

PART

1

**INTRODUCING
COMMUNITY-BASED
INTERVENTIONS**

CHAPTER

1

IMPROVING HEALTH IN COMMUNITY SETTINGS

LEARNING OBJECTIVES

- Explain the components of an ecological approach to health
- Distinguish an ecological from an individual approach to health interventions
- Recognize different ways in which community can be defined

OVERVIEW

Ecological theory provides an overview to understanding interventions that take place in community settings. This chapter will explain the differences between interventions taking place in community settings and those taking place in clinical settings. Examples of community interventions will be provided.

DEFINING COMMUNITY

A **community** is a group of people connected by visible and invisible links. Communities are defined in different ways. *Geographic communities* have geographic, physical, or political boundaries, whereas *communities of interest* are connected not by physical space but by the sharing of an interest, behavior, risk, or characteristic, and *professional communities* share knowledge and skills as well as interests.

Place Can Define a Community

Geographic communities can have political boundaries such as municipal lines that may be more or less arbitrary, but provide residents with a sense of identity that is generally distinct from the adjacent area—such as Center City, as opposed to South Center City. Geographic communities can also be defined by geographic or physical boundaries that unite people inside the boundaries (north of the river) or make them distinct and separate from adjacent groups (the other side of the railroad tracks). The use of geographic features to define communities is necessary for the work of policy makers and planners who use, for example, census tracts, health districts, or hospital catchment areas for planning purposes. While these boundaries may or may not indicate differences between people who live in these areas, they provide a useful delineation in which to conduct interventions.

Communities Defined by a Shared Concern

Communities of shared concerns or interest can be linked by something as inherent as racial, ethnic, or national background and the history, values, culture, and customs that are part of that background. The social units that structure people's work, school, or other daily activities provide another form of community. These units can generally be broken down further by age (third-grade class as distinct from the sixth-grade class in a suburban elementary school), by role (nurses as distinct from physicians in a public hospital), or by status (students as distinct from teachers in the suburban elementary school; patients as distinct from providers in the hospital). An important community of shared interest for students and practitioners concerned with health issues is the groups of people with potential, current, or past shared disease and behavior or health risk. Women with a positive BRCA gene (indicating a higher-than-average risk for breast cancer), women receiving radiation treatment for breast cancer (current disease), and women in a cancer survivors support group (past disease) are all part of a potential or real community of interest.

The definition of community is important for public health practitioners because health interventions must target a specific community. How a **target community** is defined determines how resources will be allocated, how an intervention will be delivered, and how a message will be framed.

An example of the importance of defining a target community can be seen in designing a smoking cessation intervention. If the target audience is undergraduate students, focusing on the long-term health effects of tobacco use is unlikely to be an effective strategy because this population is in an adolescent phase of development, believing that “it won’t happen to me” and focusing on today rather than the future. A more successful strategy for smoking cessation with this population would be an intervention demonstrating ways to resist social pressures while gaining peer acceptance. If the target population of a smoking cessation intervention is pregnant women, however, a message about the impact of cigarette smoking on healthy pregnancy outcomes will be more effective than one that stresses prevention of lung cancer and chronic obstructive pulmonary disease.

Demographic variables such as race, ethnicity, education level, age, gender, and class describe both geographic and common-interest communities. Many interventions will have a target community arising from more than one of these variables. A breast cancer survivor group for women in their sixties will have different issues from women in their thirties; an intervention to increase mammogram screening among African American women will need to incorporate different cultural strategies from one aimed at Latinas. Educational messages on mammogram screening for middle-class women with private health insurance may differ from messages with the same goal designed for women relying on public hospitals and clinics. Knowledge of the cultural background, health beliefs, developmental stage, socioeconomic status, and literacy levels must all be incorporated into the content of any health intervention.

ECOLOGICAL THEORY AND LEVELS OF PREVENTION

Ecological theory postulates health to be the result of a dynamic interplay between demographic variables and the physical and social environment. It expands on the model of living organisms as self-regulating systems by including the families, organizations, and communities in which we interact on a daily basis; a disturbance in any part of the system has an effect on the other parts (Bronfenbrenner, 1979). Individuals, families, and communities are not isolated entities, but rather an interrelated ecological system with each adapting to changes that occur in other parts of the organization. Each component of the system participates in determining health. Key factors in ecological theory that have a disproportionate influence on health include socioeconomic status, family, work (for adults), and school (for children) (Grzywacz & Fuqua, 2000). Consideration and integration of one or more of these factors cannot be considered in isolation from the others.

