Hospitals	Number, location, ownership, and specialty; number of beds; patient education programs; screening programs supported or provided
	Nursing homes and extended care facilities	Number, ownership, and level of care
	Local health department	Basic description, organizational chart, and programs; history regarding breast and cervical cancer screening; history regarding outreach to 50+ population
	Mental health department	Basic description, organizational structure, source of funding, and level of care
	Voluntary health organizations, private, for-profit agencies; private, not-for-profit agencies	Lists of voluntary health organizations, community agencies, and recent activities; focus on those serving 50+ population
	Other rural health or inner-city health organizations	Description and sources of funds; focus on screening
Community Social Services System		
Participation in Federal Programs, Private Health Insurance	Medicare, medicaid	Description of participation or nonparticipation in programs for breast and cervical cancer screening; description of residents' insurance coverage by employer or self-purchased policies; rates of reimbursement for specific health conditions; focus on programs that could work with the breast and cervical cancer screening effort for 50+ population
Locally Generated Programs	Local social service programs	Description of programs that assist women age 50+

As table 1 shows, the range of information that community analysis considers is broad. Collecting such a wide variety of information usually requires several different techniques.

Techniques for Collecting Information for Community Analysis

This section will review some common techniques that can be used to collect the information needed for community analysis. Be aware that the methods discussed here were selected to illustrate those in most common use in public health and that there are many others. Furthermore, it is common to use more than one method to collect the information needed. The only limitations to the methods that can be used to collect information for community analysis are creativity, funds, and legislative mandates. The techniques that will be discussed here include

- Field observation of the structural community to develop an awareness of the characteristics of the physical environment;
- Review of statistical information;
- Conducting key informant interviews;
- Conducting a community forum (or community forums);
- Conducting sample surveys of the community;
- Conducting focus groups of community residents; and
- Conducting intercept interviews at points of sale or community events.

Field Observation

Although it may appear to be a trivial, obvious part of the analysis process, there is no substitute for learning about a community by direct, firsthand observation. The types of geographic features, such as terrain, climate, and weather patterns may all influence outreach planning.

For Example . . .

In the cervical cancer prevention project involving Cherokee Indian women in rural North Carolina, field observation of the area revealed that although most women lived within 20 miles of the health care delivery facility, travel was time consuming and could be hazardous. The mountainous terrain, unpaved roads, and steep driveways to houses posed hazards to travel in inclement weather, particularly for older women. Observing the area let the program planners identify the travel barriers that an outreach program would have to overcome. The observations also revealed that conducting household interviews—the strategy for collecting evaluation data—would require personnel who were familiar with the area because many households had no identifying addresses (Dignan et al. 1994).

Field observations also must include visits to places where women will be asked to obtain health services. The typical treatment of women by staff, waiting time to be expected, condition of clinical setting, and steps required to obtain services should all be observed.

Finally, it is important to maintain a record of what is observed on tours. Photographs are a valuable resource that can be reviewed and shared with others if necessary. Copies of local newspapers and information about informal means of communication used in the community also should be collected during tours. For example, routine meetings such as church services, flea markets, and even little league baseball games are opportunities for people in rural areas to meet. Such events should be considered opportunities for outreach program activities.

Reviewing Statistical Information

Reviewing statistical information on the community is an essential part of community analysis. Records of births, deaths, marriages, and so forth, in addition to education, occupation, income, and household characteristics, are collected and maintained by local, State, and Federal governments. The most readily available source of statistical information on communities is the U.S. census. Reviewing the U.S. census data to obtain needed information can be time consuming, but once you become acquainted with its structure, a great amount of useful information can be acquired easily. Paper copies of census books are available in most libraries, and many libraries now have the census on CD-ROM. Fortunately, much U.S. census information is now available on the Internet.

Key Informant Interviews

Key informants are individuals with knowledge about a community. Depending on the community under analysis, key informants may include elected officials, teachers, health care providers, staff members of health care facilities, business owners and managers, workers, and ordinary folk from the community. During key informant interviews, the same information should be collected from each individual interviewed and the results compared. It is believed that the key informants will have varying points of view, which, when combined, will provide a well-balanced picture of issues of interest to the community analysis. The key informant method is most useful for community analysis in situations where it is necessary to (1) obtain qualitative information about the community or (2) identify gaps in understanding of the community that cannot be accomplished in other ways.