Ecological Theory Applied to Community-Based Intervention

Applying ecological theory to community-based health interventions requires an understanding of these three principles:

- Health is the result of a fit between individuals and their environment
- Environmental and social conditions interact with an individual to exert an important influence on health
- A multidisciplinary approach to health is necessary (Grzywacz & Fuqua, 2000)

This appreciation of health as influenced by other than individual behavior has important implications for health promotion interventions. **Community-based health interventions** move beyond a focus on changing the behavior of individuals and instead acknowledge the importance of interpersonal or group behavior, institutional climate, community resources, and policy effects. Community-based interventions therefore work with groups such as women over age fifty in a church, institutions such as all teachers in a district's school system, communities with geographic or political boundaries, and large populations covered by specific policies.

Prevention Efforts Focused on the Community

The influence of social and environmental factors on health behaviors and outcomes occurred around the same time as an understanding of the limitations of the individualistic medical model in changing health behaviors and outcomes. While health care technologies such as angioplasty and bone marrow transplants are now commonplace in the USA, many of the health status indicators lag behind those of other industrialized countries (Central Intelligence Agency, 2008). The overall U.S. infant mortality rate is higher than most similarly developed countries because significant areas of the United States lack access to good preventive services. Although highly trained and skilled physicians and nurses work in neonatal nurseries to save the lives of premature babies, prenatal and other preventive care is not available to many pregnant women, resulting in high rates of preterm labor, which ensure fully occupied neonatal nurseries. Dialysis programs are available for people with diabetes who experience kidney failure, but many afflicted with diabetes are unaware of their disease or unable to manage it through diet and exercise. While sophisticated regimens of antiretroviral drug treatment are available for those with HIV infection, many others with HIV/AIDS are undiagnosed and spread the infection through unprotected sex or sharing needles. Twenty-first-century medical technology that is largely confined to health care settings cannot optimize health or prevent disease. This is the role of community-based health promotion.

Focusing health and disease prevention at the community level can be successful only if the community is involved. The World Health Organization recognized the importance of community participation in its definitions of health and health promotion. For example, the definition of primary health care in the **Alma Ata Declaration**

reads: “Primary health care is essential health care based on practical, scientifically sound and acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination” (Mahler, 1981, p. 7).

This understanding of the limitations of the health care system to maintain a healthy population and the contributions to health of the psychosocial and physical environment in which we live has resulted in a shift to a broader community focus (McLeroy, Bibeau, Steckler, & Glanz, 1988). Interventions in community settings differ from individual clinical interventions in their focus on the health of a target population or community. In the targeting of communities for health interventions, community can be considered in one of the two following ways:

- Community as setting, which uses any of the above definitions of community and focuses on changing individual behaviors as a way to lower a population’s risk of disease. In this type of intervention, population change is considered as the aggregate of individual, interpersonal, or institutional change.
- Community as target, in which the goal is changing policy or community institutions, such as the development of walking trails, the availability of smoke-free facilities, or the overall rate of a disease.

Whatever the focus, the goal of almost all community interventions is to have an impact on morbidity and mortality factors that occur outside of health care settings. These interventions can be contrasted with clinical interventions, which are individually focused and usually involve diagnosis with physical exam and laboratory tests. This is usually followed by treatment with drugs or procedures, with a goal to prevent an existing harmful condition from becoming worse.

Examples of Community-Based Interventions by Levels of Prevention

Since community interventions involve a vast array of topics, one way of organizing them is by **levels of prevention**. Interventions that focus on **primary prevention** have a goal of avoiding or preventing a disease or condition before it begins. **Secondary prevention** efforts focus on screening and the early diagnosis of a disease or condition. **Tertiary prevention** interventions aim to prevent disease progression after a risk factor or disease has been identified. Table 1.1 provides some initial examples to assist students in identifying a topic area and type of intervention for implementation.