To illustrate the use of the key informant approach, consider the experience of the cervical cancer prevention project for the Cherokee population described on the next page.

For Example . . .

Key informant interviews were conducted for the Cherokee cervical cancer prevention project with individuals from three different categories: community leaders, working people, and health care providers. The community leader group included tribal leaders, elected officials, and business owners. The working group included teachers, skilled clerical workers, and unskilled workers (fast-food employees).

Interviewing Procedures Used

1. Specifying characteristics of desired informants;
2. Identifying recruitment strategies;
3. Developing protocol for interviews;
4. Conducting personal interviews;
5. Summarizing interviews; and
6. Reinterviewing for clarification if necessary.

Sample Items From the Interview

1. Information about health and family issues;
2. Information about serious health concerns;
3. Feelings about cancer;
4. Extent of false beliefs about cancer;
5. How much is known about cervical cancer;
6. Interest in cervical cancer information;
7. Characteristics of person providing information;
8. Use of videotape as an educational tool; and
9. Willingness of women to get Pap tests.

Interview Results

1. Family or friends often consulted before doctors;
2. Local health care viewed as generally competent;
3. Concern about confidentiality in health care setting;
4. Cancer a familiar disease in many families;
5. Fatalistic attitude about cancer;
6. Surgery makes cancer grow—treatments may be more harmful than beneficial;
7. Little awareness of cervical cancer;
8. Pap tests available from U.S. Indian Health Service (IHS) facility at no cost; and
9. Mixed feelings about IHS.

Conclusions Drawn

1. More study needed; focus groups recommended;
2. Service delivery problematic;
3. Small town ethic predominant;
4. Native American customs are not barriers; and
5. Personnel for planned program must be acceptable to community.

Key informant interviews are a relatively simple and straightforward method of data collection for community analysis. The advantages of key informant interviews are that they are relatively low in cost, are flexible in format, and can be adapted for use with different populations.

Selection of interviewees for key informant interviews can be accomplished in several different ways. An interesting approach is the *snowball sampling method*: It begins with identification of a group of individuals who represent the types of people who should be interviewed. For example, one elected official, one teacher, and one health care provider could be identified and interviewed. As part of the interview, each person is asked to identify other individuals who they think should be interviewed. The individuals named are then interviewed and asked to name additional people. The process continues until no new individuals are suggested for interviewing.

Community Forum

A community forum is a meeting of knowledgeable individuals to discuss issues in the community. The logistics for conducting a community forum are complex, so in most cases planners append their agendas to meetings that are already scheduled. The point of the community forum is to collect information about community issues in an atmosphere where discussion among informed individuals is likely to occur. The community forum approach is described in detail in Witkin and Altschuld (1995).

Sample Surveys

Sample surveys are by far the most complex of the methods suggested for collecting community analysis information. A sample survey is carried out to develop information with a known degree of precision. Conducting sample surveys includes defining the population for which information is to be collected, designing a system for selecting those who will provide data, collecting and analyzing the data, and developing estimates that apply to the population. For most community analyses, the cost of collecting data by sample survey is excessive. However, the opportunity to have data with a known level of precision is valuable to community analysis. In many community-based research programs, the baseline evaluation survey of the intended audience serves as a tool for community analysis.

For many States, information from the Behavioral Risk Factor Surveillance System (BRFSS), a CDC-funded activity, can serve as sample survey data. BRFSS collects data

by telephone interview and explores a variety of health-related topics. BRFSS data may be of limited value for community analysis for small populations, however, because the focus of the systems is at the State level. The Health Information Retrieval System (HIRS) software available from CDC has the BRFSS, Surveillance, Epidemiology, and End Results (SEER), and the National Center for Health Statistics (NCHS) data sets available. Each State has a disk version of this software containing these data sets.

Focus Groups

Focus groups are planned discussion groups that are designed to collect unrehearsed opinions from community residents. Focus groups are commonly used to identify the way that the community views issues and how opinions are expressed (the level of language and specific terminology used). Focus groups also are used to collect information on the appropriateness of educational materials. Conducting focus groups is deceptively easy. The groups require carefully planned recruitment, a trained moderator to lead the discussion, a thoughtfully prepared guide for the moderator, and a facility where the groups can be accommodated comfortably.

Example: Community Forum and Focus Groups

The Northcoast Breast Cancer Early Detection Program (BCEDP) (1995) provides early detection services to low-income women 40 years of age and older in the counties of Del Norte, Humboldt, and Trinity in California. Community forums were held at four locations in the region. Focus groups were conducted with BCEDP-eligible white, Caucasian, Hispanic, and lesbian women and an "at-large" group of white women.

Summary of Responses

1. Major barriers to participating in screening:
    - Transportation;
    - Food and shelter are higher priorities than preventive health care;
    - Personal barriers, e.g., embarrassment, fear, desire to avoid learning of cancer diagnosis, caring for self is low priority;
    - Difficulty balancing multiple roles in their lives;
    - Lack of knowledge, e.g., of recommended age and frequency for obtaining mammograms;
    - Negative perceptions about mammogram procedure;
    - Concern about providers, e.g., inadequate communication, time, attitude, competence, confidentiality, quality of care; and
    - Lack of available providers.

2. Suggestions to overcome barriers:
    - Provide mobile mammography services;
    - Use available bulletin boards in local communities;
    - Ensure that women see familiar faces throughout the system;
    - Offer incentives, e.g., lottery tickets;
    - Develop user-friendly, inexpensive public transportation system;
    - Provide improved tracking and followup system;
    - Use local Hispanic radio program; and
    - Provide information about available transportation.
3. Other health issues identified:
    - Concerns about menopausal issues and stress; and
    - Use of alternative health practitioners.

Intercept Interviews

Intercept interviews are commonly used in marketing research, and the process of conducting them can be simple. Individuals appearing to fit predetermined criteria are approached in public places and asked to provide their opinion regarding issues related to the program. Common places for such interviews to be conducted are grocery stores, shopping malls, and sports arenas. The principal limitation of intercept interviews is sampling. Those who agree to respond to the interview are not necessarily representative of the population. On balance, the information that can be collected from intercept interviews is usually worth the investment of time and effort.

Example: Consumer Survey

The Northcoast BCEDP (1995), previously mentioned, administered consumer surveys to women in targeted residential areas in the three-county region. Surveys were administered orally during face-to-face encounters and in written form distributed at predetermined locations. These locations were identified by review of census tract data and included local markets, small businesses, laundromats, and various community agencies. Women also were contacted at community events, at health clinics, and through door-to-door canvassing. The surveyors reported that it was difficult to reach women during weekdays because many women were at work. As a result, other strategies were adopted that included contacting women at their workplace, their physician's office, or social events in the evenings or on weekends. A total of 249 completed surveys were received, for an overall return rate of 40 percent.

Results of Consumer Surveys

1. Motivating or enabling factors identified by grant-eligible women who had participated in screening:
   - Going to clinic or physician for regular exams (54%);
   - Physician-recommended screening (31%);
   - Saw or heard advertisement for free screening (16%);
   - Family or friends encouraged me (9%);
   - Know someone with breast cancer (including self) (7%); and
   - Had symptoms or pain (7%).
2. Barriers identified by women (ages 50 to 64) not participating in breast cancer screening:
   - Cost (75%);
   - Lack of physician referral (25%);
   - Fear of radiation (25%);
   - Do not like to go to physician (25%); and
   - Clinic or physician is too far away (25%).
3. Motivators or enablers identified by women (ages 50 to 64) not participating in breast cancer screening:
   - Physician referral (70%);
   - Having symptoms or pain (50%); and
   - Hearing about free services (20%).

Steps in Community Analysis: Relevance to Effective Outreach Strategies for Older Medically Underserved Women

Introduction

Our purpose in producing this packet of self-study materials is to facilitate the planning of outreach programs for older medically underserved women. Because this purpose is somewhat narrower than the general model of community analysis, we will condense the presentation into a series of six steps.

For ease of communication, the term “community” will be used to describe the focus of attention for the community analysis, with the understanding that the focus of activity is really on a specific segment of the community, namely, older medically underserved women. In addition, when we use the term “community,” we are including both structural and functional definitions.

An Overview of the Steps in Community Analysis

The steps in the community analysis process, for the purpose of planning outreach for older medically underserved women, are summarized in table 2 below.