Developing walking can be considered an intervention at both the primary and the tertiary prevention levels because they can be important components in preventing obesity and cardiac disease. They can also be used by people who already have these conditions to help in preventing additional weight gain or further deterioration of cardiac functioning. A school system intervention that seeks to remove soda vending machines from schools is likewise both primary and tertiary in its focus on initially preventing childhood obesity, an important risk factor for the future development of

TABLE 1.1 Examples of community-based health interventions by levels of prevention

Intervention	Primary Prevention	Secondary Prevention	Tertiary Prevention
Walking trails	X		X
Removing soda vending machines from schools	X		X
Support groups for breast cancer survivors			X
Back to Sleep campaign	X		
Needle exchange intervention	X		
Know your HIV status intervention	X	X	
Mammogram access		X	
Great American Smoke-Out			X
Buckle-up seat belt publicity campaign	X		

Type 2 diabetes (James, Thomas, Cavan, & Kerr, 2004). Support groups for women with breast cancer have been shown to be effective in decreasing stress and improving coping and overall mental health (Winzelberg et al., 2003). Because the support groups help women to be proactive about potential future complications of the disease process, they are tertiary prevention. The Back to Sleep campaign, jointly sponsored by the National Institutes of Health and the American Academy of Pediatrics, is a social marketing campaign that recommends that infants be placed on their backs to sleep to reduce the incidence of sudden infant death syndrome (SIDS) (Havens & Zink, 1994). This successful primary prevention campaign is credited with reducing the incidence of SIDS 50 percent since its inception in the mid-1990s (National Institute of Child Health and Human Development, 2008).

Needle exchange interventions are a primary preventive measure that can prevent the spread of HIV infection among injecting drug users (Des Jarlais et al., 1996).

Campaigns to increase HIV tests and learn about one's HIV status are considered secondary prevention because of their goals of early detection of HIV infection. They are also a form of primary prevention because of their focus on decreasing the risk of HIV transmission to unknowing sexual partners (Varghese, Maher, Peterman, Branson, & Steketee, 2002). Interventions to increase access to mammograms are secondary prevention because mammograms are an important source of screening for breast cancer (Humphrey, Helfand, Chan, & Woolf, 2002). Women who have their healthy breasts removed because they carry the *bracia* (SP) gene that puts them at much higher risk of developing breast cancer are practicing primary prevention.

Now that there is a vaccine to prevent the spread of the human papillomavirus, there is a method for the primary prevention of cervical cancer. A campaign to get young women vaccinated is a primary prevention method. Secondary prevention would be a campaign to encourage women to get Pap smears. A tertiary preventive measure is a colposcopy for women who have some abnormal cells (Franco, Duarte-Franco, & Ferenczy, 2001). A buckle-up publicity campaign can be designed to increase seat belt use among the community as a whole, or it can be focused on a target population such as Hispanics or adolescents. Either way, such a campaign is a form of primary prevention against unintentional injuries from motor vehicle accidents (Evans, 1990).

Each of these examples has a citation—that is, each has been shown to be effective in achieving its goals. These interventions are examples of evidence-based practice, in which public health practitioners actually go to the literature and learn if an intervention has been shown to be effective. Such a citation does not guarantee positive results in a given community or population, but the chances of success are much higher than simply making up an intervention *de novo* or relying on anecdotal experience.

SUMMARY

Public health interventions have a community focus, rather than an individual focus. One of the tasks of public health practitioners is to understand both the composition of the community in which they are trying to make an impact and the level of prevention at which they want to intervene. In the following chapters, readers will be exposed to all the steps necessary to develop a community-based intervention.

KEY TERMS

Alma Ata Declaration

Community

Community-based health interventions

Demographic variables

Ecological theory

Levels of prevention

Primary prevention

Secondary prevention

Target community

Tertiary prevention

ACTIVITY

As discussed in this chapter, communities are not defined solely by geographic boundaries.

1. Identify two examples of nongeographic communities in which you are involved. Describe the commonalities that tie the communities together—such as interests, behaviors, or characteristics.

DISCUSSION QUESTIONS

1. In the United States, the shift of emphasis from infectious to chronic disease has frequently been cited as one of the main reasons for the growing interest in community health interventions. Are chronic diseases better suited to community-based health interventions than other illnesses?
2. Many of the interventions for infectious diseases use strategies involving community networks and organizing. Are these types of community intervention particularly well suited to infectious diseases? What factors influence your response (economics, target population, geography, or others)?
3. How would you identify and define a community in which to conduct an intervention for teen pregnancy? Breastfeeding? Early child development? How would the approach differ between these communities? What are the potential problems that might emerge, depending on the different definitions of the community?