Table 2. Steps in Community Analysis

Step	Data Needed	Collection Methods
Step 1. Observation	General description of the community in terms of terrain, climate, travel required, and health services available	Observation by touring the area, reviewing newspapers, and conducting informal key informant interviews
Step 2. Review of data describing the community	Data on population characteristics, including distribution by age, sex, and perhaps race; data on causes of death among older medically underserved women	U.S. census data from Internet National Health Interview Survey BRFSS data HIRS data set Other locally developed data sources
Step 3. Collection of information on the social and political structure of the community	Social and political history of the community and region	Key informant interviews Community forum Focus groups
Step 4. Collection of information on health services available to the community	Health care providers, practice patterns, extent of penetration of managed care, costs of care, and voluntary organizations serving the community	Key informant interviews Focus groups
Step 5. Collection of information on social services	Types available (programs) Cost/availability Means of access	Key informant interviews Focus groups
Step 6. Identification and characterization of intended audience within the community	Describe older medically underserved female subpopulations within the community, opportunities to contact, and barriers to participation in programs	Review of data from previous steps in community analysis, additional key informant interviews, and focus groups

Step 1: Observation of the Structural Community

Developing an orientation to the community begins with direct observation of the structural community. Recall from our earlier discussion that the structural community is the geographic area, defined in terms of legal boundaries of a city, county, or similar entity. The most straightforward way to observe the structural community is by personally visiting the community or communities that are to be the focus of planning, traveling around, and becoming familiar with the terrain.

For the purpose of outreach planning, the focus of the observations should be on factors that would influence efforts to reach older medically underserved women.

Finding Members of the Audience

A first question to ask is how such women can be found. Do they reside in specific areas of the community? If so, travel to the areas and observe the living conditions. If there are no specific areas that can be observed, are there opportunities to observe gatherings of such women? What about visiting nurse services or public health nurse visits or Meals On Wheels services? Any or all these services might provide opportunities to observe the older medically underserved women and to develop a visualization of some of the barriers that must be overcome by outreach programs. A byproduct of these observations should be development of a sense of the outreach efforts that are already in place and a judgment of their effectiveness. Remember that the common phrase “reinventing the wheel” speaks to the notion that failing to recognize previous efforts often makes for wasted time; see whether others are already conducting successful outreach to older women. If so, consider the possibility of developing a partnership with such enterprises.

Accessing the Health Service Delivery System

A second area of emphasis for developing an orientation to the community is the health service delivery system. Observation of the conditions under which women will seek and receive services is important to developing realistic interventions. Factors such as transportation to such services, waiting times, opportunities to schedule appointments, and so forth are important to observe firsthand. Interviews with health care providers and support staff members may come later in the community analysis. For now, the emphasis should be on observations from the point of view of the clients of the services.

Communication Patterns

A third element in the direct observation process should be to focus on communication patterns. If there are locally generated media, the program planner should become familiar with the typical content, frequency of publication, and circulation patterns. Electronic communications should be included.

For Example . . .

In the previously mentioned Forsyth County Cervical Cancer Prevention Project, it was learned through direct observation that many older women arranged their weekly schedules to be sure that they would be able to listen to specific radio programs. These radio programs were produced locally and featured death notices. Announcements of other community events that were important to the older women also were included in the programs. These programs provided a good opportunity for the cervical cancer education program to reach the intended audience. Another product of direct observation in this project was recognition that the locally produced African American newspaper was a potential source for reaching the community.

Things To Do in Observing the Community

1. Sketch a map of the community, oriented in the region or State, indicating major roadways, health care delivery facilities, and areas where population is concentrated.
2. Identify the major employers in the community.
3. Review and catalog all locally produced television, radio, and newspapers.
4. Describe travel in the community in terms of cost, time required, and "hassle."
5. Describe shopping patterns within the community and also outside the community if it is common for residents to leave the community for shopping.
6. Tour local hospitals, the health department, and any public clinics offering services to older medically underserved women.

Implications

What should be learned from the activities included in developing an orientation to the community? The program planner should be able to visualize the circumstances in which older medically underserved women live in the community and to estimate the challenge of locating such women. In addition, observation of health services should leave program planners with impressions about the ease of access and barriers to obtaining services for older medically underserved women.

Step 2: Review of Data Describing the Community

Review of statistical information describing the community is an essential ingredient to outreach planning. It is through this review that estimates can be developed of the number of older medically underserved women for the outreach program to target.

Estimating Number of Older Medically Underserved Women

Because tabulations of the number of women who are age 50 and older and medically underserved are usually not available in standard statistical reports, the planner may have to review the information that is available and develop estimates. The estimates are derived from inspecting population statistics along with cancer screening, incidence, and mortality data.

Sources of information for this step in the community analysis include the U.S. census, locally generated reports on population, and perhaps information from the BRFSS of the State. Additional sources of information may be available as well. HIRS may be helpful to access several data sets, BRFSS, SEER, and NCHS.

Example/Exercise

The data shown in table 3 are from a fictitious community called Needle (as in needle in the haystack). As the data in table 3 show, the population of the community is somewhat unusual in having a low number of residents in the 20- to 24-year age range. Otherwise, the distribution by age and sex is typical.

There are more females than males, principally because females generally live longer than males. Adding up the number of female residents age 45 and older will provide a first estimate of the number of women who could be the targets of outreach planning for our purposes here. From the data shown in table 3, according to the 1990 census, there were 887 women age 45 and older in the community in 1990. If we want to estimate the number of women age 50 and older, we can use a simple method of interpolation and divide the number of women in the 45 to 54 age category by two and increase our precision somewhat. This would provide an estimated 134 women ages 45 to 50, which would decrease the total in the intended audience to 753.

Table 3. Age and Sex Distribution of the Population of Needle, 1990, U.S. Census

Age	Females	Males	Total
<1	22	27	49
1-4	102	106	208
5-9	148	174	322
10-14	164	156	320
15-19	142	146	288
20-24	80	82	162
25-34	245	246	491
35-44	324	331	655
45-54	268	235	503
55-64	204	218	422
65-74	236	196	432
75-84	139	126	265
85+	40	37	87
Total	**2,114**	**2,080**	**4,194**

From this simple exercise, we have learned that there could be as many as 753 women for whom outreach planning should be carried out. However, it would be helpful to learn whether the population has increased or decreased substantially since 1990 and factor in an estimate if one can be obtained. The older age ranges of most populations are usually more stable than the younger ages, and the changes in population distribution by age over time tend to be minimal. Using this concept, we can calculate the proportion of the total population of Needle that consists of women age 50 and older and apply that proportion to the most current total population estimates.

For Example . . .

If the proportion of women age 50 and older was approximately 0.18 in 1990 (753 divided by 4,194), we could apply the 0.18 proportion to an updated total population estimate, which would provide a reasonably good approximation of the number of women age 50 and older in 1996.

What remains to be learned to help us arrive at an estimate of our task in program planning is an estimate of the number of women age 50 and older who are considered underserved. The proportion of the population that can be considered underserved may be available from official sources such as public health officials. If so, applying such a proportion to the population estimate will be a simple and useful exercise.

If it is estimated that 25 percent of the population are not reached, for example, then the older medically underserved female population might be estimated to be .25 ×753 or 754, or about 188. Recognize that this would be a crude estimate, however, and may not be very accurate.

If there are no official estimates of the proportion of the population that is not reached, other approaches to determining the outreach population must be used. This is when data from sources such as BRFSS can be useful. HIRS, a software package containing BRFSS, SEER, and NCHS, is available on disk to every program through CDC. In addition to the BRFSS, other sources, such as the National Health Interview Survey, may provide useful data.

For Example . . .

Suppose that we learn that approximately 20 percent of women age 50 and older from the BRFSS survey reported that they do not have a regular source of health care. We may decide that it is reasonable to use this information as a proxy measure for those who are underserved and could benefit from outreach and apply the proportion to our community. Thus, our estimate of the number of older women to plan for would be 0.2 × 753, or about 151 women.

It should be clear from the preceding discussion that decisions regarding estimates of the population are not made easily. To improve the precision of estimates, it is a good idea to involve consultants who can comment on appropriate procedures for making estimates. A key factor in making decisions about estimators is the extent to which the information can be applied to the population that is the object of community analysis. The more applicable the estimator is to the population, the more accurate the result.

In addition to estimating the number of older medically underserved women in the community, other chronic disease-related statistical information should be examined.

Examining Other Chronic Disease-Related Statistical Information

Rates of death by cause should be examined, by age and sex if possible, to determine the most common causes of death. The causes of death for women age 50 and older should also be a focus of attention.

Implications

From completing the second step in the community analysis, the program planner should have developed a better picture of the size of the task of designing outreach for older medically underserved women. The number of women to be targeted should have been estimated, however crudely, and the relative importance of causes of death should be known. Adding the information learned from the second step of community analysis with that from the first, direct observation should provide the program planner with a developing picture of the community and the presence of older medically underserved women.

Step 3: Collection of Information on the Social and Political Structure of the Community

The social and political structure of the community includes the way the society is organized, important events in the social history, and the political system that exists with regard to older medically underserved women. *The goal of this step of the community analysis is to gain insight about how the social and political nature of the community may influence outreach to older medically underserved women.*

To illustrate how the social and political structure relates to community analysis and program planning, consider the example of the outreach program to Cherokee Indian women discussed earlier.

For Example . . .

Recall that the outreach program to Cherokee Indian women provided education toward increasing Pap tests for the purpose of addressing a need for cervical cancer prevention. Community analysis revealed several social and political factors that influenced the way that the program was developed and implemented. The Cherokee population in North Carolina occupies a rural part of the State.

Community analysis revealed that most residents knew one another by name, knew family histories, and in general seemed to have few "secrets." In addition, the population shared the history of many Indian Nations and operated separately from the non-Indian population of western North Carolina. The community is self-governing, and political events were followed closely. Non-Indian political events were generally of much less interest unless they directly affected the Cherokee population. The society was oriented toward several types of community events, particularly school events and sports. Children's baseball games had consistently high attendance, and high school football and basketball games were important community events.

How Data Were Collected

This information was collected through observation and key informant interviews. Observation was accomplished through several visits to the area and subscription to the local newspaper. Key informant interviews were conducted with business owners and managers, skilled and unskilled workers in local businesses, tribal leaders and elected officials, teachers in the local school system, and health care providers. The interviews were conducted individually and included discussion of the value of health among women in the community as well as views of health and disease from a cultural perspective. Additional questions addressed the potential influence of Native American customs and views of health and disease on education about cervical cancer and opinions about desirable characteristics of persons to deliver the program.

What the Data Revealed

The interviews revealed that although the population had considerable awareness of and experience with cancer, its awareness of cervical cancer was limited. Many statements were heard that expressed skepticism about the value of cancer treatments and fear of harm from the treatments. The interviews with health care providers revealed that their views about cancer screening and treatment were quite different from those of the community members. The health care providers viewed screening as valuable and treatment as generally beneficial.

Implications

Collecting information on the social and political structure should provide outreach program planners with insight into the community members' views of themselves. For the Cherokee population described earlier, the community was directed inward and not concerned with other communities unless their interests were directly involved. In their view, solutions to the problem of cancer did not involve resources outside the community. In contrast, many communities are oriented more toward external resources than to their own resource bases, which directly influences program planning. In the Cherokee community, the social and political structure dictated that outreach planning should be something that would be perceived as coming from the community and not from an outside source.

Step 4: Collection of Information on Health Services Available to the Community

Analysis of the health services available to older medically underserved women must consider the functional community because women can obtain services outside the structural community. To learn about health service use, it may be necessary to use focus groups, key informant interviews, intercept interviews, and perhaps even a sample survey.

Experience has shown that failure to address adequately the issues related to obtaining health services will nearly always result in programs that are unsuccessful. The reason for the lack of success is that the program is not able to anticipate the resource needs and barriers that the participants must address to obtain services. There are two key categories of information that are needed for this step in the community analysis: information on health care providers and organization of health services.

Information on Health Care Providers and Organization of Health Services

Information on health care providers should include those who are recognized in the community as well as those who accept referrals from local providers. Lists of such providers can often be obtained from local medical societies, but for small communities, regional or State-level medical societies should be contacted. Health care providers who provide reimbursable services to older medically underserved women should be the focus of the community analysis. Such providers

would be referral sources for outreach programs. The types of information that should be collected are summarized below.

For Example . . .

A useful summary measure for this aspect of the community analysis is the patient-to-provider ratio, which is calculated by using the estimate of the number of older medically underserved women and dividing it into the number of health care providers. For a community with 153 older medically underserved women and 15 providers, the ratio would be 153/15, or approximately 10 patients per provider. This ratio can then be compared with those for the State or region to determine whether the community is underserved. Note: This does not take into account those providers who will not provide services for disenfranchised women.

The organization of health services and types of resource information that should be collected include

1. Community Health Care Providers:
   Numbers and types of
   - Licensed health care providers;
   - Patient-to-provider ratios; and
   - Informally recognized providers.
2. Health Services Delivery System:
   Descriptions of
   - Pattern of medical practice (extent of managed care);
   - Whether reimbursement for medicare or medicaid is accepted; whether applicable;
   - Colleague network; and
   - Patient referral system.
3. Hospitals Available to the Community:
   Information on
   - Services provided;
   - Reimbursement accepted;
   - Ownership; and
   - Medical staff.
4. Local Health Department (if there is one):
   Information on
   - Services provided;
   - Competition with local health care providers; and
   - Outreach programs provided.
5. Voluntary Health Agencies and Other Health-related Organizations:
   List of active organizations
   Information on
   - Outreach activities; and
   - Sources of financial support in the community, such as United Way.

Resources Outside the "Mainstream"

In addition to recognized, licensed health care providers, sources of care that are outside the "mainstream" should be considered. In some communities, health care is obtained from informally recognized providers such as faith healers, root doctors, or others. It may be difficult to estimate the extent to which these informal sources of care are used because many patients are reluctant to divulge that they use such services. Interviews with healers and other similar providers may be helpful to the community analysis. The focus of the interviews should be on practices related to screening and organic illness.

Implications

Community analysis information collected regarding health services should provide the program planner with a picture of the services available to older medically underserved women. In addition, the barriers that such women would have to overcome in obtaining services should be identifiable.

Step 5: Collection of Information on Social Services

Cataloging and reviewing social services available in the community complete the information-collection phase of community analysis. Social service agencies are the best source of this information and include official agencies of local, State, Federal, and tribal governments. In some communities, however, local religious organizations are also active in providing social services. The range of social services varies considerably by region. Programs that are of particular interest for outreach program development are those such as the Food Stamp program, adult day care programs, Meals On Wheels, and similar programs that focus on reaching segments of the community population with special needs.

Step 6: Identification and Characterization of Intended Audience Within the Community

The phrase "intended audience" refers to the portion of a community that is the focus of planning. In some cases, the intended audience can be considered the entire community. In most cases, however, the intended audience possesses specific characteristics that distinguish it from the rest of the community. Whenever distinctions between "intended audience" and communities can be made, efficiency in program development, implementation, and evaluation can be gained.

In the context of this training program, intended audiences are defined as older medically underserved women. Through community analysis, we have collected information that characterizes the community and should facilitate the identification of the segments of the community that are age 50 and older, female, and not currently served by existing programs. Specific intended audiences for programs can be identified by considering the information

collected during community analysis and considering factors such as outreach programs that are currently being offered to older medically underserved women in the community. In addition, information from community analysis identifying opportunities to contact women can be used to identify intended audiences. Such an approach has been used in previous projects.

For Example . . .

In the Forsyth County Cervical Cancer Prevention Project, outreach planning was developed to focus on women's worship, shopping, and health care habits. Interventions were developed for churches, at points of sale, and in offices of private physicians and public health clinics (Dignan et al. 1991).

For Example . . .

In the Northcoast BCEDP, outreach planning was developed on the basis of findings of a community analysis. Data were collected through analysis of available social and health indicator data, community forums, focus groups, key informant interviews, and surveys of consumers, providers, and members of the BCEDP partnership.

Priorities were established, and recommendations for action were outlined to address the goal of decreased breast cancer mortality through increased access to early detection screening, diagnosis, and treatment services for older low-income women.

Selected Recommendations

1. Build on strong existing networks in the various communities and linkages with organizations such as the American Cancer Society.
2. Develop outreach program to reach Hispanic and American Indian communities.
3. Utilize mobile mammography services in rural areas and at worksite locations.
4. Provide forums addressing menopause, in which information about breast cancer can be provided.
5. Develop health promotion activities to address negative perceptions of mammograms.
6. Develop a program to address provider continuing education needs and emphasize the importance of provider recommendation and encouragement for mammograms.
7. Develop and distribute breast health promotion materials.